When my grandfather got his first tractor he decided to keep his horses and old horse-drawn equipment in case the day ever came when he couldn't buy gas or tractor parts. Grandpa, his horses and farm machinery are now gone. But his vision lives on.
The Old Timer's Page

Links to Other Sites

- American Memory Historical Collection
- **Old Time Trade Exhibitions** at Colonial Williamsburg, Virginia.
- **The 1850 Westville, GA Living History Museum** See 1850's cooking, candlemaking, buildings & furnishings, blacksmithing, spinning and weaving, pottery making...
- **Widow Rumble's Home Page** Recreations of many facets of life in the 1800's.
- **Colonial Pennsylvania Plantation**
- **Association of Personal Historians**. Helping people preserve their life stories.
- **The Online Homesteading and Small Farming Resource**
- **Candle Making** Supplies and Information
- **Spinning Wheel FAQs** by Christine Jordan
- **Handmade Parchment & Vellum**
- **Cheese Making**
- **Handweavers Guild of America, Inc.**
- **Cisterns** by the University of Florida
- **The Rural Resource Center**
- **The Kansas Pioneer Way of Life** by Norris Torrance
- **Jackie's Smoke House**
- **The Rugmaker's Homestead '99** Learn to make a rag rug.
- **Old type bread baking ovens**
- **Laura Ingalls Wilder** author of Little House on the Prairie
- **The Overland Trail** Tons of really interesting, exciting stuff.
- **The Home Steader Web Ring**
- **Family History of Walter Scott**
- **Eldon’s Jerky and Sausage Supply** Everything you need to cure meat.
- **Whoever thought plumbing history would be interesting??**
- **Hundreds of Civil War Recipes**
- **Farm Dogs**
- **Captain John Outwater's Company Living History Site**
- Hand Weaving - **Fiber News/Fiber Arts**
- William "Cookie" Luke's **Cowboy Site**.
- **Country Folks Magazine**
It has been said that when a person dies a library burns. Only those who have tried to compile a life story on someone who has departed this life knows what a reality this is. Today there is an increasing self awareness among many toward becoming more self reliant. We try new things and - in my opinion - try to re-invent the wheel. The pioneers of 100 years ago were already more self sufficient than most of us will ever be. Perhaps instead of looking to the future and new ways of doing things, we ought to at least take a small look into the past and re-acquaint ourselves with the old ways that are proven, that work, yet are nearly forgotten. The subjects listed on this page comes from the old folks themselves. Occasionally their stories have been supplemented with newer ways of doing the same things, but generally the ideas and methods remain theirs.

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Revised: 4 Jun 01

416428

Hits since 16 Jan 04
The Spring house

Spring houses were small, enclosed one room buildings used before the days of refrigeration to keep food cool. Under the best of circumstances it was built over a spring where the water was coldest as it bubbled up to the surface. Otherwise a small stream was diverted from a nearby creek which ran through the building. The cool water running though the spring house kept the interior of the enclosed building cool.

My mother often used this same principle when I was a kid by setting a bottle of milk in the small ditch next to the house. This water coming out of the mountains was as cold as any refrigerator. As pretty as the spring house to the right is, a spring house doesn't need to be extravagant - a little four walled building built out of wood will do.

Kristi Gross supplies us with this charming word picture...

As a youngster I often visited a farm with a spring house. A spring house is a wonderful little building. The one I visited was only about 4 feet high at the roof level. Adults had to bend over to enter. It was a simple little building with a wooden door latched by a hook and eye. This spring...
The Spring house

house had a hole near the ground on each side, and a stream of water flowing right through the building. A big trough was built in the center of the water with the water always half filling the trough with clear cold water.

This trough was made of wood which sat long ways in the stream. It looked much like a long military rifle box, about a yard long and 6 inches deep with a 2-3 inch crack on the bottom of the short sides for the water to flow through. (If it was made of cement it might prove more long lasting and provide a better cooling effect than one made of wood.) Bottles containing food were placed in the flowing water within this trough. The upper sides of the box kept the bottles from flowing away.

Crock's or jars of milk, butter, eggs, anything my friend, Alma, wanted to keep cold was kept in the spring house and it was my childhood joy to be sent to the spring house after something for her kitchen use. This was especially so in the hot Oklahoma summers as it was always 20-40 degrees cooler here than anyplace outside.

Alma kept her butter in a small wide mouthed mason jar, eggs were in a wire basket and the milk was kept in a large crock and often a large pickle jar. Sometimes she had lemonade or iced tea in the spring house as well when slaughtering was going on. The inner walls of the spring house had shelves where she might set pies and baskets of potatoes, onions, or other garden produce. These were well above the water level of course. Some jars of fruit, vegetables, etc., were stored here as well.

This was used as a 'step-up' from the cellar. Things kept here were also stored in the cellar, but as it took more effort to fetch things from the cellar, things were moved as might be needful up to the spring house for more immediate accessibility.

Her spring house was ideally situated in the farmyard under a big shade tree that also helped to keep it cool. Also kept in the spring house was a metal dipper for drinking purposes, although under present conditions, I don't think this is too practical unless you are absolutely certain your water source is clean. But when I was a child getting sick from drinking the water was the furthest thing from our minds and no one suffered from ill effects from drinking it.

Kristi continues...

My thinking in terms of self-sufficiency and y2k issues would be that a souped-up extra fancy spring house could be built today for less than $50 dollars with used lumber scraps and tin, heavily insulated with big pieces of foam insulation that can be found just about anywhere. This could make a super little cool spot for keeping things cool without electricity.

You could also use this same idea, minus the building by inserting a wooden box with holes drilled in the sides and placed in the stream. Or an even less expensive option might be to set a heavy
stryrofoam chest with holes drilled for water flow into a stream. Any of these, situated and anchored in a pond, creek or marshy place, could keep items cool enough to keep them from rapidly spoiling.
This is a photo of a real old-time ice saw. It was sent in by Jack Kunath. The teeth are about 1.5 inches from point to point.

Getting Ice

As told by Clinton Hardy (born 1909)

contents © Al Durtschi

As a teen-ager I helped my dad put up ice in the Winter for Summer use. Using an ax, we chopped a hole through the ice in the coulee (small stream). Then we used an ice saw to cut the ice into blocks of about 18-20 inches square. The ice was 12 to 18 inches thick. He used ice tongs to pull them out of the water then we lifted them into the wagon. These tongs were quite heavy and had sharp points for sinking into the ice. Our little ice house was built out of rough lumber. It was insulated with sawdust between the inner and outer boards of the walls. We stacked the blocks of ice into it, filling it to about a foot from the top. Then Dad covered the ice blocks with a thick layer of straw. This ice lasted well into mid August.

Mostly this ice was used in our ice box, about as close as we could come to a refrigerator in those days. Our ice box was 'store bought' and was constructed of very pretty wood on the outside with a thin sheet metal liner on the inside. Insulation was packed between this and the outer wooden shell. On the top shelf of the ice box was a rather large container we put the ice in. It was big enough to hold all the water as the ice melted. Every day we brought in more ice from the ice house, dumped the water, and put the new block of ice into the container. This worked pretty well for keeping our food cool as long as we didn't forget to put new ice in.

We also used the ice for making ice cream on hot summer days. This was quite a novelty before the days of refrigeration.

All went well until the middle to the end of August when the Ice finally ran out. There was no place
to buy ice in our little town so when the ice was gone we just did without. It wasn't any bid deal then as we were quite accustomed to living without cooling.

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Revised: 14 Feb 01
Root cellars are nature’s way of storing fruits and vegetables. And they can be excellent storage areas for other things as well. A hundred years ago root cellars were one of the few ways they had of keeping things cool. People not only put potatoes and carrots in their root cellars, but their preserved meat, milk and cream, fruits and vegetables - literally anything they needed to keep cool. Even though root cellars didn’t get nearly as cold as a refrigerator during summer months, root cellars generally were and are 30 to 40 degrees F cooler than daytime summer temperatures.

How we used to do it.

- An old time dugout root cellar

Modern root cellars or underground storage areas

- Root Cellar basics
- A modern underground storage area
- The Grandpappy of all underground storage areas
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Revised: 1 July 96
Root cellars have been a part of life here in Southern Alberta for a hundred years. And there have been some big ones. Mrs. Crest, who contributed to the meat curing page, told me when she was a kid her Uncle had a root cellar with over 500 bottles of fruit in it, along with the usual fare of vegetables. Although there are not as many root cellars around now, they are still extensively used here for storing potatoes, carrots, apples, and in the fall of the year, other garden produce as well.
How we used to do it...

As told by Glenn Adamson
© by Al Durtschi

The first root cellars were usually dug with a pick and shovel. (In 1965 I used the front end loader on my tractor to dig the root cellar I’m using now.) The only wall we had to build was the front wall the door was in. The other three walls were formed by the dirt from the hole we dug. I made the roof with three logs as supports, then I laid 2X10 planks over them and nailed them down (See illustration). Over the top of the roof I put about 2 feet of dirt, with grass eventually growing on top of it. The front wall was also made from 2 inch lumber. Unlike the drawing, this wall extends up another three feet (see photo). The stairs were made...
with these same planks, as well as the side walls on both sides of the stair case. The planks in the roof, stairs
and front wall were all made from rough, unplaned lumber, actually 2 inches thick.

You will notice from the photograph there is an upper door and a lower door. It is important you do this as each door adds greatly to how cool the root cellar will be in the summer time and how warm it will stay in the winter. The lower door on my cellar is constructed with a sheet of 1/4 inch plywood on each side filled with insulation. The upper door is tilted slightly so water will run off when it rains, and so it will be easier to find in the snow. To prevent rain from dripping down between the outside of the cellar and the top of the door, I use a couple of pieces of tin that are wide enough to hang over the top of the closed door after being wedged in between a couple of the planks on the outside of the cellar. This helps a lot. The upper door is constructed from two layers of 3/4 inch rough lumber. There is no insulation in it, and it has a layer of tin nailed to the top of it to keep it water proof. This door is hinged to the stairs side wall on the left side and is hinged so it can swing all the way around and lay on the grass.

Our main reason for having a root cellar is to keep our vegetables from freezing in the winter. We have very cold winters. For example, last winter we had several days when the thermometer dropped down past 40 degrees below zero F. How well has our cellar worked over the years? Very well. Nothing ever froze, except for once, and then it wasn’t the cellar’s fault. On one of the coldest days last winter, I went to get some potatoes and carrots and was surprised to find the lower door open. Even with this, only a small part of the potatoes were frozen. After closing the lower door the temperature rose to above freezing again. I have never tested the temperature in the cellar during the winter time, but in the summers the temperature hovers around 51 degrees F. This is a bit cooler than the temperatures you would expect to find in a root cellar in the warmer parts of the USA. This is because our hottest days in the summer are only around 90 degrees F. And the cold winters tend to keep the ground a bit cooler throughout the year.

Last year my center cross beam in the roof broke right in the middle. The dampness from the earth above it had gradually rotted it over the years. I did not waterproof my roof when I built it, and should have. After it broke, we jacked up the center of the roof and put in a vertical support beam in the middle of the room. This should help the cellar last for several more years.
Cool and moist conditions are required for storing most vegetables. Because of this, when planning a root cellar, several things need to be taken into consideration.

**Temperature is your most important interest:** As your root cellar needs to be kept as cool as possible, there are several things you can do to promote this:
First, borrow cold from the ground. Earth, even two feet down, gives a remarkable year wide temperature stability. The further down you go the better it is. You must go down a full 10 feet before complete temperature stability is reached. But for the average builder, how deep you go is limited because of expenses.

You can also borrow cool from the air. Often the night’s air temperature will be cooler than the air in your cellar.

And finally, you should do what you can to prevent heat from having access to your cellar. This includes:

- Having your root cellar in the shade throughout the day
- Building on the north side of hills
- Wise use of insulation

Your second most important consideration is humidity. Even if kept cool, in a low humidity environment, your vegetables will soften and shrivel up. Most vegetables require high humidities. A typical underground root cellar will generally maintain a high humidity all by itself if it has an earth or dirt floor.

Air circulation: The best root cellars have vents (although none of the old cellars here in Southern Alberta I have seen have them). This is because the vegetables in your cellar give off gasses that often are conducive to either spoilage or sprouting. For example, apples naturally give off ethylene gas which makes potatoes sprout prematurely. (This can be used to your advantage if you have potatoes that are slow sprouting. Put’em both in a plastic bag.) Good venting fundamentals include:

- Have an inlet vent and an outlet vent.
- The outlet must always be at the highest level in the cellar with the outlet tube flush with the inner wall.
- The inlet should come into the cellar at the bottom. This is easily done if your cellar is built into a hill, but nearly as easy if it is buried in flat ground. With your inlet vent opening on top of the ground near your outlet vent, your inlet vent pipe must go all the way to the floor before opening into your cellar.
- Keep shelves a couple of inches away from the walls of the cellar. This will greatly promote circulation around the vegetables stored on these shelves.
- To prevent your potatoes from sprouting prematurely, keep your apples above them so the circulating air moves away from your potatoes.
- Have a system in place to close your vents in freezing weather. Something as simple as a big sponge can work for this. If you have very cold winters, you may wish to block off both ends of each vent pipe.

How big of a cellar should you build?

- A 5 foot by 8 foot root cellar will store 30 bushels of produce.
- An 8 foot by 8 foot cellar should hold plenty for the average family.
A 10 foot by 10 foot cellar should take care of everything you can produce.

**Shelves:** We have already mentioned shelves should be kept at least a couple of inches away from the walls for increased ventilation. Other things to consider are:

- Use rot resistant or pressure treated wood. After several years they will be less likely to rot and break, tumbling your foods on the floor. (The book gave one example of a person who went down to her cellar one day to find a good share of her canned fruit and vegetables broken on the floor. As the lids on canned goods rust after a couple of years, plan a dryer, cool place for these items.)
- Liberal use of shelves will enhance the storage capacity of your cellar considerably.

**What kind of root cellar is right for you?** Here are some possibilities with a few advantages/disadvantages:

**Build your root cellar into a hill.**

- You don’t have to find a door lying on the ground when it is under 3 feet of snow.
- There is less chance of flooding during very wet conditions
- Your cellar can be graded so any water that should run or seep in will run out the door.
- Can be much more difficult to excavate.

**Build your root cellar on flat ground.**

- Availability: not everyone has a steep hill in their back yard
- Easier to excavate
- Easier and cheaper to build (you don’t have to brace your cellar for all that extra weight from the hill). But that added dirt will keep your cellar cooler!
- You can build a vertical door around a staircase if you don’t want to be shoveling snow to get at a horizontal door.

**Build your cellar as part of your house:** Our house which is only one year old had a root cellar built into it when the house was constructed. Many older houses have a section of the basement that has an earthen floor. It’s primary reason was probably for vegetable storage. You can also:

- Build and insulate a room in this area.
- Dig a cellar next to the house with an entry way to your cellar through the basement.
- Put your cellar in an existing underground structure such as a pump house.
Root Cellar Basics

Construction methods:

- Dugout: The cheapest way to go in stable soil
- Wood construction: Be sure to use pressure treated wood.
- Cement
- Floors
  - Dirt: the simplest way to go and excellent for humidity control.
  - Gravel: In a very damp or very dry area you will want to put down three inches of gravel. If your cellar is unusually wet, you may want to even dig a sump in the middle of your cellar floor and fill this with gravel, along with the three inches on the floor. In very dry soil conditions you can sprinkle water on the gravel which will greatly increase the evaporation surface area.
  - Wood: put gaps in your boards for a higher humidity cellar.
  - Cement: If you want a storage area that is lower in humidity, this is a good way to go.
- You may wish to build two rooms in your cellar. One with a cement floor for lower humidity storage items, and another room with no floor for higher humidity storage items. If you did this, the wall between the rooms should be as air tight as you can make it. If you have a venting system, you should have a separate set of vents for each room. And lastly, the high humidity storage area should be the far room in the cellar.

Using your root cellar:

- Keep a thermometer and humidity gauge in your cellar.
- Keep the door(s) closed to your cellar as much as possible if it is warm outside.
- During the spring and fall of the year, open your vents (and even perhaps the door) at night when the temperature is dropping below the temperature of the air in your cellar. Close them early in the morning before the outside air warms up. (Be careful not to do this if the temperature is expected to drop below freezing.)
- If the humidity in your cellar is too low you can raise it by:
  - Leaving at least the floor of your cellar exposed to the earth (a dirt floor or air gaps in your floor down to the earth).
  - Sprinkle water on a graveled floor or lay out damp towels or burlap bags.
  - Pack root vegetables in damp saw dust, sand or moss.
- One caution about high humidities: If you get much of a temperature fluctuation in your cellar, humid air as it cools past it’s dew point will condense on the ceiling, walls, and produce. Excess water on your goods can induce spoilage. Cover vegetables with burlap, towels, etc. to absorb excess condensing moisture. Also, if your air is condensing inside, open your vents if the air outside is cooler than it is inside. Even if it is very humid air, as it warms in the root cellar, it’s relative humidity will drop. Of course, the opposite can happen. If you let warm damp air in, moisture will condense out as it cools.
- During extremely cold weather, if your cellar is threatening to freeze, put a light bulb inside. If you do this, you need to cover your potatoes so they won’t turn green. (Do not use a kerosene
lantern. Kerosene lanterns produce ethylene, which is a fruit ripener.) Also remember that snow is an excellent insulator. Don’t tramp down or remove the snow on top of your root cellar any more than you have to in order to gain entry.

- Keep a fairly close eye on your produce and remove any that has begun to spoil. (It is a true axiom that 'one bad apple with spoil the bushel.'

### Vegetables and their optimum storage conditions

<table>
<thead>
<tr>
<th>Cold and very moist (32-40 degrees F and 90-95 % humidity)</th>
<th>Cold and Moist 32-40 degrees F and 80-90% humidity</th>
<th>Cool and Dry 35-40 degrees F 60-70% humidity</th>
<th>Moderately Warm and Dry 50-60 degrees F and 60-70% relative humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots, Beets, Parsnips, Rutabagas, Turnips</td>
<td>Potatoes, Cabbage, Cauliflower, Apples, Grapes</td>
<td>Garlic, Onions, Green soybeans in the pod (short term)</td>
<td>Dry hot peppers, Pumpkins, Winter squash, Sweet potatoes, Green tomatoes (up to 70 degrees F is OK)</td>
</tr>
<tr>
<td>Celery, Chinese Cabbage, Celeriac, Salsify, Scorazonera</td>
<td>Cucumbers, Sweet peppers (45-55 degrees F)</td>
<td>Eggplant (50-60 degrees F.), Ripe tomatoes</td>
<td></td>
</tr>
<tr>
<td>Winter radishes, Kohlrabi, Leeks, Collards, Broccoli</td>
<td>Cantaloupe, Watermelon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(short term)</td>
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</tbody>
</table>

Walton Home Page || Old Timer's Home ||
The underground storage area described on this page was constructed by one of the participants on the *misc.survivalism* news group. This is a great example of what can be done as just about anyone who owns even a small piece of ground can make and use it.
Things went well as he dug the hole by hand until he unexpectedly struck bedrock at seven feet down. He would have liked to go deeper. In actuality, (unlike the drawing) his floor has a step in it, following the uneven bedrock. The level of the bedrock also forced him to make his roof 6 inches lower than he planned. The entrance way is a box 2 feet square and centered on one of the long walls. It is made from 2X10 lumber with the hatch made of the same material and hinged to the entrance boards. A ladder descends to the floor of his cellar for easy entry and exit.

Construction: The floor consists of pressure treated 2x4s using the bedrock as a foundation. The 2x4s are spaced with gaps, to allow any spills to flow down into the bedrock. The walls are made of 3/4 inch plywood supported by 2X4’s spaced on 9” centers. The bottom support beams (to the bedrock) are pressure treated 4x4s. The ceiling is supported again by 2X4s on 9 inch centers. The top is made from two layers of 1/2 inch plywood.

It was finished by waterproofing it with two layers of heavy duty landscaping plastic, staggered to overlap significantly. It was first wrapped around the sides, then draped over the top and down the sides. Finally, tarpaper was layered over the top and down the sides to protect the plastic from any rocks during the backfilling operation which just about completed this little project except for relandscaping the area. Only a foot of dirt covers the roof. Initially two feet was planned for, but again, the unexpected bedrock altered these plans.

Before the roof went on, two 55 gallon water barrels were set in one end of the shelter. After construction was complete, buckets of preserved foods were stacked on the other side. Between the barrels of water and the buckets, a set of deep shelves was made opposite the ladder for other goods. Note that none of these items are shown in the drawing.

A final note: Even with only 1 foot of dirt, the builder is getting a maximum temperature of 70 degrees in his shelter on 95+ degree F days with the cellar area in the full sun. As this only lasts for four months out of the year, it will be cooler during the other seasons.

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attached.

Revised: 1 July 1996
The Granddaddy Of All Underground Storage Areas

There are root cellars and then there are root cellars. This web page covers an underground storage container made from culvert. This concept is extremely bold in every way. When it comes to underground storage, this may very well be the granddaddy of them all. I am convinced this is one of the finest underground storage ideas you will find anywhere. This page features one of these storage areas, which should help you understand their possibilities and perhaps even get you thinking about what you would like if you designed one for yourself.

Jump within page to...

- A bold new concept
- Easily and quickly constructed
- Quickly set into place
- Inexpensive for the size
- Plenty of room
- Easily adaptable as an underground shelter
- Easily hidden from view - no one even needs to know it’s there.
- Where to learn more
**A bold new concept:** Whoever thought of this ranks as a genius of the simple. Basically, this underground storage area is made in a culvert that was designed for bridging creeks. Culverts are thin steel pipes that are very strong, light for their size, inexpensive when compared to other types of construction, galvanized and therefore rustproof. They come in a wide variety of sizes, from as small as one foot in diameter to 20 feet in diameter and bigger. Because of the huge size possibilities, culverts can fit into just about anyone’s underground storage needs. Our showcase structure was built into an eight foot culvert, however, many people building this type of shelter are now using ten foot culverts.

**Easily and quickly constructed:** This photo shows the culvert as it was near the end of construction. It is made from an eight foot culvert 50 feet long. Steel plates were welded onto each end to enclose the culvert. A one foot in diameter vent tube, again made from culvert, was placed in the top of the culvert on each end (not shown). The culvert coming off the top side of the main culvert at one end in the photo is a four foot culvert. Before the shelter was set into place, the culvert was rotated down so the small attached culvert was on the side of the main culvert. Then a length of four foot diameter culvert was welded on which became the entrance way. Before it was set into place, the entire outside surface, especially the welded portions, were sprayed with tar to prevent rusting. The floor inside the culvert was constructed from 2X4s and 1 inch plywood. This was placed in the culvert at the five foot wide point, being about 10 inches above the bottom of the culvert. With the floor at this point, there is slightly over seven feet of head room when standing. Next came the door on the front of the entrance way. Our featured shelter has a small six by six foot porch built around the culvert entrance which has a wooden door to the outside. There is also a second inner door constructed from steel, enclosing the four foot diameter entrance culvert. All that remains to be done is to put in the walls and shelves.

**Quickly set into place:** The hole for this shelter was dug in one day. The shelter was brought in and set into place with the vents and entrance pipe welded into place the next day, then it was buried the third day.

**Inexpensive for the size:** The owner of our featured shelter spent $5,000 in 1990 on all aspects of constructing and burying this shelter. (It would cost about $10K now (1998) with the proper blast doors.)
He did say that a lot of the wood for the floor and shelves was scrounged.

**Plenty of room:** Our featured shelter’s 5 foot wide floor has 250 square feet of surface. Total storage area volume comes out to about 2,400 cubic feet.

**Easily adaptable as an underground shelter:** Our featured shelter has a bed, dresser, small living area, library, and a large storage area.
This photo shows the end of the shelter next to the entrance. Note the 4 foot diameter culvert coming off the left just before the bed. The entrance pipe wasn't put on the very end of the 50 foot long culvert for a very good reason - so the bed would fit. Note also the vent pipe in the ceiling. The owner said he would cut it off close to flush with the ceiling if he had to do it over again.

We show you the first photo again to explain the two rock towers on top of the shelter. These enclose the vents, and was done this way so kids couldn't shoot holes through them.

**Your underground shelter can easily be hidden from view - no one even needs to know it’s there:**

With a tiny bit of forethought and planning, the vents could be easily hidden by terrain, in shrubbery, a rock garden, or in carefully placed outbuildings. The same could be done with the entrance way.

**Where to learn more:** Sharon Packer, a nuclear engineer and the head of the Civil Defense Volunteers of Utah has written a 150 page 8 1/2 by 11 inch book called Nuclear Defence Issues. You should get one if you are contemplating building one of these shelters. This book sells for $25.00 and includes:

- National Security Affairs
- Weapons Effects
- Building the Shelter
- Post War Survival

Mrs. Packer has a [new web site](http://waltonfeed.com/old/cellar3.html). You can get the book from there.
The Granddaddy Of All Underground Storage Areas

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Revised: 15 Jan 98
Meat Potting

Before refrigeration changed everything in Southern Alberta, meat potting was a more prevalent way of preserving meat than either salt curing or drying. In my mind, 'meat potting' was an accident waiting for a place to happen, but under the appropriate circumstances it could have a place again.

This is how we used to do it...

By Gordon Schaufert (born 1942)

Meat potting is preserving meat in it's own grease in a large crock pot. This is how we did it. Early in the morning Dad killed a pig and started cutting it up. He gave the pieces to Mom who had the wood stove in the kitchen hot and ready to cook. She started frying the pork and prepared the 10 gallon crock pot. This pot was about 18 inches in diameter and 24 inches deep. Mother washed it, and got it just as clean as she could get it. As the pork fried, it gave off lots of grease. She took some of this very hot grease and poured it into the bottom of the crock, sealing and sterilizing the bottom. Then she put the meat she had just finished cooking down onto this grease.

As she continued to cook throughout the day she added the well fried meat and covered it with the hot fat that came from the cooking process. By the evening the pig was all fried up and in the pot, covered over with a nice layer of lard that had hardened. As the days passed by, we dug down into the lard to where the meat was, pulled out what we needed, and put it in the frying pan. We cooked...
Meat Potting

it a second time to kill any bacteria that could have possibly gotten into it. Doing this not only re-
sterilized the meat for eating, but melted off all the excess fat. The meat was taken out of the pan
and the fat was poured back into the pot to seal up the hole we had just made getting the meat out.

Frequently Asked Questions:

1. How long can pork be preserved in this way?
In the Summer time we could expect it to last about six weeks. Of course in the Winter it would last
much longer. When it went bad there was no question about it, as it really started to stink. (In my
research for this subject, I talked with many old timers who never had any meat go bad through
many years of potting.)

2. How much did you have to cook it to be sure it was cooked enough?
We cooked it until all the red was gone, then cooked it some more. If there was even one piece put
in the barrel partially cooked it could have easily destroyed the meat in the whole barrel. Leslie
Basel, the custodian of the FAQs for rec.food.preserving suggests the meat be cooked to 240
degrees F and the fat that is poured in after it be even hotter.)

3. What other meats can be preserved in this way?
Really, you can preserve any type of meat. But if a low fat type of meat is potted, there must be an
adequate supply of extra fat to cover the meat as it is cooked and placed in the pot. (Several old
timers talked about potting beef. But mostly it was used for pork as it furnished it's own fat.)

4. Could meat be salt cured and then potted?
Yes, and this was done by some families. It is hard to say how long this extended the shelf life of the
meat in the pot.

5. What can I do to enhance my chances of potting safely?
Insure your crock pot is clean and sanitized before you start. Be sure the grease you pour into the
crock is always nice and hot as well as the meat. Keep everything as clean as possible. Don't use the
came cooking utensil to take the meat out of the pan as you used to turn or handle the raw meat.
Leave the utensil you use to move the meat from the pan into the pot in the frying pan where it can
stay hot and therefore sterilized. Do not touch the cooked meat with anything except the cooking
utensil you transfer the meat from the pan to the pot with. When putting meat into the crock, don't
touch the sides of the crock pot and don't touch the meat. Cover the crock with a lid when not
putting meat or fat into it. Remember, your success depends entirely on insuring that not one cell
of bacteria is permitted to remain alive in the pot. And on using the meat, schedule things out so
you plan on using the last of the meat within 6 weeks. (This was not a problem for the early folks as
they often had 10 or more children.)
6. Should I give this a try to gain experience in this type of meat preserving? Potting is no longer done for good reason. It's just not an approved way of preserving meat, considering our present technology. This information is given here for three reasons:

- Save the skill from being lost in a rapidly changing world. (There are fewer old timers every day.)
- Help people realize it is an option (in very hard times).
- Preserve our heritage.

Should you want to give it a try, go ahead. If you follow these instructions you will probably have good luck. Remember when you re-heat your meat, cook it good a second time to kill any bacteria that might have gotten into it. And if it starts to smell bad, don't mess around with it, throw it away!

**A last comment:**

The term 'scraping the bottom of the barrel' came from potting meat. By the time the old timers got to the bottom of the pot the quality of the meat was often very questionable. And hence the term means even today 'using something rather undesirable because it is all there is.' (Ref: Leslie Basel)

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**E-mail We Get...**

(The editor doesn't agree with every little sanitation measure (or lack thereof) suggested by Jeanne below. However, she's one of the few among us who has actually potted meat. She's a fun read. Letter used by permission.)

Howdy from Wyoming!

I just read the article on potted meat. I've never heard it called 'potted' before. My dad was from northern Alberta. He was born in 1900. We lived in Oregon and after I was married, we lived with my folks off & on.

In the summer of 1975, we butchered a big pig. With a little help from the local butcher, we always took care of our own meat, packaging and freezing it. We even rendered out the lard, (or the tallow if we were processing a beef). One year we had a power outage with a lot of meat in the freezer. There was a resulting power surge which knocked out the...
Meat Potting

freezers. As we couldn't afford to replace the freezers, we frantically brainstormed on what we could do to save the meat. Because there was so much meat to process, we did the crock-method, what you call 'potting.' However the meat was NOT cooked done, just 1/2 cooked.

Let me say that you NEVER pour hot grease into an empty crock. They're too precious to risk breaking! And when you take the meat out of the crock, you do NOT remelt the grease & pour it back in. You just keep a spatula, or pancake turner handy and smooth the grease back over sealing the newly made hole, then cover the the top of the crock again. We used an old, clean cloth diaper and placed this over the crock. Then we put a piece of plywood over the top of this, topped with a brick to hold it down.

Your instructions of using 'this tool' with the raw meat and 'that tool' with the 'cooked meat' is not necessary. Stick the dadgum spatula in the frypan. Flip the cooking meat. It won't be 'raw' any more. I'm 47 years old now and we did that 27 years ago.

The trick is to have a COLD storage room to keep the crock in with no bugs and no vermin around. Back in those days we had a well insulated well house which had a concrete floor which was ALWAYS COLD! And "cold" is the reason why you DON'T remelt the grease & pour it back in. The whole point is to keep the crock cold. And oh, by the way, we kept this crock of meat for a year without ANY spoilage. Would I do it again? Only with an appropriate cold room (or root cellar). It's a lot easier to just can it!

Jeanne Stueve
5 January, 2003

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Rees Family Cured Ham

The Rees family has been curing hams using the same recipe for at least 50 years. They continue to cure hams to this day and have no clue how old this cure receipt is.

For a 20 lb. ham:

- 3 Tablespoons Brown Sugar
- 2 Tablespoons Black Pepper
- 1 Teaspoon Red Pepper
- 2 Cups Salt

Mix the ingredients together and rub onto the skin-on ham, paying special attention to the hock. Then the ham is wrapped in paper, then wrapped in cloth, then placed in a cloth bag and hung with the hock down. The ham is hung in a well ventilated, dark and secure building. The ham "drips" for about two months and is ready to eat in about 6 to 9 months. The Rees family have stated they have eaten hams 3 and 4 years old using this recipe. They said the hams continued to stay edible right up until they completely dried out.
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Revised: 10 Apr 01
Curing meat by using a salt brine was a widely used method of preserving meat before the days of refrigeration. This is the way we cured pork in Southern Alberta, however it would work for beef as well:

Recipe by Verla Cress (born 1940)

**OK** - Brine barrel filled half way up with 1 cup salt per 2 gallons of hot water (that's 32 parts water - 1 part salt), and a bit of vinegar -

**OR**

**BETTER** - Brine Barrel filled 1/2 way with 5/8 cup salt & 3/8 cup curing salt per 2 gallons hot water, and a bit of vinegar.

Cut your animal up into ham sized pieces (about 10 - 15 lbs each).

Put the pieces in the brine barrel and let it soak for 6 days. Now that your meat is salted, remove the meat from the brine, dry it off and put it in flour or gunny sacks to keep the flies away. Then hang it up in a cool dry place to dry. It will keep like this for perhaps six weeks if stored in a cool place during the Summer. Of course, it will keep much longer in the Winter. If it goes bad, you'll know it!

**OR... FURTHER PROCESS IT BY:**

Putting it in a brine barrel, filled half way up with 4 cups brown sugar to 3 gallons water - and a bit of vinegar (note: no salt): Inject some of the sugar brine mixture into the already salted meat with a syringe, then put the meat in the sugar brine for 3 days.

Remove the meat from the brine and smoke it for 3 days. Now put your smoked meat into flour or gunny sacks to keep the flies away and hang it up in a cool dry place to store. Smoked meat preserved like this should keep in the Summer for at least 4 months if stored in a cool dry place. It will keep much longer in the Winter, or if refrigerated.

---

More Detailed Instructions:

This recipe was taken from a tiny home-made recipe book, "Remember Mama's Recipes." It was put together by the women of the Stirling, Alberta, LDS congregation back in 1973.

Brine Cured Pork

- 100 lbs pork
- 8 lbs salt (Note: 1 part salt to 48 parts water)
- 2 oz. salt peter
- 2 lbs brown sugar
- 5 gallons water

Method:

Mix salt, brown sugar and salt peter, add this to the water and bring the mixture to a boil. Stir to dissolve sugar. Skim off any scum that may form while boiling after everything is dissolved. Remove from heat and chill until quite cold.

Pack the pieces of meat into clean barrels or earthenware crocks, placing them as close together as possible. Now pour the cold brine over the meat making absolute certain the meat is completely covered. Put a board over the meat that just fits inside the container and place weights on it to make sure that the meat is emerged in the brine. When curing larger and smaller pieces of meat at the same time, place the larger pieces on the bottom and the smaller ones on top. This is so the smaller

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Extract from
Leslie Basel's
rec.food.preserving

Salt, Sugar, Sodium Nitrite and Sodium Nitrate.

Salt and sugar both cure meat by osmosis. In addition to drawing the water from the food, they dehydrate and kill the bacteria that make food spoil. In general, though, use of the word "cure" refers to processing the meat with either sodium nitrite or sodium nitrate.

Sodium nitrite and sodium nitrate are the basis for two commercially used products: Prague powders #1 and #2. Prague powder #1 is a mixture of 1 part sodium nitrite and 16 parts salt. The chemicals are combined and crystallized to assure even distribution. Even though diluted, only 4 ounces of Prague powder #1 is required to cure 100 lbs of meat. A more typical measurement for home use is 1 tsp per 5 lbs of meat. Prague powder #2 is a mixture of 1 part sodium nitrite, .64 parts sodium nitrate and 16 parts salt. It is primarily used in dry-curing.

One other commonly available curing product is Morton's Tender Quick. It is...
Salt Curing Meat in Brine

a mixture of salt, sodium nitrite, sodium nitrate and sugar. Ask your butcher or grocer to stock it for you.

[Where can these compounds be obtained?]

If you are chummy with a local butcher who does curing, maybe (s)he will sell you a small quantity. Otherwise, the Sausage Maker offers all items mentioned here. The Sausage Maker Inc./ 26 Military Road/ Buffalo NY 14207. (716)-876-5521.

© 1996, Leslie Basel

Also, check out Eldon's Jerky and Sausage Supply

There is some concern that sodium nitrate and sodium nitrite might be carcinogenic. Also a great sausage page.

The meat should be cured in a temperature that is just above freezing. If the meat is cured at a warmer temperature the brine may show signs of souring. If this should happen, remove the meat and soak it in lukewarm water for an hour or so. Wash the meat in fresh cold water and be sure to throw out the soured brine. Clean out the container, repack the meat and make a fresh brine in original proportions.

- Bacon sides and loins require 2 days per pound in this brine.
- Shoulders will take 3 days per pound.
- Hams will take 4 days per pound.

After the meat is cured the pieces should be soaked in warm water and then washed in cold water or even scrubbed with a brush to remove any scum that may have accumulated during the curing process.

Hang the meat by very heavy cords in the smoke house and allow to drain 24 hours before starting the smoking.

Hard wood is the best to use for smoking and the temperature in the smoke house should be 100-120 degrees F. The ventilators should be left open at first to allow any moisture to escape. Smoke until desired flavor and color is arrived at.

The Way We Did It...

As told by Glenn Adamson (born 1915)

We never had electricity or an ice house on the farm. Since we had no way of keeping meat refrigerated, we only killed animals as fast as we ate them. ...Pork was our main staple. It seemed there was always a pig just the right size to butcher. We ate more meat out on our farm than the typical family eats now. In the summer, what pork we didn't eat immediately was preserved. When we butchered a pig, Dad filled a wooden 45 gallon barrel with salt brine. We cut up the pig into maybe eight pieces and put it in the brine barrel. The pork soaked in the barrel for several days, then the meat was taken out, and the water was thrown away. We sacked a shoulder, a side of bacon, or the ham, which was the rear leg, in a gunny sack or flour sack to keep the flies off. It was then hung up in the coal house to dry. Quite often we had a ham drying, hanging on the shady side of the house. In the hot summer days after they had dried, they were put in the root cellar to keep them cool. The meat was good for eating two or three months this way. We didn't have a smoke
house like some people had. But what we had worked just fine. In the winter time when we killed something we didn't have to cure it. We'd hang it outside the house or somewhere else where it was cold and it kept just fine. (We're talking Canada, here, where it gets really cold.)

My Uncle George Ovard told me the following story when I was just a kid: He had put a pig in the brine barrel and when he went to take it out several days later he only found half of his meat. This puzzled him somewhat, but he never said anything about it. A couple of days later, one of his neighbors happened to stop by and mentioned, "I hear someone took some of your pork out of your brine barrel."

Uncle George said, "Yes, but I didn't tell anyone about it." The guy had trapped himself right there.

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Revised: 2 Sep 99
Yeast Cultures

Jump within page to...

- Method One
- Method Two
- Method Three
- Notes on Yeast and Yeast Cultures

Method One

As told by Maud Shurtz (born 1896)
contents © Al Durtschi

We kept our yeast culture in a gallon crock jar. When making bread, we used all the contents except about a cup. This gave us the `seed' to rebuild our culture. We did this by adding cool potato water, some mashed potatoes, a 1/4 cup of sugar and a cup of flour. We then gave it a stir, and set it in a warm place near the stove. When potatoes were cooked for dinner, we added the cooled potato water to the yeast culture. If all went well with our culture, the yeast was ready for the next bake day. If for some reason the yeast died, we carefully washed and sanitized the crock pot then went to the neighbor's place for another start.

Method Two

As told by Rose Adamson (born 1915)
contents © Al Durtschi
When making bread, my mother pulled a piece of dough off maybe the size of a cup and threw it in the flour bin. The day before she made bread again she went to the bin and got the bread dough which was now large and flat and quite hard. She put this in a bowl of warm potato water with some sugar and let it sit in a warm place. The next day when Mother was making bread she poured the now frothy yeast culture into the bread makings.

(Note from the author: In trying this out, it worked fairly well unless it was left in the flour bin too long. I found that if I left it more than a week the yeast culture died.)

Method Three:

Yeast Cakes
By Bob Scott

- 1 pint fresh buttermilk
- corn meal
- 1 cake of yeast
- 1/2 cup of white flour and more corn meal

Bring the buttermilk to a boil then remove it from the stove. Stir and add corn meal until quite thick then cool. Soak yeast cake in warm water. Stir into above and let stand (rise) overnight. In the morning stir in the white flour and extra corn meal to make the dough very stiff. Roll out to thickness of boughten cakes and cut into squares and let dry.

Use like store bought yeast cakes.

Notes on Yeast and Yeast Cultures:

- Yeast requires warmth to grow
- Yeast goes dormant at 63 degrees F (14C)
- It works best between 80-95 degrees F (24-35C)
- Yeast slows down above this until it dies at about 109 degrees F (46C) Yeast cultures are fragile and are easily contaminated and killed by bacteria
- Keep all wooden or plastic spoons, and everything that is added to the pot as sterile as possible
- Do not use metal as your yeast culture pot (this includes the stirring utensil) - use a ceramic or plastic container
- Place a loose fitting lid on top to allow the carbon dioxide to escape
- Yeast changes sugar and simple starches into carbon dioxide and Ethel alcohol
It is possible for the yeast to kill itself by the alcohol it produces. For bakers yeast this happens at about 12 percent alcohol content. To prevent this from happening you must keep an eye on it. When it stops frothing it is either out of food or is nearing it's toxicity level. Add more water and carbohydrates and if your crock is already full, dump some of it out.

Final Note: Don't expect your yeast culture to act like dried high potency yeast. It will act much more like a sour dough recipe and may take several hours to raise.

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Revised: 4 May 99
Makes eight to ten loaves of bread.

Ingredients:

- yeast culture
- 2 1/2 quarts water
- 1 1/2 cups of sugar
- lots of flour
- 2 table spoons of salt
- 1 1/2 cups of melted lard.
- Cooking time: 35-45 minutes at 325 degrees F
First my sisters stirred up the yeast culture and poured most of it into a big bowl, then they added warm water until the two together equaled about 2 1/2 quarts. (Don't use hot water. Yeast dies at 109 degrees F.) Then about 1 1/2 cups of sugar was added, and stirred up into the water. My sisters then waited for bubbles to start forming on top of the mixture. If the yeast was dead, the bread wouldn't rise. After it started bubbling, my sisters added about two quarts of flour to start out with. This was all beat until the batter was smooth. Then they added 2 tablespoons of salt and about 1 1/2 cups of melted lard. Then they mixed it all together. At this point the dough was sloppy, like very thick pancake batter. They whipped this with a spoon for about ten minutes to bring out the gluten. At this point, they started adding flour, 2 cups at a time, working it in with a spoon, until it became so stiff a spoon didn't work any longer.

But it wasn't done yet. My sisters then, using their hands, continued to knead the flour into the dough until it became rather stiff. Let me explain a little further. The consistency was right when it had an elastic feeling when kneaded. It needed to stick to ungreased hands. If it didn't stick, it had too much flour in it, and the bread would be too dry after baking. At this point the dough needed to be kneaded and worked for about ten more minutes. Further working it helped to complete bringing out the gluten. This really gave my sisters a good workout (something I enjoyed watching). They didn't have muscles in their arms for nothing! Lard was rubbed on the dough on both sides so it wouldn't dry out, or stick to the bowl.

My sisters now set it aside until it had doubled it's size. It was then punched down, and let rise again. After rising the second time, my sisters put it into loaves. They did this by flouring the table top so the dough didn't stick to the table. Then they put the dough on the table, spread it out, and divided the dough into equal portions. They took each portion and kneaded it until all the air was worked out. Then they formed it into the shape of a loaf and put it into the pan. Our family didn't have single loaf pans, but had pans which held four loaves at a time. Since our oven could only hold one of these pans, the rest of the dough wasn't put in pans for at least a half hour. If they did, the second batch rose too high before it could be put in the oven. Before putting in the oven, the loaves needed to rise and increase in bulk two or three times.

Getting our wood burning stove's oven just the right temperature was a real art. We didn't have any magic instruments to tell us when it was right at 325 F. So my sisters had to learn a couple of other tricks instead. If it wasn't hot enough, more wood or coal had to be added to the fire. If it was too hot, they left the door open a crack until it cooled down to about the right temperature. During
all the bread making, they had to be getting the oven hot so it was ready when the bread had risen.

My sisters were good at knowing when it was just the right temperature. When they opened the door, they could tell how hot it was by how much heat hit them in the face. I guess it's one of those skills one acquires through experience. After the bread was put in, they kept a close watch on it to make sure the oven wasn't too hot or too cool. With four loaves of bread in one pan, it took a little longer to cook. The bread usually baked an hour. But if they were in separate loaf tins, it cooked in less time, perhaps 35-45 minutes. My sisters could tell the bread was done by looking at it in the oven. If it had a nice golden look, it was either cooked, or half raw in a too hot oven.

After the bread was out of the oven and separated, if my sisters pushed in lightly on the sides, and it sprang back out, the bread was done. To finish the process off, butter was rubbed on top of each loaf to give it a nice golden look, and help prevent the crust from drying out. If my sisters were on top of things, the second batch was already in the pans, risen the proper amount, and ready to go in the oven when the first batch came out.
Recipe instructions by Rose Adamson (born 1914)
contents © Al Durtschi

Step 1: Collecting the cream: You must first get the cream. You do this by letting the raw whole milk sit for several hours. The cream will naturally float to the top. You can skim this off the top of the milk. We used a `cream ladle' which was a large spoon shaped piece of tin with holes in it - the holes being about 1/16 inch in diameter. The milk ran out the holes but the cream wouldn't. The cream was collected and put in the root cellar, the coldest place we had. Every morning we collected the cream from the previous day's milking and added it to the other cream we had collected. After about a week we had enough cream to make a batch of butter. Note: the colder the milk the thicker the cream. If you have the refrigeration, get the milk as cool as you can without freezing it. Otherwise put it into a cool creek if you have one handy.

Step 2: Souring the cream: As you can imagine, our cream was already quite sour after a week of gathering the cream in a root cellar that didn't get any colder than 60 degrees F. If it was in the Winter and the cream hadn't soured, we brought it in the house and set it on the counter for 24 hours so it could begin to sour. Note: The butter will not separate easily from fresh cream if it hasn't soured.
Step 3: Get the cream temperature right: The butter will not separate from the cream if it is too hot or too cold. Room temperature is best - say 50-68 degrees. It should not be even close to the melting point of butter. If your cream has been sitting out on the counter you can ignore this step.

Step 4: Churn your cream: Put the cream in a butter churn. Do not fill it over half full. There are two types: the vertical plunger churn and the rotating paddle churn. Which ever type you use, churn the butter in a steady and methodical motion. With a vertical plunger churn, raise it all the way up and push it all the way down in one second cycles. Gradually turn the plunger as you do this. If you have a paddle churn, turn it about one revolution every second. Separating the butter from the 'butter milk' is not a fast process. Depending on conditions it could take you from 1/2 hour to forever! When one hand gets tired, switch! A different feel is one of the indications that it is getting done. It got thicker, then shortly thereafter the butter separated out. You can also take a look inside and see what progress you are making.
Making Butter

Step 5: Separate the butter from the buttermilk:
You can use the cream ladle or the butter paddle. This resembles a large wooden spoon 3 inches in diameter, only almost flat. Carefully scoop the floating butter off the top of the buttermilk and place it in a bowl.

Step 6: Remove all the remaining buttermilk from the butter: Using the butter paddle, work the butter back and forth on the sides of the bowl. As the buttermilk comes to the surface pour it out of the bowl.

Step 7: Wash the butter: Pour a small amount of very cold water into the bowl and work the butter like you did before. As the water becomes discolored, pour it out and pour in more cold water and continue to work it. Continue this process until the water remains clear. Note: It is important to work all the buttermilk out of the butter as it will go rancid if you don’t. And it will ooze and run, most distasteful to the more delicate souls among us.

Step 8: Add salt: Sprinkle in 1 teaspoon of salt per pound of butter and mix it in. Then taste it. If it is too salty for your taste, you can put in more cold water and work it through the butter as you did before. The salt will gradually migrate into the water.

Step 9: Put in molds: Butter molds have false bottoms for pushing the molded butter out of the mold. Pack the butter into the mold, being sure to get rid of any air bubbles. (This way, if you sell it, people won’t think you are cheating them when they knife into one of them.) Then push it out of the mold and wrap in butter paper. Or you can put it into an old margarine container and put the lid on if you are keeping it for personal use.

NOW

As told by Montey Rasmussen (born 1951)

We put our fresh, unpasteurized, raw cream straight from the refrigerator into our Bosch bread
mixer, attach the wire whip, and turn it on. The mixer first turns it into whip cream then after a
couple of minutes it rather abruptly separates into butter and buttermilk. For the last minute or so
I have to hold the lid down tight on the mixer as buttermilk is flying everywhere. It takes about 5
minutes to do this.

With this type of high speed mixer it isn't necessary to let the cream sour. I think the fresh cream
makes much better butter. After I turn off the mixer and take off the lid, I pour most of the
buttermilk out of the side of the bowl and collect the butter. The majority of the butter is wrapped
up in the wire whips that I flip out.

We get the buttermilk out of the butter and wash it much like the instructions above for the old
time recipe. However, as I work the butter I try to keep it as cool as I can as working the butter
when it is too warm will mess things up. I've even put ice cubes in the water to cool things off
without damaging the butter. When our butter is finished, we put it in a margarine container and
put it in the refrigerator.

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**A Little Butter Making Story**

As told by Sarah Bean Romeril (born 1851)
to Maude Romeril Shurtz (born 1896) her daughter

We had a wooden barrel churn to make butter. The children
all took turns in doing the churning. One day, I got the
churning under way and left Vilate and Maude to finish it,
while I went to Raymond with our horse and wagon. The girls
must have had the cream too cold as they churned it for hours
and it still didn't come. They even put spoons in the churn,
thinking the spoons would help the cream splash around and
hasten the process. When I came home, I could see how hard
they had been working at it, so we put it away for another day.

As we churned the cream it got thick and then it separated
into thin buttermilk and little chucks of butter. We'd drain off
as much buttermilk as possible. Then it was washed to get all
the buttermilk out so it would not go sour. To wash it, it was
worked with a wooden pat and clean water. Salt was added,
and mixed in, then it was printed with a butter mold into
pounds with crosses on top that made it look very nice. Finally,
it was wrapped in butter paper and put in the cellar to keep it
cool until it could be taken into town and traded at the general
store. What was left was made into nice round pats, crossed on
Making Butter

top with the butter pat, and this was used for our table.

Before we had a cream separator, I set the milk in milk pans, set them on shelves in the cellar, and marked the pans A.M. or P.M. with chalk. Then in about 24 hours the cream was skimmed off the milk for churning. Maude always liked to lick the skimmer afterwards. She liked cream very much...

Churning Butter On A Farm

Just about every 2 or 3 days at our house it was churning time. We took our turn and we did dread it, but tried to make it fun since it had to be done. Our churn was a 4 or 5 gallon stoneware jar with a large mouth. It has a wooden lid and dasher. We kept our milk and let cream rise to the top. We filled the churn half full or a little over with the cream skimmings off the milk. You haft (have to) pour warm water in the churn to make it come quicker. That is to make the butter quicker.

We started to churn by wrapping a cloth around the dasher above lid to keep it from splattering. We pushed the dasher up and down, up and down. That dasher is something akin (like) a broom hannel (handle), on one end a cross of two slats. As it goes up and down innin (in) the churn it agitates the cream. You have to keep doing this about 30 or 40 minutes. We used to sing:

"Come butter, Come butter, Come!
Peter - standing at the Gate!
Waiting for a Buttercake!
Come Butter Come!"

I had forgotten all the words until a lady remembered the words. Her mother sang this tune as she churned on the farm.

The temperature of the cream had a great deal to do with the amount of time it took to churn and make butter. If the cream wasen (was) too hot, the butter would be too soft and puffy. Iffin (If) it was too cold, it made little balls and butter wouldn't gather, stick together. Hot water, stirred with the dasher into cold liquid helped gather the butter. When the butter gathered enought, we removed the lid and gently moved the dasher sideways and brought the butter 'gather (together). We lifted out the lumps of butter and put in a big bowel (bowl) and drained whey away. We worked it good with a butter paddle (flat wooden paddle) similar to a spatula. We would work and work to get all the water out. Mamma'd send us back to worken it more. After working all the water out, we rinsed it with cold water and worked that water out. This gave it a fresher flavor and we added 1 teaspoon 'a salt into a quart of butter. We used a wooden butter mold with a design in mold. We spooned the butter in and firmed it up and pushed the butter out of the mold with the mold handle into a butter bowl. We then set it in a pan of cold water and covered it with a cloth to cool. It was ready to eat with sorghum. The milk in the churn was good buttermilk. It was poured
Making Butter

into buckets or jard (the act of pouring into jars) to cool and be ready to drink and be used in cooking.

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**Homemade Country Butter** (Modern Day Methods)

Put some papers on the floor and dig out your churn. Clean it good and put it on the papers. While you are getting the churn all ready, soften to room temperature 1 pound of the cheapest oleo you can buy and 4 oz. of cream cheese. When these are soft, stir in one small can of evaporated milk. Mix until moisture is worked out. Can use a spoon. This keeps well in the refrigerator or it can be frozen. You may omit the cream cheese and add a pinch of salt. Muss your hair, flop in a chair from fatigue and serve your "Homemade Butter" for supper and tell your family how you 'worked' all day to make homemade butter just for them! And its good! Yummy too! Mrs. R.L. Ford and Mrs. J. L. Bryan.

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**Egg Butter**

We always liked anything with sorghum. Melt a quart of molasses with 1/4 cup butter or bacon drippings in a heavy pan (skillet is best) and add 6 beaten egg yolks. Stir pretty fast, then stir in some nutmeg to your taste. Serve with biscuits and it is plenty good. My dad made sorghum and many times this was our only breakfast. Mrs. Earl Squyres.

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Revised: 2 Jul 01
Making Sauerkraut

There's a reason for everything, even if we don't understand it. It's likely the old timers of 200 years ago didn't understand many of the reasons they made sauerkraut except they knew this was a good way of preserving their cabbage through the winter. Today we know that fresh, raw cabbage is very rich in vitamin C, containing enough in 200 grams (that's about a cup) to supply a whole day's needs. Cooked cabbage and sauerkraut have about half this much. Sauerkraut is also an excellent source of Vitamin K. In the old times, Vitamin C was hard to come by during the winter. Beyond their conscious knowledge, sauerkraut was one of their very few sources.

The Recipe...

By Mabel Mertz
of Southern Alberta

- 5 lbs shredded cabbage (About 6 quarts, pressed)
- 2 oz salt (3 tablespoons)

Shred cabbage finely, put it in a large pan. Mix cabbage and salt with your hands. Pack gently with hands or potato masher. Repeat until crock (Al uses a 6 gal plastic bucket) is nearly full. Cover with

See a great web site on fermenting foods... http://www.wildfermentation.com/
...and another great web site on sauerkraut recipes. http://www.sauerkrautrecipes.com/
Making Sauerkraut

cloth, plate and clean rock or something heavy. During the curing process, kraut needs daily attention. Remove scum as it forms and wash and scald cloth often to keep it free from scum and mold. At room temperature, fermentation will be complete in 10 to 12 days. Pack into jars adding enough juice to fill jars. Often there is not enough juice. If this happens, make a weak brine by dissolving 2 tablespoons of salt to a quart of water. Screw bottle lids on tight and process in a boiling water bath for 15 minutes. After bottles are cool be sure they have sealed before putting them away.

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**Filling the 50 Gallon Barrel**

*As told by Lucinda Jensen
© 1997 by Al Durtschi*

"Every fall during the Depression the cabbage we raised was picked and placed in a big pile by the cellar. Then one of the family, usually the smallest one, had to go down to the ditch and scrub their feet. This was not such an easy task after running free as the wind bare foot all summer long. Sometimes the feet had become chapped from repeated wading in the streams and mud baths. (Time was not wasted on baths and scrubbing feet during the summer. That was something to be endured the months we had to spend in school.) Someone was sent over to Maria Mitchell's to borrow the cabbage cutter. Then the fun began as the cabbage was shredded and dumped into a large fifty-gallon wooden barrel. The one with the clean feet stomped it. Salt was added according to the need and so the process went on until the cabbage was all snugly pounded into the barrel. The others who were not actively involved in making it had the fun of tasting it as the barrel was being filled. Their job was to see that just the right amount of salt was added. Of course, Mother was the official taster. After the cabbage had cured the barrel was stored in the back room.

"After school, we came home and kicked off our hot new shoes and changed our one and only dress. Then we dove into the large plates of sauerkraut and delicious boiled potatoes with butter, salt, and pepper. My, what wonderful flavor! After this was enjoyed, then came the work....

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**The following was submitted by Kevin Cramer**

I read Mabel Mertz's recipe for homemade kraut and think I might have something to improve the process. Although it's not a 100 year old method, it was taught to me by Bill Scmuck (himself in his 80's). We use 2 trash bags, double bagged and filled with about 10 inches of water as a fermentation lock on our sauerkraut. We've fermented at least 2500 gallons using this method over the last 12 years. The only failures have been attributed to "peeking". DO NOT peek until the fermentation has ceased 7-8 weeks at 65º F, and then bag or can it immediately.

Clean your crock (or in our case Rubbermaid trash cans) with bleach water and rinse well. Slice, stomp,
Making Sauerkraut

salt, and pack your cabbage into the trash can leaving at least 12” of space at the top. Wipe any cabbage from the sides before inserting the bags (this stuff turns hard and is nearly impossible to scrape out later). Carry this beast to your basement, put 2 bags (one inside the other) into the top of the can and fill it with 10 inches of water from a garden hose. Loosely tie the inner bag into a knot (to slow down any evaporation). Make sure that there are NO gaps along the sides. Check your water level every 2 weeks or so and top off if necessary. Then remove the bags of water CAREFULLY... so as not to rupture them and flood your work. You could siphon or dip this water out if you really wanted to.

We make 1000-1500 pounds of sauerkraut every October and then bag it into 1 quart freezer bags in late December. We let the bags freeze outside, on a tarp (cover the bags or the kraut will bleach in the sunlight). We then move them into our chest freezers and give them out for Christmas presents. In Central Pennsylvania it is a tradition to eat sauerkraut every New Year's day. Most of the older family members really appreciate the taste of good, un-rinsed kraut.

If you don't want to freeze or can it, you can take it from the crock and quickly cover it back up with the fermentation lock. I would use 5 gallon buckets for this method so that you don't destroy more than a few gallons if you contaminate a batch. Friends of ours have had success with this method... they also consider burying their venison as a winter storage option.

We bury the cabbage "butts" or "hearts" in the kraut and ferment them along with the kraut. They taste like pickles and can be eaten raw. This year we are going to try a batch with peeled horseradish roots inserted into the cabbage as it ferments. A Slovak friend tells us that it adds flavor but little heat.

Kevin

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Revised: 21 Sep 01
Learning to make your own soap can be a rewarding and worthwhile experience. Not only does it teach a valuable skill that could come in handy during less than prosperous times, but I have found it to be a lot of fun. It is abundantly rewarding to use something like this that one has made himself. (Self reliance is a very good feeling.) I have also found that making my own soap from store bought raw materials is cheaper than buying it. My first bar lasted a month in the shower with my wife and myself using it - much longer than a store-bought bar of soap would have lasted.

### The way the old timers used to make it…

### Soap Making Today:

- Basic Instructions
- Making Soap With James Hershberger, A Chemical Engineer
- A Soap Making Recipe For Beginners by James Hershberger
- The Lye to Fat Table
- Rebatching
- Soap cooking... How to do it in a modern setting.
- Rendering Fat
- Six Old Time Recipes
- Finding Soap Making Supplies
- Determining Your Soap's pH
- The Way Al Makes Soap

### Links to Other Sites:

- What is soap made of?
- Bubbles
- Detergent Builders
- Majestic Mountain Sage Material Safety Data Sheet (MSDS) info, Lye Calculator, fragrance calculator,
Supplies, Soap, and more. This is a top notch site.
- Get a really great little [lye calculator](http://www.soapdelicatessen.com) Windows program.
- **Finally... Soap Making From Ashes** by someone who knows what they are talking about by Paul A. Norman.
- [Soap making](http://www.soapdelicatessen.com) by Elaine White. Excellent information.
- [Mountain Sage's Soap Making Mailing List](http://www.soapdelicatessen.com)
- Rainbow Meadow [soap making mailing list](http://www.soapdelicatessen.com).
- [Beautiful Bubbles](http://www.soapdelicatessen.com) with Leslie Wilson
- Essential Oils and trays for your soap making at [The Essential Oil Company](http://www.soapdelicatessen.com).
- Soap molds at [Kelsei's Creations](http://www.soapdelicatessen.com).
- [Soapmaking by Kathy Miller](http://www.soapdelicatessen.com) who has been at it 20 years.
- [Cranberry Lane Natural Beauty Products](http://www.soapdelicatessen.com) - More soap making supplies.
- [The Wellington Fragrance Co.](http://www.soapdelicatessen.com) (wholesale)
- [The Soap Saloon](http://www.soapdelicatessen.com)
- [GTF Labs](http://www.soapdelicatessen.com) for lye in relatively large quantities.
- [Camden-Grey Essential Oils](http://www.soapdelicatessen.com)
- [Beeswax and honey soap](http://www.soapdelicatessen.com) by Honey Hill Farm
- [SunFeather Natural Soap Company](http://www.soapdelicatessen.com) Home crafted soap and supplies
- [Handcrafted Soap From The Enchanted Forest](http://www.soapdelicatessen.com)
- [Berkshire Blues Soap Page](http://www.soapdelicatessen.com)
- [From Nature With Love](http://www.soapdelicatessen.com) - Soap making and aromatherapy supplies.
- [Soapmaking Discussion Forums](http://www.soapdelicatessen.com)
- [The Victorian Greenhouse](http://www.soapdelicatessen.com) Soaps and Supplies
- [Sunshine Soapworks](http://www.soapdelicatessen.com) Soaps and Supplies
- [Sweet Soaps](http://www.soapdelicatessen.com)
- [Uniquely Designed TLC](http://www.soapdelicatessen.com) soap/Cutter Molds
- [Soap Making Machinery](http://www.soapdelicatessen.com)
- [FnFSupplies.com](http://www.soapdelicatessen.com)
- [Seraphina](http://www.soapdelicatessen.com) Spa and body products... naturally
- [Devonshire Incense and Soaps](http://www.soapdelicatessen.com)
- [Charmed Life Bath & Body Specialties](http://www.soapdelicatessen.com)
- [Universal Candle & Soap Making Supplies](http://www.soapdelicatessen.com)
- [The Soap Wizards](http://www.soapdelicatessen.com)
- [The Soap Deli](http://www.soapdelicatessen.com)
- [Jed's Wooden Soap Crates](http://www.soapdelicatessen.com)
- [Soap Making at Backlink.net](http://www.soapdelicatessen.com)
- [The Scent Source](http://www.soapdelicatessen.com): Wholesale supplier of fragrance oils for the candle and soapmaking industries.
- [Lady Bird Soap](http://www.soapdelicatessen.com)
- [http://www.soapdelicatessen.com](http://www.soapdelicatessen.com)
- [Buffalo Girl Soaps & Soapmaking Supplies](http://www.soapdelicatessen.com)
The Soap Making Home Page

- Audrey Leigh Essential Oils
  - http://www.pinemeadows.net Supplies for making soap, lotion, bath salts, candles, and other cosmetics.
- Soap Supplies at http://www.betweenfriendstoo.com
- http://www.Scentedbubbles.com
- Shea Butter At Discount Prices
- Village Herbals - products using all natural ingredients.
- Country Rose Soap Quality handcrafted all-natural Herbal Soaps, Herbal Lip Balms, Creams, Lotions, Massage Oil, Unique Gifts and more.
- Athena's Choice All Natural, Baby Approved Soaps.
- Natural Selection Bath And Body a full range of products including essential oils, fragrance oils, carrier oils, flavor oils, packaging, botanicals, aloe vera and lots more.
- http://www.littlescentedsecrets.net/ a family-run company who make homemade soaps, including an all-natural olive oil soap.
- http://www.handcraftedcountrysoaps.com Affordable luxury soaps, that will seem to give you the softest skin ever! Yes, we use lard mixed w/ exotic oils for a really nice bar of soap!
- The Ponte Vedra Soap Shoppe Aromatherapy and soap making supplies.
- Earth Essences We offer pure essential oils and aromatherapy products.
- Bath and Beauty Auctions
- Candle & Soap Making Supplies
- Moonlight Soap All natural and handmade.
- Nature's Apprentice Soap Making Supplies and soap making history.
- http://www.superiorsoaps.com/ Made on the shores of Lake Superior.

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Soap Making...
The Way We Used To Do It

This page reflects one axiom of the true pioneer spirit found in an active little lady who intimately knew those times: use everything and don't throw anything away. Anything can be used for something.

The following information and recipes are told by Mabel Mertz (born 1912).
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- Jump within page to Basic Instructions
- Jump within page to A little Story

Note: These soap recipes are lye heavy. Look for the (updated lye requirements in parenthesis).

- Jump within page to Recipe #1
- Jump within page to Recipe #2

Basic Instructions

As we had no money to buy fat with when I was a girl, we made our own by rendering it when we killed an animal. We cut off the fat, cleaned it up, then cut it up finely with a knife. Then we put it in our big pots and cooked it until all that remained was the cracklings floating in the boiling fat. We drained off as much fat as we could, poured it into pails, and stored it in the root cellar. We used this to make pies, and to cook with. We put the cracklings away for another day when we would make soap out of them. The cracklings still had a lot of fat in them. In fact, the main reason we cooked the soap was to dissolve, or disintegrate the cracklings into the soap.

On the day we made soap, we took the cracklings and put them in our big copper kettle. As they were heating on the stove, we added our lye, sprinkling the crystals on top of the cracklings. Then we added the water and started stirring it. We boiled this mixture until the cracklings disappeared. If there was any little pieces of meat in the cracklings they wouldn't dissolve and we
had to take them out with a wooden spoon, or lift them out on the end of our stirring stick. We continued to stir and boil it, checking it every 20 minutes or so to see if it was done. We did this by taking a spoon full out and pouring it on a plate. We knew it was done when it hardened to the consistency of soft cream cheese after it cooled. Sometimes there was streaks of water running through it. If this happened we knew it needed more water. We poured more water in, boiled it some more, then tried it again. If it ran off the stirring stick like water, we knew it had too much lye and needed more water. We knew it was right when it left a creamy layer on the stick. We didn't have any recipes in the early days when I first learned how to make soap. After a bit of the mixture had cooled, I put it on the end of my tongue. If it’s bite was just right I knew I had the lye/fat ratio correct.

When the soap had finished cooking, we poured it out of the kettle, sometimes as much as 4 inches deep into a small galvanized tub. The soap didn't set up really hard immediately. I waited until the next morning to tip the tub upside down, knock the soap out of it, and cut it up into bar sized pieces. Then I sat the bars outside on a board to continue drying. It wasn't too many days before it was ready to use. To store it, we threw it into a box.

Sometimes we wasn't get to the soap making right away and the cracklings went rancid. This wasn't matter, however, as during the soap making process the lye cleaned them right up, and the soap that came from them was just as nice smelling as if we had used fresh cracklings.

Home made soap makes great pre-wash. Get the clothes damp and rub the soap bar on the bad spots. It works as well as the expensive stuff from the store.

I've seen dozens of soap making recipes. But let me tell you, as an old soap making expert, I haven't seen any better soap made than the soap haven't manufactured with the three simple ingredients: fat, lye, and water.

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**A little Story**

Mother once told me a bit of a mean little story about something that happened before I was born. At the time she was in charge of the woman’s organization at the church. One of the ladies felt her family didn't have as much money as the rest of them had and continually complained, "If we had as much money as you have, I could be like the rest of you," she said. You must keep in mind that in our little pioneer community, none of us had any money and we were all shabbily dressed! One day after tiring of listening to this woman, Mother asked her to come with her, took her outside to where our buggy was, and pulled out a box from under the buggy seat. Giving her the box filled with home made soap, she said, “Fine, if you want to be like the rest of us, take this home and use it!”

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**Never Fail Soap**

- 5 lbs cracklings
Soap Making... The Way We Used To Do It

- 1 gal soft water
- 1 can lye (1 lb.)  (This recipe lye heavy. Use 10.6 oz. lye)

See the above information to see how long to boil it. Remove from heat and stir until thick. Perfume it if you like and pour it into molds if you prefer, in the wash tub it does a good job of cleaning soiled clothes.

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Home Made Soap

- 9 lbs fat
- 1/4 lb. borax (optional)
- 1/4 lb. rosin (this makes the soap softer, but again optional)
- 2 small cans Gillette Lye  (This recipe lye heavy. Use 19 oz. lye)
- 5 Quarts water

Boil together for 2 or 2 1/2 hours

Set for three days, then put in tight wood box lined with newspapers.

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The two recipes come from Mrs. Mertz's little book she put together for the ladies of the community back in the 50’s called Remember Mama’s Recipes.

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Soap making is not hard to do if you are armed with just a little bit of information. Soap is the result of combining fats with some sort of caustic agent such as lye using water as a catalyst. Armed with just a little bit of knowledge it’s possible to turn out a nice batch of soap with things that can be purchased at most grocery stores. Read on to get the specifics on this fun and interesting hobby. Study this page carefully and you shouldn't have any problems turning out a great batch of soap.

Jump within page to:

- Water
- Lye
- Fats and Oils
- Soap Mixing
- Saponification
- Superfatting
- Coloring Dyes
- Scenting Oils
- The Soap Setting Tray
- Final Curing and Storage
- Soap Making Tips
  - The Lye/Water/Fat Ratio
  - Mixing Order Of Ingredients
  - The Intentional False Trace
  - The Curing Process and Your Part In It
  - Using Your Soap

**Water:** For best results, use rain, distilled, reverse osmosis or de-mineralized water. Your water should be 0.38 of your fat by weight. Don't worry too much about getting it exact, however, as this measurement isn't terribly critical.
Soap making - General Instructions

Lyso: You should know a little bit about lye, or sodium hydroxide. Lye is a very strong base. If you get it on you, you will find it's bad stuff. (Be sure to store lye where kids or pets can NEVER get at it.) You must use care in determining what utensils and mixing containers you use when handling lye. Use wooden or plastic spoons and enameled, plastic or glass bowls for mixing. (Lye will eat up Aluminum in a hurry. Also, lye instantly and permanently takes the shine off Formica. Formica is so sensitive to lye that it left timeless streaks across the table where I wiped a few dry crystals off with my hand. Now, with our table top and kitchen counter tops ruined, the wife ushers me outside when I handle lye.) You would be wise to wear eye protection and rubber gloves when handling the lye crystals or the lye solution after you have mixed it into the water.

Dissolve lye in cold water. Having half your water as ice would be so much the better. Never pour the water into the lye. Doing this could cause the mixture to explode and blow very corrosive lye water and crystals all over the place. Rather, always pour the lye into the water. If you don't stir it immediately as you pour the lye into the water, the lye will settle to the bottom and quickly solidify. This isn't a problem as tapping it with the stirring utensil will break it up. As you mix it, a physical reaction takes place between the lye and the water generating a lot of heat. If you are making a large batch of soap, the lye can even start the water boiling - with little droplets of lye water splattering all over the place. If this starts happening, stop stirring it until the bubbling stops. Generally, it doesn't take more than a minute to dissolve the lye crystals into the water. You know this has happened as the water will become relatively clear. Before using, the lye water must now cool down to about 85 degrees F (or room temperature if your mixing area's above 85 degrees) before adding it to the fat.

Fats and Oils used in soap making. In my experiments I have learned almost any fat or oil can be used to make soap. Fats for soap making include animal fats such as tallow (fat from beef), lard (fat from pork), and the various plant derived oils and hydrogenated fats. Traditionally, animal fats have been used, with beef tallow making the hardest soap, pork lard a medium hardness soap and chicken fat the softest. It's generally accepted that the harder fats make better soap.

There are a multitude of fats and they each bring their own unique qualities to soap. If you want to know what a particular fat will do, make a small batch of only that fat and see what kind of bar it makes. Armed with this knowledge you can mix fats to give your soap the qualities you want. This is how soap recipes are born.

Whatever type of fat or oil you use, you must ensure it is clean and free of impurities. It shouldn't be rancid, have excess salt in it, or have any solid particles. (Many people remember the soap ‘grandma used to make,’ and have unpleasant memories of nasty smelling stuff. If Grandma had used clean, fresh, fat, her soap would have smelled clean and fresh. But we can't blame Grandma as she did the best she could with what she had. You will notice that Mrs. Mertz disagrees with me on this point in her ‘how we used to do it’ page.)

Rancid and dirty fat can be cleaned by boiling it for a few minutes in a large pot with four parts water to one part fat. Set it aside and let it cool. After it has solidified, remove the fat from the pot in one piece. One way to do this is to run hot water around the outside of the pot, melting a thin layer of fat next to the pan. It should then slide out. Scrape all the foreign matter off the bottom of the fat. If it is still dirty,
Soap making - General Instructions

repeat the cleaning process again. It is also fairly easy to render your own fat.

What are your best fats for soap making? Amazingly, the soap making professionals feel that lard beats tallow and vegetable oils for gentleness to your skin. However, soap made with 100% lard doesn't lather very well. But it cleans beautifully. There is a predominant idea today that you must get bubbles for the soap to do its job. Soap making professionals have told me this is not the case. But if you want bubbles, you can have the kind of bubbles you want by using different oils.

**Different Fats that create bubbles:**

- Coconut Oil gives big, fluffy bubbles. One hundred percent coconut oil soap is sometimes used around maritime operations as it will even lather in sea water, really, about the only soap that will. Soap with coconut oil can be a tiny bit harsh on some people's skin. If you'd like cheap coconut oil, get a one or five gallon bucket of popcorn popping oil which is 100% coconut oil that's dyed yellow. Yes, you will be stuck with yellow soap but this won't be a problem for most people.
- Olive oil gives very fine, silky bubbles. This oil is very good for the skin.

In your soap making, use at least 25% of these fats as part of your overall fat to get the desired effect you're seeking.

**Saponification (Sap) Value:** Each fat requires a different amount of lye to change the fat to soap. See our Lye to Fat Ratio Table Page for a short discussion on this and a listing of different fats and the lye required to convert them to soap.

The temperature of the fat is important. It needs to be a bit above it’s melting point. This is 130 degrees F for beef tallow, or 85 degrees F for pork lard, or about the same temperature for vegetable oil. The hotter your oil, the faster the chemical reaction between the lye and the fat. But the hotter the oil, the easier the soap separates into layers during the mixing stage.

**Mixing:** With the lye water and fat at the right temperature, very gradually pour the lye water into the fat using a very small stream. Stir gently only in one direction the whole time you are adding the lye water. This helps it mix. You should insulate your mixing pot with old rags, etc, to prevent the fat from hardening before you've finished mixing the soap.

**Saponification and its role in the mixing process:** Simply stated, saponification is the name for the chemical process that happens between lye and fat as they turn into soap. It doesn't happen all at once, but actually takes days to complete. There are different levels of this process, and the most important one for you to know about is the "Trace" stage. This is the point at which your soap has thickened up somewhat. As you let the soap run off your mixing spoon back into the mixture, the falling soap stays on top and doesn't blend in, but leaves its "trace" mark on top. Its thickness is another way to know when trace occurs. Its consistency is much like the thickness of pudding after it's cooked but before it has set up.

With stirring only, it can take a long time to get your soap to the trace stage depending on many
variables. One of these variables is the heavyness of the fat. The lighter the fat or oil, the longer it will take it to trace. You can expect a wait anywhere from 30-60 minutes for animal fats to several hours or even days for the vegetable oils. Does this mean you need to sit and stir your soap for several hours until it traces? I don't. After mixing it for about 15 minutes, I do other things and mix the settled layers back up every 15 or 20 minutes when I happen to go by it. (You may wish to set your timer so you don't completely forget it!) At the trace stage of thickness, it won't separate out into layers when you pour it in your setting trays or molds.

**A False Trace** can happen when making soap with fats that are solid at room temperature, such as tallow, lard, or shortening. If the temperature of your soap mix drops below the melting temperature of your fat, it will start to solidify. As it does, your batch will start to thicken up just like it was tracing - but it's not! Rather, it's the fats solidifying. To prevent this from happening, be sure that the soap you are mixing stays above the melting temperature of the fat. In fact, the warmer your soap, the quicker it will saponify. It wouldn't hurt to keep your soap up to around 115 degrees F to speed this process along a little more quickly. At 120 degrees F lanolin will curdle your batch, so sometimes, depending on the additives you've included, you may need to be very careful how hot you get it.

Vegetable oils can also be used for making soap. These oils are liquid at room temperature and without employing a trick or two usually require many hours of mixing before they trace.

**Trick 1: Use a blender.** The more finely the lye and fat molecules are intermixed the faster they will saponify. Using a blender, the trace stage can be reached in minutes instead of hours. Don't use an upright blender unless you don't mind millions of tiny air bubbles being permanently whipped into your soap. Use the hand-held type instead. With one of these, even your most stubborn oils should trace within 20 minutes. Sometimes, you can get a trace with animal fats in just a couple of minutes. Anyone who has sat around for hours stirring a batch of soap will be ecstatic with this.

**Trick 2: Cook it.** There are a couple of processes that I have developed myself yet are rather unorthodox. And this is one of them. If you don't have a blender, perhaps cooking your soap is for you. See our [soap cooking page](http://waltonfeed.com/old/soap/soap.html) for more details. After it has cooled, pour or spoon it into the soap mold or tray and treat it like you would for the no-cook recipes. Even though it has been cooked, the chemical reaction that slowly turns liquid vegetable oils into soap will take much longer than cooked animal fat soaps.

**When your soap has traced you can add your superfatting, coloring and perfume oils.**

**Superfatting oil:** When your soap gets to its trace stage, the saponification process is around 90% complete. Fat added at this point makes your soap softer. There is a reason why the superfatting oil is added after tracing instead of at the beginning with all the other fats. If it was added at the beginning you wouldn't have any control over which fat or oil ended up as your 'free fat' as all fats would saponify together. This is presupposing you are going to superfat with a different fat or oil than you used to make your soap with. Exotic oils are generally used in superfatting. They are added at trace to give the benefit
of their desirable qualities without having to use so much it empties your wallet. A good rule of thumb is to use 1 oz. per pound of total fat used in the recipe. (That's one part superfatting oil to 16 parts total fat.) Let me list just 2 of the more common superfatting oils:

- **Avocado Oil:** Feels very soft to the skin and makes an excellent shaving soap.
- **Cocoa Butter:** Makes a hard bar. It smells and looks nice, but doesn't lather.

**Coloring Dyes:** Several things are used to color soap. Approved items are clays, mineral pigments and spices. You can get these items from soap supply companies. Moving back into the area of unorthodoxy again, I color all my soap with a piece of crayon. Virtually all crayon is made with stearic acid, a type of fat. The stearic acid saponifies into the soap leaving behind the pigment.

I melt crayon into my soap after it has traced. Don't be tempted to put your crayon in at the beginning as the lye will change its color. You may need to heat a half cup or so of your traced soap to about 150 degrees F to get it to the melting temperature of the crayon. Even adding a crayon at this late stage of mixing, you may notice a slight color shift over time.

**Scenting Oils:** There are two types of scenting oils, FO's (fragrance oils) and EO's (essential oils). An EO is made from distilling the oil out of the plant it comes from. A fragrance oil is a man-made chemical that's steeped in alcohol. EO's are usually used in soap making as FO's have been known to seize soap, or turn it into a yucky ball that doesn't saponify correctly. EO's are much more expensive and harder to find than FO's but also have better scent retention. If it is an EO, it will most often say so on the label. You will also know it by the exorbitant cost. FO's can often be used safely at trace however. Make a small test batch first to see if your FO is going to work before making a big batch. Be aware that rose and cucumber FOs are notorious for seizing soap. If you want to use an FO that can possibly seize soap, you can safely use it during a rebatch. Certain fragrance oils and essential oils change the saponification characteristics of a mix. Jasmine absolute from real flowers is damaged by strong alkali. It is a natural fragrance and not a fragrance oil.

**The Setting Tray:** Mrs. Mertz used a galvanized tub. Other old timers used a wooden box in the shape of a tray with a cloth laid in the bottom of it. The cloth was used to help remove the hardened soap from the tray. If you are going to use a solid tray, may I recommend plastic wrap instead of cloth as a barrier between your soap and the tray. But there is something even simpler than this. If you have any square edged, flexible plastic trays with lips at least as high as a bar of soap is thick, use this instead. After the soap has hardened, a slight flexing of the tray will dislodge the soap. When the soap begins to harden (1 hour to 3 days depending on how fast the curing process is moving along), section it into bars. When cutting, the soap should still be soft enough to easily run a table knife through it but hard enough that the soap doesn't run back together again. After it has further hardened (3-7 days), remove it from the tray, and break it into bars following the knife marks made earlier. Even though your soap looks hard at this stage, it is far from done. There's a good chance it contains a bit of lye that should dissipate into the soap as the saponification process continues. This will be true as long as you had your lye/fat ratio correct in the first place. Your soap will need to sit for 2-6 weeks to dry out and cure, depending on the fat you
used. Use [litmus paper](http://waltonfeed.com/old/soap/soap.html) to test the lye content of your finished soap. Be sure to wash off any soda ash that has formed before testing. Soda ash has a high pH value. Your soap should be below a pH of 10 within 36-72 hours after it has traced. The closer the pH of the finished soap is to 7 the better but don't expect normally made soap to reach this. If your soap is over a pH of 10, let it sit around for a week or two. Hopefully as the soap continues to saponify the lye will get transformed and the pH will drop. Your soap should be below a pH of 10 before you use it. Below a pH of 9 would be better. There are a few seasoned soap makers that test the pH by tasting the soap. Your tongue will tingle if there is still too much lye in it. Of course, you don't want to swallow this stuff. This was suggested to me as a possibility by Mrs. Mertz and also by other contemporary soap makers who sell soap.

**Final Curing and Storage:** With the soap out of the tray or molds, stack it up and set it in a warm dry place for at least two weeks. When it has fully cured, place it in a plastic bag or air tight container, and store it in a cool, dry place. You might notice a thin, white powdery layer on the outside of your soap. This is soda ash, and forms as a result of the carbon dioxide in the air interacting with the lye in the soap. This outer layer quickly washes off the first time you use it. If this is a concern, cover your setting soap with plastic wrap so the air can't get to it. After saponification nears completion, you can remove the air barrier to let your soap dry out. After all this, if there is still a thin layer of soda ash on your soap after it has cured, wash it off, then let the surface of your soap dry before storage.

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**Final Soap Making Tips:**

**My experience:** The recipes I used left a lot to be desired. The instructions weren't sufficiently detailed for me to really figure it all out and so I made several mistakes which I will now point out.

The first thing I had trouble with was **getting the lye/water/fat ratio correct.** Often the recipe simply said ‘a can of lye.’ Obviously, in yesteryear all lye cans must have been the same size. Not so any more. From analyzing several recipes both relatively modern and old, I find the lye to fat ratio in many recipes to be lye heavy. I suggest you figure the lye yourself using the fat to lye table before using a recipe. Then alter it accordingly when making your soap. Let’s not forget the 0.38 parts of water to one part fat by weight. (Water, lye and fat are the primary ingredients for all soap recipes I've found, and will make a good bar of soap all by themselves.) Depending on what you want to use the soap for, you may wish to deviate from the lye-fat table. Make laundry soap intentionally lye heavy and delicate facial soaps intentionally a bit fat heavy. Mix it:

- Double the SAP table's figures for lye for really tuff cleaning jobs, like laundry soap.
- Use the 5% fat column for regular hand soap.
- Use the 9% or 10% column for delicate facial cleaner

Note: The more lye in the soap, the harder bar it makes. (One of my friends told me how before the days
of the automatic washing machine, his mother always threw a bar of home made soap into the wash during her ‘manual wash cycle’ then pulled it out before the ‘rinse.’ The same bar of soap lasted several batches!

The second thing I had trouble with was adding the different ingredients at the right times. Rinse created some real messes with this one. Here is a suggested order to add things: Start out with...

1. **Water**
2. **Sugar** can be used in soap recipes for making clear soap. It won't dissolve if you try to add it after the lye or fats have been mixed in. Don't add sugar if you plan on cooking your soap.
3. **Salt:** It may be of interest to know that the commercial soap makers use salt to separate out the glycerin which is a natural byproduct of soap making. Then they sell it as a byproduct even though by removing it, they reduce the quality of their soap. Commercial soap makers use salt to curdle a batch of soap. Salt is sometimes used to clean fat during the rendering process and can be used to help solidify soap when making it from ashes. Under normal circumstances you probably won't add salt.
4. **Ammonia** is an emulsifying agent that helps a mixed batch of impure oils to get together closely enough to saponify readily. As the soap cures the ammonia evaporates, leaving your bar ammonia free.
5. **Borax** is an emulsifying agent that helps a mixed batch of impure oils to get together closely enough to saponify readily. When the soap is used the borax acts as a water softener.
6. **Lye**

   Mix all your fats together before adding your lye water to them.

7. **Fat or Oil**
8. **Lanolin** (Lanolin comes from sheep's wool. It's oil based and mixes with the other fats very nicely. Adding Lanolin as a superfatting oil at trace is also an option. Lanolin is a mix of cholesterol, other heavy alcohols and fatty acids. It's good for the skin and has a low sap value. Lanolin does require a little lye.
9. **Coal Oil**
10. **Lemon Juice**

   **After Trace:** All the following items are optional:

11. **Ground Oatmeal** (abrasive element)
12. **Vitamin E** This is an antioxidant, and acts as an anti-rancidity agent. Poke a hole in one end of the pill with a pin and squeeze it out into your batch.
13. **Coloring Dyes**
14. **Superfatting Oil**
15. **Scenting oils:** To prevent the lye from eating up your perfume, you need to add this as late as possible in the saponification process - the last thing before you put it in the mold.
The third thing I had trouble with was **getting it to trace correctly.**

Trying different things, I happened on a couple of different ways of getting soap to trace. Three methods of getting soap to trace have already been discussed. When I first started making soap I didn't know the first thing about "trace." Because of this, I had several failed batches until I developed a unorthodox way of setting soap that incidently is a lot faster than waiting for it to trace by stirring only. The following method will only work with fats that are solid at room temperature, like tallow, lard, and shortening. You can't color or scent your soap if you do it this way as you should only add these things after tracing. Professional soap makers are leery of this method as they feel it is important to stir the batch to trace as it keeps the molecules moving. Yet I add this last method here as I've had excellent luck with it.

**The Intentional False Trace:** After all the ingredients are thoroughly mixed, set your mixing container in cold water and continue to stir, especially the sides and bottom. I use a big spatula to do this as the fat will solidify first on the sides and bottom of the pan. This solidifying fat/lye mixture must be remixed into the warmer mass in the center of the pot. As the mixture cools, continue to quickly stir it while the whole batch thickens. When it gets to the consistency of thick gravy or pudding, (trace consistency) pour it into your setting tray. The idea here is to get it so thick there is no way it can separate, yet fluid enough so it will flow. With it in the setting tray, put it in the refrigerator so the fat in the soap can continue to solidify. After it is cold, take it out of the refrigerator and set it aside. Unless you make the soap during very hot weather, it stirring re-melt and separate. Anywhere from an hour to a day, depending on how fast it is setting up, the soap should be ready to cut into bar sized pieces. Note: Don't get confused here. If you actually traced your soap, you shouldn't put it in the refrigerator. The refrigerator is only used when you thickened your soap in cold water before tracing had a chance to happen.

**Final curing:** As mentioned before, it takes soap days for the saponification process to complete, then weeks before it has cured with all the water evaporating. My experience is that it takes about 1 to 3 days for the soap to set up hard enough to cut the soap into hand soap sized bars without it melting back together again. Check it once or twice a day. You don't want it so hard you can't run a table knife through it. After sectioning the soap in the setting tray, leave it in the pan to further harden 3 - 5 days. You want it to be hard enough so it will maintain its shape and not break up as you are taking it out of the tray. You can't hurt it by leaving it too long, but if you take it out too soon you can accidentally break pieces off or put big cracks in the bars that will later break. When it has cured long enough, remove the now solid soap and break it up into bars from the knife marks made earlier. If you used a solid pan lined with plastic wrap, after the soap is removed, use your finger to smooth out the small grooves made by the wrinkles in the plastic wrap. (If you wait, it will be too hard and you can't be able to do this.) It is then stacked up and left to further dry (cure) for two or more weeks.

**Using It:** Even mentioning this may seem like over kill. When I first used that initial bar of lye heavy soap from my first ever attempt at soap making, I rubbed and rubbed, and didn't get much off it. But I soon learned that I was just breaking it in. After I used it a few times, it was much easier to use. If you
have kids, to decrease their resistance to using soap ‘you’ made, break it in first then put it out for them to use.

Floating soap: Ivan Stern discovered the easy way to make your soap float. Just add a tablespoon of sodium bicarbonate (NaHCO3) or so to your soap mixture after you've added almost all of the alkali. The bicarbonate reacts with the fatty acids to release CO2 into the mixture. Be aware this adds a very small amount of caustic material to your batch.

References: I'm extremely thankful to the following soap makers for helping me get my soap making skills out of the dark ages.

1. James Hershberger at Devonshire Incense and Soaps
2. Leslie Wilson at Beautiful Bubbles
3. Tina Howard at Majestic Mountain Sage

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Revised: 11 Oct 01
Rendering Fat

Method 1

This recipe comes from rec.food.preserving’s FAQs. Imogen submitted the information.

Put the fresh fat from under the skin through a meat grinder. Take small portions and heat them in a large, shallow pot. Safety is very important here!

1. Keep a tight fitting lid handy in case the fat catches fire.
2. Use a stainless steel pot, if you have one. They are easier to clean later.
3. Use a wooden scraper to constantly loosen the fat from the bottom of the pot. Plastic one's are no good as they will melt.
4. Keep a metal ladle and WARM, HEATPROOF jars handy to fill as the lard dissolves.
5. Continuously remove liquid lard as it becomes available.
6. Try to push the raw fat under, so it can dissolve versus the rest spitting all over the place, while it starts to roast.
7. When all your fat is crisp and your lard out, remove pot from the hot element immediately.
8. Never try to refill your pot. ALWAYS do one batch at a time!
9. You should either pressure-can your lard or simply freeze it.

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Method 2:

By Sharon Predoehl

- Place a large pot on the heat, pour in 1 quart water and simmer.
- Fill the pot with fat until it won't hold any more.
- Boil this for a half hour then strain.
- If you have more fat to render, repeat the process.
- Pour the beef fat/water liquid through a strainer into a large container.
- Chill this in refrigerator for several hours. The fat will rise and harden on the top, the water and beef will sink to the bottom.
- Remove the cake of fat, scrape any brown beef from the bottom of the fat.
- Use it, or wrap and store it for later use.

"I use a very large Reverware stockpot. I get my fat from the grocery store, for free no less. You may try asking around at different butcher shops for the best deal." Sharon

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Revised: 10 Jul 00
Lye to Fat Ratio Table

This table is for those of you who want to get a bit more scientific in soap making, or just want to check and see if the person who created the recipe you're planning on using knew what they were doing. Each fat has its own saponification value, or "SAP Value." And because of this, each fat requires a different amount of lye to convert the fat to soap.

For the soap to be made with no left over lye or fat you must have very accurate measuring equipment. As the same oil from different sources will have a slightly different saponification value, we recommend you keep your soap a bit fat heavy to ensure you don't end up with lye in your finished product.

In the table below use the 0-4% excess fat columns (red) if you have accurate technical equipment to test for excess fat or lye. Use the 5-8% excess fat columns (green) to make good hand/body soap and the 9-10% columns (blue) if you want excessively fat heavy soap.

This page was written under close consultation by Tina Howard at Majestic Mountain Sage. In fact, the following table was made using her lye calculator, which will automatically calculate the amount of lye you need for a large variety of different fats. You plug into her calculator the fats and quantities and it returns how much lye you'll need.

Calculate the amount of lye you need by multiplying the amounts of each fat (including superfatting oil) in your recipe by the number intersected by the fat and your desired excess fat column. Then add the different lye amounts for the different fats in your recipe together.

**Example:** You want to calculate the amount of lye for a recipe that calls for for 16 oz. of lard as it's only fat. You want your finished soap to have 5% excess fat. Intersecting the Lard row with the 5% column, you find the number **0.132**. Multiply 16 (fat wt) by **0.132** = 2.1 oz. of lye.

<table>
<thead>
<tr>
<th>Animal Fat</th>
<th>Desired Excess Fat In Finished Soap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Lard</td>
<td>0.132</td>
</tr>
</tbody>
</table>

### Why different oils have their own SAP values:

It all has to do with the length of the fatty acid chain. Briefly, it takes the same amount of lye to saponify a short fatty acid molecule as it does to saponify a long fatty acid molecule. The longer a fatty acid molecule is, the more a set number of them weigh. Saying this in another way, the longer chain fatty acids have a higher molecular weight. Hence, it takes less lye to saponify the longer chain fats. You can determine which fats above are the longer chain fats by looking at their SAP values. The higher the SAP number, the shorter the chain. Most of the fats above revolve around 18 carbon chain molecules with the sap value hovering around .136-.140 in the 0% Excess Fat Column. (The reason they are all slightly different is because the mixture of different fatty acids in each fat or oil is slightly different.) On the other hand, coconut oil contains about 47% lauric (C12), 19% myristic (C14), 9.5% palmitic acid (C16) and 20-25% other residues. Because coconut oil has several shorter string molecules, it takes more lye to turn a given weight of them into soap. Coconut's SAP value is .184. The reason for this is: the smaller the molecule, the more you can fit into a given volume. The more you can fit in a given volume, the more saponifiable bonds will be required and the more base you will consume.

Speaking of a molar (equal number of molecules) ratio, then it takes an equal level of base to saponify the fat/oil, although the larger molecule will have a larger volume.
See our Essential Fatty Acids Section to learn more about fatty acid chains and Mr. Hershberger's page for a more in depth explanation of the saponification process.

Thanks to Dr. Richard Walton for many of the above comments.
What is soap and how does it work? Soap is saponified fat; a chemical reaction that takes place between oil and lye. I'm often asked the question, "Can I make soap without lye or some other caustic agent?" The answer is, "No." Some places sell spaghetti for "making soap" but this is already soap. This is only a remelt or a "rebatch operation."

Fats are made up of fatty acid molecules. Three fatty acid molecules are tied together into what are called "triglyceride" molecules. View the movable image below to see what happens when a stearic acid triglyceride molecule and three lye (sodium hydroxide) molecules come together to form 3 soap molecules and 1 glycerin molecule.
Interestingly enough, there actually isn't that much glycerin compared to the soap. Figuring the atomic weights, there's only 1% glycerin compared to 99% soap.

A soap molecule has an amazing characteristic. One end of the molecule is attracted to fats and repels water and the other end of the soap molecule with the two oxygen atoms and the sodium atom (Na) loves to be around water but repels fat. If you placed soap molecules directly between a layer of fat and a layer of water, all the soap molecules would flip so the oil loving part of each molecule pointed towards the oil and the water loving part of each molecule pointed towards the water layer. This doesn't really happen in real life but something just like it does. When oil is placed in soapy water, the soap molecules break the oil into billions of microscopic droplets. These tiny oil droplets are only about one ten-thousandth (0.0001) inch in diameter. Surrounding each droplet are 20 million soap molecules creating a soap film 1 molecule thick. Many people incorrectly think soap dissolves oil. Rather, it puts the oil in a fine suspension in the water, more correctly called an emulsion. This permits the water to 'wash it away' from whatever is being cleaned. For soap to work, it must be agitated to emulsify the fats.

The **hydrogenation of fat** was first developed for the soap making industry in the late 1800's because of a shortage in animal fats. The unhealthy idea of eating them came later. Totally hydrogenated soybean oil is the main fat I use in all of my soap making. It's used for deep fat frying in the fast food restaurants so is readily accessible from any restaurant supply store. This type of fat makes great soap that's gentle on the skin. As this makes very hard soap, I use olive oil to soften it. Non-virgin oil is cheaper and just as good - maybe even better in soap. For people just learning to make soap, I suggest vegetable shortening as it's so much easier to get.

**Lye:** As lye heats water when being mixed, for the least chance of accidental boiling and to reduce fumes, I mix my lye into water that's 50% ice. Having ice in the water should prevent it from heating up to the point it causes strong vapors or emits lye droplets. I once mixed my lye in an old Clorox plastic jug. It got so hot the lye melted a hole in the bottom of the plastic and ran all over the place. Ice water will also help prevent this from happening. I now get my lye in a solution of 50% water. I like using lye like this because the chemical reaction between the lye and carbon dioxide in the air forming sodium carbonate won't go into suspension in the water. It settles out in the bottom of the container, keeping it out of my soap. Soap made from lye, or sodium hydroxide, makes
solid soap. Potassium hydroxide makes liquid soap.

When adding the lye water to the melted fats, stir the mix in only one direction as you pour in the lye water. Pour it slowly so the water stream is no larger than the diameter of a pencil. Stirring in one direction only spins out the lye stream into a very thin thread. Adding the lye water in this way should prevent it from settling out in the bottom of the pot. After you've added the water, quickly stir the mix in a figure 8 motion.

To saponify, I now use a stick blender on all of my soaps unless I'm doing one of my many demonstrations at old time re-enactments or Renaissance fairs. I used to exclusively use Di Propylene Glycol or DPG.

DPG does the same thing a blender does - finely mix the fat and lye molecules together.

It seems to be very important for ease of pouring into a mold not to have it set in less than 15 to 20 minutes. The panic effects which result from trying to catch a run-away soap batch are not worth the time saved, however the quality of the soap does not seem to be too adversely affected from too much DPG. The plus is that the batch cures very quickly. Since several unknown compounds found even in essential oils accelerate or inhibit saponification, each batch type should be tested if you want predictable results. For instance, lavender oil inhibits a little and probably as much as 0.15% DPG would be added with lavender oil. A batch with no additives should start at 0.05% and if that isn't fast enough, increase in increments of around 0.05% until the soap "makes" in about 15 to 25 minutes. These percentages are out of the entire weight of substances used in a batch of soap including the fats, lye water, perfume color etc. One tsp holds 4 gms DPG which is enough to saponify a 8 kg (17 1/2 lb) batch of soap. I use a large veterinary syringe to meter the correct amount of DPG into the soap batch. I've also found that grape seed extract will speed saponification much the same as DPG.

Essential oils are just one form of natural concentrated scent. They, by definition, are steam distilled from the material (usually plant) as they are stable to steam heat and are soluble in steam but not water. Many natural scented oils cannot be steam distilled due to insolubility in steam or sensitivity to heat and must be extracted in some other way. The oils derived this way are called 'absolutes.'

Many natural fragrances are liable to saponification and can only be used in re-melt. Unfortunately, you can only find out about these by the sad experience of having no remaining scent in a cured batch of soap. Recombinant fragrances are usually labeled "fragrance oils," although many fragrance oils are mislabeled essential, or organic. It is best to make a recombinant oil from natural scented fractions vacuum distilled from natural sources, as many synthetic fragrant compounds have contaminants from synthesis.
that cannot be cheaply removed. That is why many perfumes smell off or cause bad
reactions. Di Propylene Glycol (DPG) is also a favorite extender for fragrance oils and is a
cosmetic emollient. As already mentioned, it causes soap to trace quickly and is good for
the skin. If the fragrance oil you are adding has DPG in it and you don't know it, you could
end up with a big surprise. It is best to purchase fragrance oils for soaps from a reputable
soap-makers supply company. The prices are usually fair and the scents are designed to be
used in cosmetics soaps.

Snippets Of Knowledge

Don't use softened water in soap making. There is no way to tell how
the salts in various waters may affect the reaction. Use clean
rainwater, distilled water, reverse osmosis or de-mineralized water.
Condensate from air conditioners and de-humidifiers are all very
good. If you are worried about bacteria, boil the water.

Beef tallow makes the hardest soap, but I feel lard has the ideal mix
of stearates and oleates to give the best soap characteristics, hardness
and adequate solubility.

If you find your soap is still a little harder than what you like even
after using a softer fat, try decreasing your lye percentage 1 to 10%
and adding 1.40 times as much potassium hydroxide (KOH) instead.
You may remember that potassium hydroxide makes liquid soaps. A
small amount of potassium hydroxide will soften an otherwise hard
bar.

Cure-out times using a Braun hand blender (the best for the money in
my opinion) are from 4 hours to three days. I only have a three day
batch every year or so. This is without any accelerator such as grape
seed or DPG.

As for taste testing for alkalinity, I learned the hard way to touch one
finger to the soap crutch (stirrer), and carefully taste the thin film of
the soap on my finger. This does the job and avoids lye burns to
the tongue. The trick to taste testing cured bars is to just touch the tip
of the tongue to the bar or, better still, get a smear off the bar with
your finger and touch the tip of the tongue to that finger. Lye burns in
the mouth are NO fun. I have made several painful mistakes that way.
For cooked soaps, use a LOT more water; the excess cooks out.

Polyethylene pails in a double boiler work well for making soap.

Even an amateur soap maker should use some kind of scale to weigh the lye rather than try to make volume measurements. Trying to use volume measurements to determine lye needed is a very risky business!

Grapefruit seed oil is an antioxidant, germistat and stabilizer. I use 15 ml Citricidal concentrate (the trademark name for grapefruit seed concentrate) in about 15 lbs of soap. I use 10 times this much to make germicidal soap.

I use Dixon Crucibles Colorart Powder Tempra for color with good results for most colors. These are children's tempra paint colors mixed with 50 grams of shortening and whipped into a roux, then adding this at trace. The lye requirement includes this extra 50 grams of fat. I use 60 grams of tempa for a stronger color in a 15 lb batch of soap; 15 grams for a tint. This works nicely. Don't use any pigments with cadmium, mercury, lead or other poisons in them. You shouldn't find any of these things in children's paints but they are often found in professional artist's pigments.

Scent is 1.8% of the total mix.

Here is a novel idea that really works and saves on scenting oils. After the soap has cured, saturate a bit of muslin in the appropriate scent and layer the soap bars with it. Store in a tight keeper for about 3 weeks. The scent seems to penetrate clear to the center.

Shrink wrap is very good at holding scent in the soap.

Unlike plastic which breathes, cellophane is impervious to essential oils and won't let them pass. Use this to wrap your finished soaps and they won't lose their scent.

I pour the liquid, traced soap into 18" long 3" PVC schedule 40 tubes set in a wooden base and press fit with plastic sandwich bags for the seal. Using DPG, the soap often cures in 24 hours and I have used it that green quite often. I cure the soap in the tubes until it is waxy and hard. To remove the soap I warm the tubes in a Coleman cooler.
Making Soap With James Hershberger, A Chemical Engineer

tube is set on a wooden shelf just above hot water. Cheap sandwich bags cover the ends to prevent the steam from softening the soap. When the soap is warmed to 130 deg F, it has the consistency of room temperature cheddar cheese and can be pushed out of the tubes with a wooden piston and cut with a monofilament line tied to two small handles like a garrote. Bars, when that warm, dent easily but can be pressed into rigid molds. When cool, they become quite hard again.

It doesn't hurt to have a bit of 1 part vinegar to 10 parts water on hand, especially at public soap making demonstrations. The weak acid in the vinegar will quickly neutralize the effects of a droplet of stray lye water on skin, clothing or the work area.

Often when doing a soap making demonstration, I'll use a cardboard box lined with a garbage bag for my setting tray.

Cured soap should have a pH of 9 or less.

Should you wish to make a neutral pH soap during a rebatch operation, use boric acid. Using a strong acid will turn your soap back into fat and salt!!! Even vinegar might be too strong for this.

My soap recipe is extremely gentle on the skin. I call it a 'High Toleration Soap.' People who have not been able to use anything else have been able to use my soap without adverse reaction. Coconut oil is very popular in soaps today. I don't use coconut oil because it makes a rather harsh soap for skin. Olive oil makes very fine bubbles and is very good for the skin. Concerning soap lather, I've had no complaints from people who use my soap. The fine bubbles from the olive oil are enough.

Four hundred forty grams of finely ground comfrey root in a 14 lb batch of soap stops poison ivy itch.

Old timers used to put pine tree rosin in their soap to help it suds.

People with psoriasis or exema need soap with 20% pine tar in it, often curing their condition. Beware of regular pine tar soaps as they generally only have 3% pine tar in them which is not enough. Soap with pine tar also makes an excellent pet soap. It's very soothing to their skin and tends to discourage bugs from getting on them.
Beware! Pine tar added to soap makes it set up in 28 seconds. Be sure you have everything ready to pour before adding it, then immediately pour it into the setting tray. You can get pine tar at ranch supply stores. People with horses use it to cover lacerations.

Hard Water: Each doubly positively charged calcium or magnesium atom in your water will tie up two singly negatively charged soap molecules. When this happens, soap molecules can't do their jobs any longer. Instead of being evenly dispersed in the water, calcium or magnesium tied soap molecules clump together forming soap scum. As this reaction happens quickly, enough soap must be used to neutralize these metals first before additional soap can do any cleaning. Borax will neutralize these mineral salts leaving the soap to do it's job.

Soap is a good lubricant by itself and is added to petroleum oil making grease. Try rubbing soap on the contact surfaces of a sticking drawer or door.

Where I get my supplies:

Di Propylene Glycol is available under that name code RM135, from:

Intercontinental Fragrances Inc.
10422 West Gulf Bank Rd.
Houston TX 77040 Phone: (713)896-9991
25 lbs is the minimum quantity sold, enough DPG to accelerate over 20 tons of soap.

I get my fully hydrogenated soybean oil from US Foods Corp in 50 lb cubes. For general, small scale soap making use a shortening such as Crisco.

My caustic is 50% liquid from a 700 lb. drum from Van Waters Rogers. Hobbyists or casual soap makers use solid crystal or flake lye and mix it themselves in water.

My color comes from Dixon Crucible Colorart tempra powder, whipped into a roux with a little melted shortening.
Soap Cooking In A Modern Setting

Most soap recipes found today aren't cooked. However, cooking does offer some advantages.

Pro’s to cooking soap:

- Cooking the soap solution greatly speeds up the chemical reaction needed to make soap. Instead of taking weeks to cure, it’s ready for use much sooner.
- It's a relatively quick way to trace vegetable oils.

Cons to cooking soap:

- I no longer cook soap as a hand held blender works just as fast.
- This can be very dangerous. Before the process is complete, the soap can get up to 330 degrees F. From 220 degrees F. to 275 degrees F. it has a tendency to splutter or spatter soap out of the pot if it boils too vigorously. This is not something you want to do with children around.
- There is a chance of fire. If you have a fire extinguisher handy and use a pot with high sides, you shouldn't have any trouble. Have a lid handy to smother any flames, and never leave cooking soap unattended. Be sure to wear adequate protection. This includes long gloves and protection for all exposed skin and face. A face shield would be a good idea. No one wants a drop or two of this stuff spattering on their face or arms and making a scar.
- There are some things you can't put in your recipe if you are going to cook it.

How It’s Done...

For cooking, you must modify the recipe somewhat. Don't add any sugar or salt as this will make a mess. Lanolin will curdle your batch if it is heated above 120 degrees F. You should be able to add the other ingredients in the recipes found on these pages. However, the three basic ingredients, fat, lye and water
Soap Cooking In A Modern Setting

make great soap all by themselves.

With your ingredients well mixed, place your soap mixture in an stainless steel or enameled pot. Turn the heat on moderately high until it gets to the boiling point, then turn it down so it maintains a slow but rolling boil - a low enough boil so it is not spattering all over the place. If it starts spattering out of the pot, pull it off the heat partially until it slows down. Then turn down the heat. Your goal is to keep it boiling, but not so vigorously that it becomes dangerous. Stir constantly and always be conscious of how it’s boiling and behaving. As it boils two things happen:

- The chemical reaction necessary to make soap is greatly accelerated.
- Some of the water in the soap is boiled off.

The soap cooks somewhat like candy in that it starts boiling at a temperature of about 220 degrees F and as it continues to boil the water off, the temperature rises. It is very important to know when to quit. As it slowly gets thicker, the instant the bubbles start appearing in the same place, giving you a hint that it is acting just a bit more rigid than before, pull it off the heat. In my experience this happens at a temperature of between 300 and 330 degrees F. It would be handy to keep a candy thermometer around as an aid in checking on it’s progress. If you let it go too long and the soap separates, add a little more water to bring it back into suspension.

- 300 - 310 degrees F for lard
- 320 - 330 degrees for vegetable oil

If you don't want to, it really isn't necessary to bring the soap up to these high temperatures. This is the way I do it however. To see if you've cooked it long enough, you can also dribble a bit of soap onto a plate then wait for it to cool. If it's setting up you have cooked it long enough.

With the pot off the heat, place it in cool water. If you don't, the soap is so hot it will continue to bubble for a few minutes with the pot off the stove! Also, if you tried to pour hot soap at these temperatures, it would melt a hole right through your plastic mold! Continue to stir it until it has cooled off - down to at least 120 degrees. As it cools you may wish to add a piece of crayon. As it melts it will color your soap. This is also a good time to add fragrance oils (FO's). After it has cooled, it should have the consistency of thick pudding. Pour, or scoop the soap into your soap tray or mold, then smooth it out the best you can with a spatula. As it is very sticky, to get it nice and smooth on top, place a layer of plastic wrap on it and continue to smooth it out. I like to place something flat on top of it and press down lightly. This makes it as flat on top as it is on the bottom. A couple of hours later as the soap has continued to cool and harden, you can remove this top layer of plastic wrap. Smooth any imperfections out with your finger that were created by wrinkles in the plastic wrap.

**Soap made from Animal Fat:** After a couple of hours, section it into bar sized squares with a table knife. Depending on how firm it is, on the second day, you can remove it from the tray and break it into bar sized pieces using the knife marks you put into it. After two more days it should be mostly cured.
After it has dried it's ready for storage. After curing, give it a litmus paper test. It should be a PH of 9 or less. Or you can give it the taste test.

**Soap made from Vegetable Oil:** After you get it in the soap tray, treat it in the same way as you would for soap made from animal fat using a non-cook recipe. It will take longer to cure but still makes fine soap.

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Revised: 10 Jul 00
Soap making - Rebatching

Rebatching: Making new soap out of old. You may want to rebatch under the following circumstances:

1. In making soap your recipe failed and you want to try and repair it rather than throw it away.
2. You have a lot of old soap scraps that you want to re-pour into new bars.
3. You have ingredients you want to put into your soap that must be added after the saponification process is complete (like fragrance oils, some dyes, etc.)

How it's done: If you have a failed batch that hasn't had time to harden, you can follow the instructions for cooking soap. If your soap has completed it's saponification process then read on!

There must be a hundred different ways of doing this. Here's how I do it.

- First, take your soap and run it through a grater. (I use a small hand held food grater.) After it is all grated into fine chunks, put it into a stainless steel or enamel lined pan. Stir in small amounts of water until it turns into a thin paste.
- Now put it over a low medium heat, but not hot enough to burn it. (Many people use a double boiler.) After it heats to a certain point it will liquify. This happens almost all at once after it gets hot enough, which is still well below boiling temperature. If you have ended up with a big ball of yuck, perhaps you still haven't heated the center mass hot enough or it needs more water. If it acts like it's starting to burn, turn the temperature down but keep heating it.
- If you added a bunch of water there is no problem with heating it up and boiling it off. If you do this, don't heat it above 230 degrees F.
- With the soap liquefied, pull it off the heat and let it cool down. As it cools down, but before it has set up, you can add your FO's, coloring and anything else you wish to put into it. If it sets up before you get it all mixed up - no problem, just put it back on the heat.
- After you have it mixed the way you want it, pour it into a setting tray or your molds and smooth it out.
- After it cools you will find that it has already set up quite firmly. Go ahead and cut it into bar sized pieces, remove it from the setting tray or molds and put it out to dry. I have had some trouble with my rebatched soap warping as it dries. If you live in a dry climate like I do, you may wish to more evenly dry it by putting it in a loosely sealed container - loose enough for some air to get to it, but not too much.
Determining Your Soap's pH

The dictionary defines pH as "A measure of the acidity or alkalinity of a solution calculated as the common logarithm of the reciprocal of the hydrogen ion concentration in moles per cubic decimeter of solution and numerically equal to 7 for neutral solutions. pH increases with increasing alkalinity and decreases with increasing acidity. [potential of hydrogen.]

Acids and bases are opposites, on the opposite ends of the pH scale. The more acidic or basic a solution is, the further out on the scale it will be. Seven is the central point. The number '1' reflects the strongest acid and a '14' represents the strongest base. Mix a strong acid and a strong base together and you'd get a huge explosion. In fact, mixing acids and bases were some of the first rocket fuels.

You must have a base, or caustic solution to make soap. The two most common caustic solutions in use for soap making today are sodium hydroxide (lye)[NaOH] and potassium hydroxide [KOH].

You can test the strength of an acid or base by using 'litmus paper.' This is a special paper with chemicals in it that change the paper's color to many different shades depending on it's pH.

To test a bar of soap's pH, wet the bar in running water and rub the bar with your hands until you get some bubbles or a thin film of liquid soap on the outside of the bar. Wet your litmus paper on it and check the reading. Really, it's just that easy. It's fun to test your soap throughout it's curing process to observe how the pH drops over time. Your finished soap will be alkaline to some degree, however it should not be above a pH of 10. Nine or less would be better. If your soap's above a pH of 10 it's likely to cause a burning sensation on your skin, starting with the more sensitive skin on your body. Over lots of time a soap's pH tends to drop. The very first batch of soap I ever made was lye heavy and weighed in at a pH of 12. (I've been saving it for laundry soap in less than prosperous times.) I just tested this 3 year old soap again and find it's pH has now dropped to about 10 1/2. Yes, 'lots of time' might be one cure for a lye heavy batch of soap.

Most pH strips, as they are sometimes called, are a single paper. I use a more accurate pH strip that actually has four small sections of different kinds of litmus paper glued to a plastic strip. It's much more accurate than regular litmus paper and more convenient.

This picture shows the scale you'd use to match your test strip with in determining the pH. Check to see which set of colors most
Determining Your Soap's pH

closely match your strip. The number at the top tells what the pH is. I've found with this paper I can get a reading within 1/2 of a pH.

Made in Darmstadt, Germany, these pH strips can be obtained at...

VWR Scientific
800-932-5000

Ask for EM-9590-1
Box of 100 costs $14.04

The lady at the lab I bought my strips from gave me a great idea when I whined about how much they cost. She said, "We cut our strips into four thinner strips. You might try that." And this is what I do.

The pH of a few major brands of hand soap.

<table>
<thead>
<tr>
<th>Soap</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camay</td>
<td>9.5</td>
</tr>
<tr>
<td>Dial</td>
<td>9.5</td>
</tr>
<tr>
<td>Dove</td>
<td>7.0</td>
</tr>
<tr>
<td>Irish Spring</td>
<td>9.5</td>
</tr>
<tr>
<td>Ivory</td>
<td>9.5</td>
</tr>
<tr>
<td>Lever 2000</td>
<td>9.0</td>
</tr>
<tr>
<td>Palmolive</td>
<td>10.0</td>
</tr>
<tr>
<td>Zest</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Soap makers in general say they shun soaps with a pH over 9 but look at the major brands! Notice the Dove above... a true neutral pH soap. To get this you'd have to run your cured soap through a rebatch operation and mix in boric acid to lower the soap's naturally high pH. My cured soaps now weigh in anywhere between a pH of 9 to 10. I've also thrown a pH strip to a couple of other soap maker's soaps sold on the internet and find they also come in at about the same pH as mine.

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Ingredients:

- 1 can (12 oz or 340 grams) 100% lye
- 21 1/2 oz (605 gms) ice cold or part frozen distilled water
- 5 lbs, 7 1/3 oz (2.48 kg) lard or all vegetable shortening

Equipment:

- 1 ea, 1-2 quart Pyrex or oven ware bowl
- 1 ea, 4-6 quart plastic bowl or stainless or cast iron pot
- 1 ea, plastic, wooden or stainless big spoon
- 1 ea, shallow cardboard box lined with plastic trash bag
- Rubber gloves
- Canning pot (for water bath if you use plastic reaction bowl)

Instructions:

Prepare the lye water by freezing 1/2 of the water into ice cubes. Put the ice cubes and the rest of the water into the 1 to 2 quart bowl. Using the stirring spoon (known to soap makers as the "crutch"), pour lye slowly into the ice and water, stirring until the lye is all dissolved. Take great care with the lye, it is very caustic and will burn the skin and eyes! Any splatters must be washed off immediately with lots of water!

Cover the solution to keep out air and allow to cool (or warm up) to about 85 degrees F.

Melt the fat in the 4-6 quart bowl or pot. Don't use aluminum or galvanized bowls! Plastic ware can be heated in the water bath.

When the fat is melted, cool it down to 95 degrees F. Prepare the box with it’s plastic trash bag lining, so the fresh liquid soap can't leak out.

When all is ready, begin to stir the liquid fat in a clockwise direction while pouring the lye water into it in a thin steam (pencil size or thinner) until it is all added. Crutch (stir) the mix vigorously, using “S” pattern or use a hand blender alternating with a circular pattern until the mix begins to cool and thicken.
At this point do NOT stop or the mix may separate!

First the soap will be murky, then creamy, then like heavy cream and finally, like hot cooked pudding and will show traces when you dribble a stream from the crutch onto the surface. This process can take from 10 minutes to 45 minutes, depending on the temperature, weather and purity of your ingredients. Stir vigorously but patiently! With hand blender stir time is cut to 1/10 of the regular time.

When your "trace" does not sink back into the surface, the soap is ready to pour into the lined box. Wear rubber gloves and treat the raw soap like you treated the lye water. Wash off all splatters immediately. Have 10% vinegar and water and a sponge to neutralize splatters.

After 3-5 hours the soap may be cut into bars with a table knife, NOT a sharp knife. Allow the soap to cure in the box for about a week before breaking it up and handling it, and another month before using it.

The old farm ladies carefully "tasted" the fresh soap with the tip of their tongues for the sharp bite of unreacted lye, as I do today.

The soap from this recipe makes a bath and facial soap, and if you want old fashioned "Grandma’s Lye Soap," use less fat; about 5 lbs 5 oz instead of the original amount called for in the recipe. Allow this soap to mature in open air for six months.

Should you wish to color your soap you may stir in about 20 gms children’s powder tempura paint when the mix reaches the heavy cream stage. Perfumed soap may be made by adding 60 gms (about 2 oz) of essential oil or perfume just before the soap is thick enough to pour. Sometimes I will wait for the unscented soap to cure, and then wrap the soap in muslin, anoint a cloth with perfume and wrap it with the soap in aluminum foil. Set it aside for about six weeks until the perfume has penetrated to the core of the bar.

To re-form the bar into a new shape, place some bars into a ziplock bag and warm them up by immersing the closed bag of soap in hot (120degF ) water for 30 minutes. The soap should be soft enough to cut, make into balls or even press into molds. It sets when it has cooled and rested for an hour or so.

Guild Master Gwilym
Devonshire Incense and Soaps
1026 Park Rd 1-C
Smithville, TX 78957
800-568-6242
http://www.devonshireincense.com
Soap Recipes

The recipes on this page are adapted from the book *Making the Best of Basics*, written by James Talmage Stevens, published 1975-1977 by Peton Corporation.

Jump within page to:

- Basic Hand Soap
- Basic Perfumed Hand Soap
- Soap from Home made Fat Drippings
- Basic Granulated Laundry Soap
- Laundry Soap: Recipe II
- Basic Shampoo

Basic Hand Soap

- 1/2 oz or 14gm lye
- 1/4 cup cold water
- 1/2 cup lukewarm fat
- 1 T. lemon juice (optional)

In a plastic container, gently stir lye into cold water with wooden spoon. Slowly add lukewarm fat. Continue to stir until slightly thickened. Add lemon juice, stirring to mix thoroughly. Pour mixture into plastic molds. Cover with plastic wrap and leave for 24 hours. Remove soap from molds and allow to air-dry for 14 days. Yield: 1 - 2 medium bars.

Basic Perfumed Hand Soap

(This recipe makes nice soap)

- 5 cups rain or soft water
- 1/2 cup powdered borax
- 11.6 oz. lye
Soap Recipes

- 11 cups fat (lye calculated for lard. See lye to fat table.)

  **Add at trace...**

- 1 oz. strawberry dye
- 2 oz. lanolin
- 3 oz. glycerin
- 3 T finely ground oatmeal
- 4 tsp. aromatic Rose Geranium

Follow basic directions.

---

**Soap from Home made Fat Drippings**

- 3 quarts fat drippings
- 12.7 oz. lye
- 4 1/2 quarts cold rain or soft water
- 3 tsp. borax
- 1 tsp. salt
- 2 T. sugar
- 1/4 cup ammonia

Thoroughly clean fats by boiling in equal amount of water. Place kettle in a cold place to firm fat. Cut fat from kettle sides. Pour off water and waste. Scrape off excess wastes from bottom of lard cake. Clean kettle and replace lard cakes, melt over low heat. Dissolve lye in 1 quart cold water and let stand until cool, then add melted fat slowly. Stir constantly. Mix other ingredients together and add to first mixture. Stir until the mixture is thick and honey colored. Pour into pan lined with a clean white cloth. Before soap becomes hard, mark pieces into cakes or form into balls. When hard, store to allow further air-drying.

---

**Basic Granulated Laundry Soap**

- 2 1/2 quarts rain water
- 2 quarts grease, strained, melted and hot
- 1 can lye (probably 1 lb.)
- 3 T borax

Mix water, borax, and lye. Add strained grease slowly. Remove from heat and leave in pot. Stir often during the first day. Allow two weeks to cure, stirring occasionally.
Laundry Soap: Recipe II

- 5 lbs. grease
- 1/2 cup ammonia
- 1 oz. sassafras oil
- 3 quarts rain water
- 1/2 cup borax
- 1 can lye (probably 1 lb.)
- 1/2 cup coal oil

Melt lye in cold water. Dissolve borax and add lye to mixture. Melt grease and add ammonia, then coal oil. Add to lye mixture. Stir until mixture congeals then put into milk cartons or leave in enamel pan. Cut into bars 24-48 hours later.

Basic Shampoo

- 1 bar basic soap
- 4 quarts rain water
- 2 slightly beaten eggs
- 1 tsp. powdered borax
- 1 oz. bay rum

Dissolve soap in boiling water. Let cool. Add eggs, borax and bay rum. Stir to mix thoroughly.

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Finding Soap Making Supplies

This page will help you find your soap making supplies locally and at the best prices you can find. If you are looking for soap making supply outlets, please see the links to the other sites at the bottom of our soap making homepage.

Buying Supplies On A Budget

Soap making need not be expensive. In fact you can make soap a lot cheaper than you can buy it at the grocery store.

Lye used to be found in every grocery store but it's getting more difficult to find. Red Devil Lye is no longer a good choice for soap making. The company that makes Lewis Red Devil lye has just succeeded in engineering a formula with lime and another compound in it which renders the stuff worthless for home soapmakers. May I suggest you use one of the many suppliers we have on our soap making home page. Whatever you purchase, insure that it is pure powdered or crystal sodium hydroxide. You don't want any additives in it.

Fat, the other ingredient you will need can also be purchased in the grocery store. I make most of my soap from 100% lard and purchase it in 1 lb blocks. If you plan on making lots of soap, there are cheaper ways of getting lard, however. One possibility is the big boxes used by restaurant or bakery stores. Ask them where they get it and more than likely their supplier will also sell it to you. Several other oils and fats can be purchased in the grocery store as well, such as corn oil, Canola oil, safflower oil, sunflower oil, olive oil and shortening. And don't forget the fully hydrolized vegetable oils used for deep frying foods at fast food joints. This fat makes excellent soap that won't go rancid even after long storage! Coconut oil can often be purchased locally as it's the same fat used in popcorn poppers used at the movies. You will have to settle for yellow soap, however, as this source only supplies yellow dyed coconut oil. Several of the exotic soap making oils have very short shelf lives. I would suggest you purchase fats and oils that have a long storage life if you are planning on putting them away for future soap making projects.

Several other ingredients can be purchased in the drug store. With any luck you will be able to find lanolin, fragrance oils, glycerin, litmus paper and a box of crayons for coloring.
The grocery store is also a good place to get **Borax**. Look for The 20-Mule Team box. This is 100% pure borax and is many times cheaper than purchasing a small box of some other brand from a specialty house.

**Utensils:** You probably already have everything at home you will need to make soap. You will need a plastic or glass **mixing bowl**, a large plastic or wooden **spoon** to mix it with, and a small **food scale**. Don't try and get by without the scale as you really do need it to measure the lye, if nothing else. If you aren't sure if this soap making thing is for you, a small food scale should be enough to get you started. At around $10.00, this may very well be the most expensive item you need to buy. However, if you are going to get serious about this soap making thing, you need a **good, precise scale** that can accurately measure very small amounts. This is because you need to meticulously measure very small amounts of lye for small soap batches. In my opinion, you don't need an expensive thermometer, either. I use a **candy thermometer** that starts out at 60 degrees F and goes up to 400 degrees F. This has served me well and cost less than $2.00. For a **setting tray** I use an oblong, flexible Tupperware container with square sides. It works great. You could use a glass cake pan and line it with plastic wrap just as well. Don't use anything aluminum as lye eats it. Look around the kitchen and see what you have. Your imagination is your only limitation. Worried that the soap might ruin your utensils for later use with food? I have experienced no problems with the stainless steel, plastic, or glass items I have used. This is just my opinion, however, as some soap makers keep their soap making utensils separate. The lye will mess up a wooden spoon. You wouldn't want to use this again with food. Do you need to purchase any of these items? Probably the grocery store is again your cheapest outlet.

If you decide to get fancy and make **really nice soap** it may be necessary to go to a soap making supplier for some of the more exotic fats, essential oils, soap molds and coloring dyes. But none of these things are necessary if all you want is a good bar of soap for personal use.
The Way Al Makes Soap

In 45 minutes I threw the following batch of soap together so I could get some pictures. The process doesn't take long. As the years have passed, my methodology has changed from the early days when I was doing so much experimenting while I learned the art. What follows is how I now make virtually all my soap.

Step 1: Determine about how large a batch you want to make.
Generally speaking, this will be determined by the equipment you have on hand and what you plan on doing with the finished soap. I generally use about 10 lbs of fat when I make a batch. Why I make such a large batch will be explained later.

Step 2: Get all your equipment together.
I collect my big stainless steel pot, a scale, a couple of Pyrex bowls, a plastic spoon, the SAP table and my fats and lye.

Step 3: Weigh out your different fats.

Recipes... My recipe is in my head and every time I make soap it's a little different. If I was selling my soap and needed my soap to be consistent every time, then yes, I'd also use a recipe.

Today, I'm making a smaller batch than I usually make using only 4 lbs of fat. I make most of my soap with lard. The only reason I make so much lard soap is because I have a 50 lb box of it in the food storage room. If I had a box of something else I'd be using that.

What you see to the left are really cheap food scales. If you are going to do much soap making I'd strongly suggest you invest in a much better scale. More on this later.

Generally, I don't even determine beforehand exactly how much of this or that fat I'm going to use. I just keep plopping the fat on the scale until it looks about right then I tap the table next to the scale to unload it's gears giving me a more accurate reading. This time... 48 ounces of lard. You must be as accurate as possible about reading the scale. Now I write "48 oz lard" down on a paper.
Using a spatula, I empty the lard into my big stainless steel pot. Next I weigh out my coconut oil. Even though coconut oil is a bit harsh on the skin I use it each time I make soap because the kids won't use it if it doesn't lather like mad. As coconut oil carries this quality I add about 25-33% coconut oil to the batch. I add the coconut oil to my measuring bowl until the scale reads what I want. Tapping the table, I read 16 oz and write on my paper, "16 oz Coconut oil," then add this fat to my big stainless steel pot.

Step 4: Computing water and lye needed.

Don't let this step throw you. After you do it just one time it will be as easy as 'falling off a log.' Using the SAP chart I figure the following...

**Water needed.**

*First I add the weight of my fats...*

48 oz lard + 16 oz coconut oil = 64 oz total fats.

*Then using the figure on the bottom of the SAP table I compute my water requirement...*

64 oz total fats X 0.38 = 24.3 oz water

**Lye needed...** (using the 5% superfat column)

(Sap Value)

48 oz lard X 0.138 = 6.336 oz lye

16 oz coconut oil X 0.175 = 2.800 oz lye

Total Lye Needed: 9.136 oz lye

Step 5: Measure the lye and water.
Compared to the fat, a batch of soap doesn't take much lye, hence the need for a really good scale. A cheap little food scale like this one just can't measure accurately enough to get the lye amount exact. This is especially true with small batches where a very small amount of lye must be measured. This is the primary reason I make large batches of soap. The more lye I need, the more accurate the scale will measure it. My batches generally take at least a pound of lye. My scales will measure this somewhat accurately, but it sure won't adequately measure an ounce. Do this outside.

There's not too much to say about measuring the water. Get as pure of water as you can find. Rain water is good as is distilled water.

**Step 6: Mix the lye in the water.**

Be sure to do this outside in case of spills and because of the fumes created. Always pour the lye into the water, never the other way around. The colder the water the better. Stir it with a nonmetallic spoon. In just a minute or two the lye-water mixture should be clear and ready for the next step.

**Step 7: Heat the mixed fats until they have melted.**

Don't over heat! Some people get wrapped around the axle, saying you must have the fats and the water at very specific temperatures. Hogwash. The fats should be melted but not hot and the lye water should be about the same temperature. I heat mine in my big stainless steel pot on medium heat until the fat is just above it's melting temperature.

**Step 8: Stir the lye water into the fat.**

As you do this, stir the soap in only one direction and very slowly pour the lye water into the oil as you stir it.
The Way Al Makes Soap

Step 9: Blend with a stick blender until it traces.

For the first ten minutes or so, your soap batch will have the consistency of the melted fat. This photo looks down into my big stainless steel pot. Occasionally the soap separates which looks a bit like clabbered milk. Ninety-nine percent of the time a little water added as you mix will cure this.

Step 10: Add other ingredients at trace.

Now I add my colorings, scents and other ingredients which gives the soap it's distinctive qualities. If I'm planning on making several different kinds of soap using the same starter stock, I'll often separate this into two or at the most three smaller portions. You have to work quickly as the soap is now hardening rapidly. From a normal trace with soap just above the fat's melting point, you have perhaps 15-30 minutes before the soap gets so thick you can't work with it any longer. The hotter the soap, the faster it will move from a nice trace to unworkable soap. Soap at 180 degrees F will move through this stage in only 2-3 minutes, so be careful with the temperature!

Step 11: Pour the soap into molds.

I lay a single layer of cellophane on the bottom of my tray which helps in removal of the soap later. Using a large spoon and spatula, pour or spoon the soap into your setting tray. I'm using an old margarine tub here. Smooth it out and lay cellophane over the top. I then get a large book and press it down on the soap lightly to flatten out the top.
**Step 12: Cut your soap.**

Do this step 1 to 24 hours after you have put your soap into the mold. Using a thin knife, cut your soap into bar sized chunks. With this particular batch I poured the soap about 2 1/2 inches deep so I'm cutting the bars as if they are laying on edge. If the soap was thinner, I'd cut it as if the face of the bar was on top. Do not cover your tray with cellophane after this. Leave it open to dry.

**Step 13: Remove soap from mold and let it cure.**

Use judgement in determining when to remove the bars from the mold. This time could be three days to a week or longer after you've cut it. The bars should be hard to the point they maintain their shape. Sit them on edge in a warm, dry place where they can be undisturbed. Then forget about them for two or more weeks. (This is hard to do if it's your first batch!) My special place for drying/curing soap is the top of the kitchen cupboards.

**Step 14: Check pH and store your soap.**

Actually, I rarely check my soap's pH now that I have the process down. If you're new to this it's probably a good idea to check your soap so you know for certain what it's pH is. Your soap should have a pH of 10 or less and will be unless you made a mistake on calculating the amount of lye needed. The closer your soap is to a PH of 7 the better but expect a pH of around 9. Many people taste their soap to check for pH. And you can do this too. However, I think pH strips are still handy to have around. To the beginning soap maker who has never experienced the 'bite' of the soap, how does one know when it's right?

The bottom bar in the photo shows how you can round off the bar's sharp edges with a potato peeler. Sometimes I'll do this if I'm giving soap away as a gift. The soap peelings go into a plastic bag for later rebatching.

After curing, place your soap into a plastic bag and store it until ready for use. Unless you've added antioxidants at trace, you should try to use it up within 12 months. If not, don't throw it out. It might not have a really clean, fresh smell any longer but it's still good soap.
Summary:

This page isn't a full set of instructions but rather should be used as an anchor to tie the loose ends together. You owe it to yourself to read the soap instructions page carefully before making your first batch.

By no means should you consider this the only way to make soap. There are many different approaches you can take and still end up with a great finished product.

Above all, don't be afraid to experiment with soap making. That's half the fun, and as you do, you'll develop your very own process for soap making which works best for you.

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Revised: 10 Jul 00
Growing and Harvesting Wheat by Hand

Although grain is still grown and harvested by hand in many parts of the world, in the United States this skill is practically lost. Having done just a bit of this myself, the thing that impresses me the most is how long it takes to do this by hand. Compare this to modern agricultural methods where just one man, aided by his machinery, can do the work of literally hundreds of men working with hand tools. Until one actually experiences both ways, it's hard to comprehend the strides we've made in agriculture during the last 120 years.

Land Preparation: If you are growing wheat on land that has previously been under cultivation this isn't relatively too big a job. Normally, all that's needed is to turn the dirt over with a shovel, then smooth it out with a rake. But if you are breaking up sod, or grass land, this can turn into a grueling ordeal. For example, I enlarged my garden last spring. Working as fast as I could with a shovel, I only turned over
about 100 square feet per hour. After it has been turned over, it still needs to be gone back over and further cut up with a shovel then broken up with a rake. All of this is hard work. And since it's impossible to get in there and weed the grass out of the wheat as it grows, if you have an extra season, you could let it sit so you could get in there several times during the summer and kill the new grass. This might also be a good time to grow some 'green fertilizer' to be turned under after it grows. I fertilize mine with manure as there is plenty of it around where I live. Be careful how much you fertilize if you live in dry country, however, as the more fertilizer used, the faster the wheat will grow. If it grows like mad and uses up all the available water in the soil, it will die before it even has a chance to head out. It's better to have a short, stunted crop of wheat than tall, dead wheatgrass.

**Planting:** The old timers planted their wheat by 'broadcasting it.' They did this simply by throwing it in a fan shape by hand. How densely it needs to be seeded depends again on how much water is available for the crop. The drier the ground the lighter you want to seed it. This is because the denser the growing wheat, the quicker the available moisture in the ground will be used up. I live in wheat country. Around here, the farmers plant 1 1/4 to 1 1/2 bushels to the acre (that's 80-96 lbs). But to put it into more manageable terms for the guy who wants to do this on a small patch, lets say, 100 feet by 100 feet (10,000 square feet) that would come to 18-22 lbs of wheat. That also comes out to 7.5-9.0 grams of wheat per cubic yard. Perhaps we should mention farmers now only plant 'treated wheat.' This is wheat that has fungicides on it to prevent several bunt and smut funguses, which left unchecked, will eat the wheat right in their shells. The fungicides are stained red to prevent accidental poisoning. In fact, it's illegal here to plant seed that hasn't been treated as the government, and everyone else, for that matter, want to keep these dangerous diseases as eradicated as possible.

**Growing:** The old timers tell me they then harrowed the wheat seed into the ground on their early farms. You can do the same thing by raking it in. Then all you have to do is wait and let nature take it's course. You should put water on it two or three times during the summer if you live in a dry climate and have the means to irrigate it. The wheat looks much like grass when it first sprouts, then continues to grow until it 'heads out.' Heading out means the wheat heads start developing on top of the plants. The plants turn yellow as they near harvest. You need to keep an eye on your field as you want to start the harvest after the kernels have fully dried but not wait any longer after this than you must. One never knows when a big wind storm, rain, hail, or snow will come and make harvesting your crop almost impossible and destroy the quality of your crop.
Cutting: The old timers used a scythe to cut their wheat. (Lehman's has several of them for about a hundred dollars. You can get a catalog for $3 by calling 330-857-5757. Or, if you'd like to go directly to the source, please take a look at [http://www.scythesupply.com/](http://www.scythesupply.com/). I still don't have scything down pat. An old timer taught me. He makes it look effortless, and I guess it is for him. Instead of just swinging it, he also moves the scythe blade forward through the wheat. It's important to keep the scythe razor sharp or it won't do it's job.

Next comes the stooking. Grandpa taught me how to do this. He used the wheat plant itself to tie the stook together. This almost needs to be demonstrated, but what he did was take perhaps a 1 inch diameter pile of wheat, wrap the bottom end of the straw into a knot, then wrap the wheat around the stook and tie the wheat end of the straw into another knot.

Threshing: The stooks are now ready to be brought in from the field to where you are going to thresh them. This is done with a flail. I made mine from two large willows, about 1 1/2 inches in diameter. They are connected with a rope through holes drilled through their ends. Yes they look a lot like great big nunchakus. Mine were home made, and were not perfectly straight, but they still worked just great.

Take a stook, open it up on a large canvas tarp, and start beating the daylights out of it with the flail. I did this out on the grass so the flail wouldn’t break the kernels or beat holes in the tarp which I expect it would have done had I threshed it on concrete. After the wheat is beat out of the straw fairly well, the next step is to pick up the straw and move it off to the side. Be careful you don't throw any heads of wheat away doing this. What you have left is a lot of straw mixed in with wheat at various stages of threshing. The easiest way I found to get the straw out of the wheat was to put it through a very coarse sieve. I used a webbed plastic in-basket which worked great. This also worked good for catching the wheat heads that needed to go back on the threshing floor to be beat out with the next stook.

The reason a flail looks like nunchaku is because they ARE nunchaku; or more rightly, the ancestors of them. In feudal Japan, the Shogun decided that no peasants could own weapons, so only one knife in a village was permitted, and you had to book your turn with this at least a week in advance. Only after permission was granted from the local Samurai, would you even get your booking secured. Peasants saw they could use certain farming utensils as weapons. The police baton was originally the crank on a mill used to powder rice, the staff was originally a walking stick, and the nunchaku was originally used in the process of obtaining grain.

Simon Walkden
Growing and Harvesting Wheat by Hand

At this point the wheat is full of chaff - the fibrous outer shell that surrounds each kernel of wheat on the head. You need a windy day, or a big fan to get rid of this. As the wind always blows where I live, I throw it up into the air like people have been doing for thousands of years. The wheat is a lot heavier than the chaff so it falls to the ground first. The chaff is blown away. I also did this on a big tarp so it wouldn't be so hard to collect the wheat. Finally, after lots of throwing, it was clean enough to suit me.

Yield: How much wheat did I get? About a quart per stook, and my stooks were small. How long did it take? Doing this by myself, I'd guess it took one to two hours per gallon of finished wheat. The farmers in our area are getting anywhere from 8 to 60 bushels of wheat per acre under a wide range of variables. These fluctuations include planting density, amount of rainfall or irrigation, amount and type of fertilizer used, average summer temperature, and weather extremes.

Self reliance is a very good feeling, even if it is a lot of work.

These photos forwarded by Charles Ragen.
Charles says he can help get you a winnowing machine if you'd like one.
Growing and Harvesting Wheat by Hand

An old, hand powered Chinese winnowing machine. The circular piece on the right is the hand driven fan. Wheat trickles in from the top funnel and as it falls the cross wind blows air through the falling grain. The fullest, heavier kernels fall in the first chute and are used for animal feed. The lightest material - the chaff, flies straight out the back.

Winnowers like the one shown above were used mainly in south China for rice--suitable to that particular climate and topography with small plots in the hills and valleys where there were many windless days.

An old, hand powered grinding mill still in use in China today. As the wheel is so wide and the radius of the turn so sharp, rather than just rolling over the grain, it also drags the grain which helps in the grinding process.

This particular grinder is located in the Northern Shandong countryside a few miles from Confucius's native place. The grinder is called a Qufu, pronounced Chewfoo, and is the village communal stone grinder made from granite. It is used by these women to crack corn for their hogs and chickens.

An old, hand powered grain grinder. Grain is fed into the center of the upper stone. As it turns, the grain moves from the center to the outer edges and is ground in the process.

This limestone grinder is still in use in the 3 Gorges of the Yangzi River Valley. It is used to prepare soy beans for tofu making as well as grinding up anything. Every family has a set--or at least had a set in bygone days. By the way, this town, now 400 feet above the water, will become river front property in late 2003 when the reservoir behind the dam fills.

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Never doubt in the dark what God has shown you in the light.

Michelle Terrill

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When I was old enough to go to the field with Father, he would plant grain, broadcasting it with his hands. Whenever he finished planting a patch of grain, he would take off his hat and ask that the Lord would protect it, and bless it that he might be able to harvest a crop. Before his death he said that he had planted and harvested crops for some fifty-five years, and had never lost a crop.

John Durtschi
Born 1894

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|| Walton Home Page || Old Timer's Home ||

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Growing and Harvesting Wheat by Hand

Revised: 10 Aug 01
Making a Cistern

Presents...

Making A Cistern

This 70 year old cistern is still in use today. Made completely of concrete including it's cap, it's tank is 8 feet deep and has an inner diameter of 10 feet with a capacity of 4,700 gallons.

How one family did it...

As told by Glenn Adamson (born 1917)
contents © Al Durtschi

Modern cisterns are made out of concrete and are usually underground. In the early days many people didn't have the money to make an all-concrete cistern and did it this way:

When I was a kid on the old homestead our cistern was about 25 feet straight out the front door of our house. It was a big hole about 8 feet in diameter and maybe ten feet deep in the ground. A cement floor had been put in it but the walls were dirt. Dad knew a lot about plastering because of
Making a Cistern

his carpentry work. He quickly plastered the dirt walls with several coats of plaster. This made it water tight. The cistern's vertical, round wall was capped with a cement lid (a wooden top would also work in a pinch). In the top of the lid was a 2 1/2 foot square cover. At first we lowered the bucket on a rope to get the water, but later Dad put a well pump on top of it so we didn't have to open it and let dirt fall in. From the cistern we got all the water we needed for cooking, washing, and whatever. When the cistern got low, Dad diverted water from the ditch to fill the cistern. The water was fairly clear as it had just run out of a pond. After the cistern was full, Dad treated the water, probably with chlorine. We only put water in the cistern about twice a year.

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Revised: 2 May 96
Modern bathrooms are a relatively new convenience. Here in the small farming communities of Alberta, a few families didn't get indoor bathrooms until well into the 1960's, which for an old goat like me wasn't that long ago.

Building an Outhouse

as told by Rose Adamson (born 1914)
page contents © Al Durtschi

The average outhouse was three to four feet square by 7 feet high. Many were single holers, but often they were double holers. In the last century, hotels often had outhouses with a dozen holes. And at least one hotel outhouse in Montana had a two story outhouse with a plank from the second floor going over to the second floor of the outhouse. The `droppings' fell through a 1 foot channel down past the first level into the hole.

Outhouses were easy to build. They were nothing more than a wooden shell with a roof, a floor and a front door. Inside was a 2 foot high box built into the back half that went from one side wall to the other side and came out from the back wall about two feet. In the top of this was an oblong hole about 12 inches by 10 inches. The outhouse was set over a hole that had been dug, usually about 5 feet down into the ground.
Did these things stink?
Yes.

What kind of toilet paper did they have?
Although toilet paper may have been marginally available in the early days, it didn't really catch on. People didn't know anything else, and had better things to spend their meager cash on than this new unnecessary stuff. There are lots of stories of newspapers, the Eaton's catalog, and other magazines in the outhouse that weren't there for reading. We tore a page out, ruffled it up to make it a little softer, then used it.

In the Summer time how were the flies kept down?
Lots of people really didn't worry about the flies. Some of the fancier outhouses had lids for the holes. And if people were really concerned, they bought powdered lime or sometimes lye and sprinkled it down into the hole. This also helped the stench considerably. One thing is for sure, wondering where that fly had been that was walking on the dinner plate took on a whole new meaning with an outhouse near by.

How far away from the house was the outhouse?
Anywhere from 50 to 150 feet.

Couldn't people do something different in the cold winter time?
Like what? There is many the story of children (now old timers) telling about their '50 yard dash'... unless you want a really fancy one.
The Outhouse

in the middle of the night in the dead of winter, dreading putting their bare little bottom on that icy seat. But many families had `chamber pots' under the bed. These were used exclusively for '#1' and not '#2.' If they had to do 'that,' they still needed to run to the outhouse. In the mornings someone had to take the chamber pot outside and dump it, then take it to the well or creek and wash it out (never mind who lived down stream).

What happened when the hole under the outhouse got full?
Usually the father of the family dug a new hole a few feet from the outhouse, moved it onto the new hole, then took the dirt and filled in the old hole. However, I know an uncle who got in there with a shovel because he didn't feel like digging a new hole. (He left the seat just a little messy.)

What about privacy?
Well, sometimes there wasn't. If it was a two holer outhouse and two members of the family had to go and couldn't wait -- -- well, you know. We have two and three bathrooms in our homes now, but I don't know of anyone who thought hard enough about having two outhouses to build another one in those days.

How do I keep the dainty women folk from getting embarrassed when going to the outhouse?
Always put the outhouse on the other side of the wood pile. Women, generally being easily embarrassed, will stop and get wood if there are any men around. This way the man never has to carry wood into the house! And, always put the outhouse downhill, or at least never uphill. The length of time it takes to get back to the house doesn't matter.

Submitted by Jim Maggard,
Dayton, Ohio

And now for the most ask question - What about that cutout of the moon on the door?

A moon and stars were used in colonial times to designate the sex of the outhouses. Originally the moon was for women and the star was for the men. But the men's outhouse was usually in such disrepair, everyone wanted to use the women's outhouse. ...so, eventually they quit using the stars

Halloweening - a true outhouse story

As told by Lewis Adamson (born 1912)

We always had lots of fun on Halloween night when we were teen-agers. One of our favorite people was the town policeman. When us kids were out Halloweening, he stayed right at home, making sure that none of us came to do some Halloweening at his place. On Halloween in 1928, when I was 16 years old, we were down at his place trying to figure how we were going to get him and play Halloween tricks. We watched him close, and saw him come out of his house and go into his outhouse. He figured we were going to tip it over, and so he stayed out there, expecting to give us a little surprise. A friend and I got a long piece of wire off the fence. Then we told the rest of our bunch to go out and act like they were going to come in from the other side. While he was watching them, we came in from the back side, threaded that wire around the outhouse and twisted up the ends. Then we motioned for the rest of them to come and help us. They came sneaking around to where we were. When he heard us, he tried to come out to surprise us. But it was too late. It was him that got the surprise. With him in it, we tipped his outhouse over so it landed on the door. Then we all ran away. Luckily, he never found out who we were.

The funny part of it was, the next day I was in the cafe' and I heard someone talking about it. The man sitting by the table next to me said, 'There was sure something strange happen last night. I was away from home. My wife was there alone, and she heard somebody hollering. So she went out to see what it was. Here it was, the town policeman in his tipped over outhouse with his head out the hole. She couldn't get him out. So she went and told my neighbor, and he went and got someone else to lift the outhouse off him and let him out of there.'
As told by Lucinda Jensen

Memory takes me back to the little house on the hill. It had to be stationed at least 2 blocks away to protect the sensitive noses of those who lived in the area.

I was ill from eating too many of those wonderful green peas from the garden. The need came to make the run up the hill. I made it up there and accomplished my mission but on the way back I ran into trouble. I awoke about half way to the house. I was lying in the path where I had fallen. I got up and everything worked so I made it back to the house. Oh, the trials that accompanied the little house on the hill.

Another memory, unpleasant to recall: when the north wind blew and the thermometer registered below zero, the bad weather didn’t stop the need to make a hurried flight up the hill. The cold seat didn't help, either. We didn't linger long and the droppings froze immediately, thus making a neat pile which eventually reached the seat. In my minds eye I can still see that neat pile that had to be tipped over quit often to make room for more deposits.

Oh the joys of the "Out House".

In the summer time the heat did a turn about on the pile. The smell really permeated the area. Thus, for a different reason, we didn't linger long. Big blow flies filled the interior and their happy buzzing was ever present. In my mind I could see those same flies crawling on my food.

During the depression the government sent unemployed men into rural areas to build new sanitary out door toilets. It wasn't long before we had a nice new out house sitting on the hill. A cement box surrounded the hole and a nice cover was put in place that could be lifted up or closed according to the need. This new invention made the whole scene quite pleasant. But the story of the little house on the hill would not be complete without singing the praises of the old Sears Roebuck catalog that was used with much anxiety. A far cry from the soft toilet paper of the now generation.

Thank you, but, I’ll just use my new toilet in the house.

Lucinda Jensen
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Revised: 20 Mar 00
You know how some people just love to tinker and putter around? Well, that's Loren Jensen through and through. Loren's dad was a timber man and Loren grew up in the mountains in the summer helping his dad get logs out of the forest to keep the family saw mill supplied during the winter months. When his dad died and the saw mill was shut down, Loren turned it into this most historic little store. Loren and his wife, Phyllis, must really love this stuff or they would never have gone to all this effort. I think you'll enjoy having a look around.
This is what you see when you walk through the front door. I thought I was walking into a Wild West movie.

This shop is more than a museum, it's also a little store selling health foods and supplements plus a hundred other little sundry items.

Looking from the center of the store towards the front door.
A few other things you'll see inside the store...

Outside
A work in progress, Loren is constantly adding to and fixing up the little fort behind the store. It's still got some distance to go before he's happy with it but it's already well worth seeing. What's with the old truck? That's how Loren gets around.

Honestly, I don't know what it is with me and **outhouses**. They are just really fun, that is, as long as I don't have to use them. I've seen fancy outhouses outfitted with electricity and heat but I've never seen anything this swank. I can only guess multimillionaires of 150 years ago must have used something like this. It's just the most elaborate thing you can imagine. It even has its own skylight. See the next three pictures for a peek at what it looks like on the inside.
These are two very old pioneer homes that date back over a hundred years. The wood stove to the right sits in the center of the larger home. It's hard to believe people actually used to live in something as small and bare as this. But in reality, to the early pioneers, this would have been a mansion compared to some of the tents and dug-outs they started out in. In some parts of South America or Africa, a little shack like this would still be considered very nice place.
Heber Valley Products

Heber City is located up a mountain pass from Provo, Utah. If you happen to be driving through Heber City, you can find this little store with it's attached fort on the highway leaving Heber to the southeast. It's about a mile outside of town on the north side of the road. Feel free to pop in for a visit. They get a lot of enjoyment from showing their little place.

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Revised: 20 Mar 00
Remember Mama's Recipes

Compiled by Marlene and Mabel Mertz in 1973 by the Stirling, Alberta LDS Woman's Organization

Back in 1973 some of the older women in the Stirling Relief Society got together and dug up some of their mothers' and grandmothers' old recipes then put them into a little booklet. You may have a hard time finding the ingredients for some of these recipes. And be forewarned, some of the recipes are 'behind the times' and may be considered unsafe. Most of the ladies that contributed to this book are either 'in a better place now' or in the nursing home - not to mention their mothers and grandmothers who handed these ideas down. There were only about 100 copies made - until now. We hope you enjoy this walk down memory lane.

- Washington Pudding
- Rice Pudding
- Tapioca Pudding
- Bread Pudding
- Baked Beans
- Baked Corn
- Bean Soup
- Potato Soup
- Cottage Cheese
- Buttermilk Pie
- Head Cheese
- Brine Cured Pork
- Venison or Beef Jerky
Many of the pioneers found it necessary to cook nothing but wheat to feed their families. And again during the Great Depression, wheat once more kept many from starvation. To cook whole wheat kernels, put wheat in the oven and heat until it is very hot. Then wash it and boil slow for 3-4 hrs or until kernels burst. No need to use lye.

Your Comments To Mama's Recipes

- Turpentine by Rusty Oxydado
- Winter's Cold Cure by Rusty Oxydado
- More Old-Time Remedies by Phillip J. Stevko
- Type II Diabetes and Cinnamon? by Phillip J. Stevko
Remember Mama's Recipes

- Aspartame forwarded by Phillip J. Stevko
- Remedies and Recipes forwarded by Kristi Gross
- Vicks, Colds and Burns by Emily
- An 1860's recipe for Liniment by Marilyn Nickless
- Sunburn Aid by Jerry Bare

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Page last updated: 23 Dec 02
Washington Pudding

- 1 cup brown sugar
- 2 Tbsp. butter
- 2 cups hot water
- 1/4 tsp salt

Prepare in a large heavy sauce pan with a tight fitting lid. Make the following batter and drop by the spoonful into the hot sauce.

- 1/2 cup sugar
- 1/2 cup milk
- 1 cup flour
- 1/2 cup dates or 1 cup raisins
- 2 Tbsp butter
- 2 Tbsp cocoa
- 1 tsp cinnamon
- 2 tsp baking powder

Bake on top of stove, covered tightly, for 35 min. Serve hot or cold. Both are good.

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Page last updated: 20 Sep 99
Rice Pudding

- 1/3 cup rice
- 1/4 tsp salt
- 4 Tbsp sugar
- 4 cups milk

Wash rice and place in baking dish. Add sugar salt and milk. Stir to dissolve. Cook in 350 deg.F. oven for 1 hour until rice is done. Raisins may be added and nutmeg or other spices to taste. Stir occasionally.
Tapioca Pudding

- 3 Tbsp tapioca
- 3 eggs
- 1 tsp Flavoring
- 1 qt. milk
- 1 cup sugar

Soak the tapioca in warm water for 2 hours. Stir into boiling milk, let boil 15 min. Beat together the yolks of the eggs and sugar, stir into pudding and flavor, pour into baking dish. Beat whites with 3 Tbsp sugar until stiff and frothy. Put on top and bake for 5 min or until egg whites are browned nicely.

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Page last updated: 20 Sep 99
Bread Pudding

- 1 pint stale bread crumbs
- 1 qt milk
- 2/3 cup sugar
- 1-2 eggs
- 2 Tbsp butter
- 1/2 tsp salt
- 1/4 tsp spice or extract flavor

Place the bread in the milk and let soak until soft. Beat the egg until light; add sugar, salt and flavoring. When mixed well, stir into bread and milk. Pour the whole thing into a Pyrex or earthenware pan and place in a rather slow oven. About 1 1/2 hours.
Baked Beans

- 2 cups navy or pea beans
- 1 1/2 tsp salt
- 2 Tbsp brown sugar
- 1/4 cup molasses
- 1 bay leaf
- 1/2 tsp dry mustard
- 1 Tbsp chopped onion
- 1 cup boiling water
- 1/2 pound piece salt pork

Wash beans, discard imperfect beans. Cover with water and soak overnight, or cover with boiling water and soak 4-5 hours. Drain, cover with a large amount of boiling salted water; boil slowly for 1 hour. Drain, combine salt, sugar, molasses, bay leaf, mustard, onion and water and add to beans. Pour into bean pot. Score rind of pork and press into beans, leaving the rind exposed. Cover beans with additional water, (boiling) and bake in 300 deg F oven for 4 hours. Remove cover for last 1 1/2 hours cooking.

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Page last updated: 20 Sep 99
Baked Corn

- 2 Tbsp butter
- 1 1/2 tsp flour
- 1 cup milk
- 2 cups cooked corn
- 1 Tbsp sugar
- 1 tsp salt
- 1/8 tsp pepper
- 2 eggs

Melt butter, add flour and mix well. Add milk gradually and bring to the boiling point, stirring constantly. Add corn, salt and pepper and heat thoroughly. Remove from fire, add well beaten eggs and pour in a greased baking dish. Bake in a moderate oven, 350 deg.F. for 25 min.
Bean Soup

- 1 lb. white beans
- 6 cups cold water (1st amount)
- 1 ham bone with the meat on it
- 2 tsp salt
- 1 small onion
- 1 bay leaf
- 1/2 tsp dry mustard
- 4 cups water (2nd amount)
- 1 cup tomatoes
- 3 cups water (3rd amount)

In your soup pot, soak the beans in the 6 cups of water overnight in a cool place.

In the morning, add the ham bone, salt, onion, bay leaf, mustard and 4 cups water. Cook slowly, covered for 3 hours. You should stir the soup 2 or 3 times during this period.

Remove from heat and take out the ham bone and bay leaf, slip the meat from the bone and return meat to the soup. Add tomatoes and remaining 3 cups of water and simmer 1/2 hour. Soup is ready to serve.

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Page last updated: 20 Sep 99
Potato Soup

- 1 Tbsp flour
- 3 potatoes
- 4 cups milk
- 1 onion
- 2 stalks celery
- 1 tsp salt
- 1/4 tsp pepper
- 2 Tbsp butter

Cook potatoes and onions in salted water, until they are soft mashed. Scald milk with the celery, remove celery and add the butter and flour which is creamed together. Then add the prepared potatoes to the milk and season with salt and pepper. Bring to a boil and serve at once.

I prefer to just cube the potatoes and allow them to remain in the soup. I also add carrots and crisp bacon pieces. A sprinkling of celery seed will do in place of celery.

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Page last updated: 20 Sep 99
Cottage Cheese

Use clean fresh milk, (skim). Put milk in large container. Add a little sour milk or starter, about 1 cupful to a gallon of milk to hasten the curdling. With a good starter the skim milk will curdle in 12 to 15 hours. Keep at a warm room temperature of 75 deg. F. until curdled. Too high a temperature causes a tough cheese. When milk is firmly clabbered, add one third as much boiling water as you have milk or enough boiling water to heat mixture to about 100-110 deg. F. Carefully stir the curd and let stand 7-10 min or until curd has barely separated from the whey. Pour the whole mixture into a cheese cloth strainer or a fine wire strainer. If you prefer a mild tasting cheese, pour cold water over the curd. This washes it and removes the acid taste. I have had good luck just setting the skim milk on the back of the stove, or over a pilot light of a gas stove until it clabbers. Then I have turned a slight heat on it until it forms the curds and whey. One must be very careful not to heat it too much. After it is drained well I just add a little sweet cream and salt and pepper to taste.

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Buttermilk Pie

- 2 cups buttermilk
- 1 cup sugar
- 1/4 tsp salt

Bring to a boil and add this mixture

- 1 Tbsp butter
- 3 Tbsp flour
- 3 egg yolks
- 1 tsp vanilla flavoring

Stir until it thickens, pour into a baked pie shell and cover with meringue made with the whites from the eggs or if you prefer you may top the pie with whipped cream

HINT: Apple cider vinegar mixed with honey and consumed at the rate of about 2 pounds per week is said to cure arthritis. Another person claims that by simply consuming 100 pounds of honey a year has cured his arthritis. [Editor note: That's a quarter pound of honey a day! Who can eat that much??]
Head Cheese

- 20 lbs pork
- 5 lbs beef
- 1 oz pepper
- 1/2 lb salt
- 1/4 oz Allspice
- 1/2 oz cloves
- 1/2 oz caraway seed (if you like it)
- 4 lbs meat stock

The pork used for this usually consists of heads, hearts, tongues, and if using beef, should be shanks and necks.

Put the meat in a large kettle and cover with water then cook at a simmering temperature for 2 or 3 hours until the meat is very tender. The meat is then taken from the liquid and separated from the bones. Cut the meat into about 1/2 inch cubes. Add the seasonings and measure 4 lbs. of the liquid in which the meat was cooked (meat stock) and add this. Mix the whole thing thoroughly with your hands until the seasonings are properly worked into the meat. The meat is then put into hog paunches or beef straight and laid out to cool. They may be pressed by laying a weighted board over them. If you prefer you may place the headcheese in bowls or bread pans.

This has to be eaten fairly soon as it is a fresh meat product. It would keep several months frozen.

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Venison or Beef Jerky

Jerky is practically indestructible, lasts almost forever and can be used as either a quick main meal or a basis for soups and stews. The word jerky comes from the method in which the meat is removed from the bones. It was jerked away quickly so as to eliminate many of the sinews. Three pounds of fresh meat equals about 1 lb. jerky.

Method 1: (Indian style) Hang strips of meat on racks made of willows to dry in the sun or sometimes in the smoke of the campfire for a smoked flavor.

Method 2: (pioneer) Rub strips of meat with dry salt and put in a stone crock to "season" for 24 hrs. (use no water) Then remove the strips and hang in sun or smokehouse to dry until very hard.

Method 3: Mix together 3 lbs. salt, 5 Tbsp. black pepper and 4 Tbsp. Allspice.
Skin one thigh of the animal, muscle by muscle removing all the membranes so that only the raw and moist flesh remains. Best size meat is pieces about 1 foot long 6” wide and 2 or 3 inches thick. Rub the salt spice mixture into the meat. Be sure to cover every bit of the meat's surface. Hang each piece by the small end to dry. If the sun is to hot, hang it in the shade. Never let the meat get wet or even damp, take it inside if it rains. Cover the meat with canvas or cloth to protect it from the dew. This will be at it's best at a month old.

Fish may be kept in much the same way.

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Page last updated: 20 Sep 99
Pot Roast

- 4 or 5 lbs roast (chuck)
- 1/4 cup of drippings
- 2 cups water
- 1 small head cabbage
- 6-8 carrots
- 6-8 small onions
- 1/2 tsp salt
- dash pepper
- celery salt
- pepper

Brown the roast on all sides in the drippings. Put the roast in a roaster with a tight fitting lid. Sprinkle with salt and pepper. Add water and bake at 350 deg. F. for 2 hours. Then add the cabbage, carrots and onions. Season with salt, pepper and celery salt. Replace the cover and continue to cook until the vegetables are done.

At the same time you put the vegetables in the roast, scrub the potatoes and put them on the rack beside the roasting pan. They should be done about the same time.

I usually add the potatoes to the roast along with the other vegetables. When everything is done, lift the meat and vegetables onto a platter and make a gravy in the bottom of the roaster.
Chicken in Cream

- 1 young chicken
- 4 cups water
- 3 cups medium cream (sweet or slightly sour)
- 1/4 tsp salt
- 1/8 tsp pepper
- onion

Select 3-4 month old chicken, dress, clean and wash in slightly salted water. Cut in small pieces, cover with water and boil 45 min. Drain stock. Add cream, onion and seasonings. Boil again until meat is tender. Serve with new potatoes and young green peas.
**Wheat Casserole**

- 1 1/2 cups wheat cooked until soft
- 1 cup celery cut fine
- 1 small green pepper (optional)
- 1 cup hot milk
- soda crackers
- salt and pepper to taste
- 3 Tbsp butter

Arrange wheat, celery and peppers between two layers of soda crackers in a greased baking dish. Add 2 Tbsp butter to hot milk and pour over the mixture, dot with butter on top and bake in hot oven 425 deg. F. for 25 min.

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Whole Wheat Pudding

- 1 cup wheat cooked until soft
- 1 cup grated carrots
- 1 cup grated potatoes
- 1 cup chopped raisins
- 1 cup sugar
- 1 cup flour

Mix altogether and add 1 tsp soda and 1 tsp each of cloves, nutmeg, cinnamon and 2 Tbsp butter. Mix well and put in a buttered dish and steam for three hours. Serve with whipped cream.
Whole Wheat Breakfast Cereal

Into a pot measure:

- 4 cups boiling water
- salt to taste (about 1 tsp)
- 1 cup cracked whole wheat kernels

Boil for 15 min to 1/2 hour stirring occasionally, remove from heat. Cover and let stand until ready to serve. Serve with milk and sugar.

Wheat may be added to soups and stews, meat loaf and many other recipes to extend them.

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Page last updated: 20 Sep 99
Self Rising Bread

At 6:00 A.M. mix 1 cup corn meal with enough water to wet it. Stir this into 1 pint of boiling water. Let boil 5 min. stirring constantly. Set off the fire and add 2 pints fresh milk (yet warm from the cow), 1 Tbsp salt and 1 Tbsp sugar. Let cool then stir in enough flour to make a soft batter. Keep in a warm place (should be kept lukewarm, for if it is chilled the whole thing is ruined). At about 10:00 or 11:00 o'clock when it seems thin, stir in 1/2 pint more flour. It should be ready to finish mixing by 1:00 o'clock. Add 1 pint of fresh thick buttermilk and 1 tsp soda, with enough flour to make a rather soft dough, mold into loaves, put into greased pans, let rise 1 hour then bake in medium oven for about 1 hour 10 min.

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Page last updated: 20 Sep 99
Invalid Dishes

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- Barley Water
- Oatmeal Gruel
- Flax Seed Lemonade
- Eggnog

Barley Water

- 2 Tbs pearl barley
- 4 cups water

Put barley over the fire in cold water, let come to a boil and cook 5 min. Then drain off the water and rinse the barley in cold water. Return to the fire. Add 1 quart of water. Bring to a boil again and simmer until reduced by 1/2. This may be sweetened or flavored. This is highly nourishing.

Oatmeal Gruel

- 1/2 cup oatmeal
- 6 cups boiling water
- 1 tsp salt
- sugar and cream

Add salt to the boiling water. Stir in the oatmeal and cook for 2 1/2 hours in a double boiler. Remove from fire and strain. When preparing it for a patient, use 1/2 cup gruel mixed with 1/2 cup thin cream, 2 in. boiling water and sugar to taste.

Flax Seed Lemonade

- 2 Tbs Flaxseed
- 4 cups boiling water
- 1 cup sugar
- Juice and grated rind of 3 lemons

Blanch the flax seed, add boiling water and let it simmer for 3/4 hour then add sugar and lemon rind. Let stand for 15 min. strain and add lemon juice. Serve either hot or cold. Also a tsp. of this every 1/2 hour
will help a bad cough.

**Eggnog**

- 2 eggs
- 2 Tbsp sugar
- 1 cup cream or milk
- Flavoring

Beat the eggs until light and creamy add the sugar and beat again then add the cream or milk and the flavoring, and beat again. Serve immediately to patient. [We think the flavoring would probably be nutmeg and vanilla.]
Molasses Candy

- 1 cup molasses
- 3 cups sugar
- 1/2 cup water
- 1 tsp cream of tarter

Mix sugar and cream of tarter together. Add molasses and water. Stir until sugar is dissolved. Boil without stirring until it hardens in cold water. Turn onto buttered pan: when cool, work and cut into sticks.
Brown Sugar Candy

- 2 cups brown sugar
- 1/2 cup milk or cream
- butter (size of a walnut)
- walnuts
- vanilla

Boil until it forms a soft lump when dropped into cold water, remove from fire. Beat until it begins to thicken, then add 1 cup chopped walnuts and vanilla. Pour into buttered dish.
Peanut Crisp

- 2 cups white sugar
- 1 cup peanuts

Melt sugar in hot skillet over fire stirring constantly. Pour liquid sugar over peanuts then spread in buttered dish.

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Custard Pie

- 5 eggs
- 1 tsp nutmeg
- 1 1/2 pints milk
- 1 scant tsp salt
- 5 Tbsp sugar

Line deep pie plate with pie crust and leave enough over edge to pull up to make pie a little deeper. Beat eggs, sugar, salt, and nutmeg together. Scald milk and pour over, mix well. Put in crusts not cooked. This makes one large pie or 2 small ones. Needs a good oven so as not to cook too long and cause separation of the whey. (to test when cooked, put small end of tsp in center of custard; if none adheres to it, it's done.)

Don't overcook.

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Crumb Cake

- 2 cups flour
- 1 cup sugar
- 1/2 cup lard

Rub together to form crumbs and save out 3/4 cup to use for cake topping.

- 1 cup buttermilk or sour milk
- 1 tsp soda
- 1 tsp cinnamon
- 1 tsp cloves
- 1/2 tsp salt
- 1/2-1 cup raisins

Mix these second ingredients with the first and when batter is in the pan, sprinkle crumbs over it for icing and bake 350 deg. F.
Cream Cake

- 1 cup white sugar
- 2 eggs
- 1 tsp baking powder
- 1 tsp vanilla
- 1 cup sweet or sour cream
- 1 1/2 cups flour
- 1/2 tsp soda in a little hot water

Put sugar and eggs in a bowl and stir well. Add cream and beat well, add flour, baking powder and vanilla. Mix soda with hot water and add last.

Bake 30 min. in 350 deg. F oven.

I have added cinnamon, nutmeg, and cloves to make this a spice cake and have also added cocoa or chocolate cake. Either way is very good.
Brown Sugar Icing

- 2 cups brown sugar
- 1 cup sour cream

Boil together for 20 min. or until it forms a soft ball in cold water. Remove from heat. Beat until creamy enough to spread.
Canning Citron or Vegetable Marrow Jam

Citrons and vegetable marrows [both squashes that people at one time grew] grow very easy here on the prairies and will make good fruit or jam when other fruits are difficult to get.

Canning Citron
When citron is ripe the seeds are bright red. Remove the seeds and cut the citron in small pieces and put in a preserving kettle. Cover with granulated sugar and let stand over night. In the morning cut a few pieces of lemon and put into it. There will be enough juice on the fruit to cook it in. Cook until the fruit is transparent. Seal in jars while hot.

Vegetable Marrow Jam
Dice marrow when it is a little on the green side. Cut as for marmalade, 2-3 lemons and 1 orange for each marrow. Mix together. Add 1/2 - 3/4 lbs. sugar for each pound of fruit mixture. Let stand overnight. Cook slowly until thick and clear. Note- use plenty of sugar and don't make more than will be used in a year because it loses color and flavor.

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Green Tomato Marmalade

- 4 lbs green tomatoes
- 1/4 cup finely chopped ginger
- 6 cups sugar
- 5 lemons
- 1/2 cup water

Chop tomatoes, add grated rind and juice of lemons, ginger and water. Simmer 1 hour stirring occasionally to prevent burning. Add sugar. Simmer until sugar is dissolved and then boil rapidly until consistency of jam (about 25 min) pour into jars and seal.
Carrot Marmalade

- 10 cups grated carrots
- 10 cups sugar
- 6 oranges
- 4 lemons
- 1 tsp each of Allspice, cinnamon and ground cloves.

Wash and peel thin the orange and lemon rind being careful not to get the inner white membrane of the rind. Put through the food chopper. Remove thin white membrane from orange sections and slice into small pieces. Squeeze the lemons and add the juice to the mixture and allow it all to stand over night. The next day, add spices and cook 2 hours. Put in jars and seal.
Canned Rhubarb without Sugar

Cut rhubarb in small pieces. Sterilize jars and then allow jars to cool. Place jars in a large pan or sink and fill them to the brim with water. Pack rhubarb in jars, forcing out water and all air bubbles as you pack in the rhubarb. Then seal. This is like fresh rhubarb when open.

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Canning Wild Mushrooms

When you have picked more mushrooms than you can eat, it is possible to can them. Clean and slice the mushrooms and blanch them to wilt them down. Pack them in jars, leaving 1 inch head space. Put lids on and process them in boiling water for three hours. Store in a cool dark place.

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To Can Cream or Milk

Fill sterilized jars to within 1/2 inch of the top with cooled milk. (or cooled cream). Put lids on jars and tighten them down. Place jars in a canner, having water to cover the shoulder of the jar. Boil for 1 hour from the time the water starts to boil hard.

Pressure cooker-- Same method but process 10 min at 10 lbs pressure.

Store in a cool dark place.

This cream will whip.
Preserving Eggs

First of all, the eggs you choose to preserve must be of the very best quality, 2-3 hours old and allowed to cool. If they are dirty, brush them clean. Do not wash them as it destroys the natural film on the shell. Do not attempt to store any cracked eggs. If possible, candle the eggs to choose the best.

**Method 1:** Mineral oil, the thinnest available, warm the oil so it is as warm as your hands can work comfortably. To apply the oil, dip clean cloth in it and wipe the egg so that every bit of the shell has been coated. Now just place the eggs (small side down) in egg crates and store in a cool place. If egg crates are unavailable they do very well packed in wheat. It is important to pack the small ends down. Just alternate a layer of wheat and a layer of eggs. The eggs should keep at least 6-8 months.

**Method 2:** Eggs in lime water; The lime water has to be prepared first as it has to stand for awhile.

To make the solution, measure 5 gallons of water and bring it to a boil. Remove from heat then add two pounds of fresh lime or dehydrated lime, and stir this almost constantly as the water cools. Dissolve as much lime as possible.

Now set the mixture aside and let stand, undisturbed, until all the undissolved lime has settled to the bottom and only clear liquid remains on top. It is only this clear liquid which is to be used...

The crock which you will be using should be very clean. Siphon the clear liquid into the crock you will be using, taking much care not to disturb the sediment on the bottom, now pack the eggs as closely as possible into the crock in the lime solution. Be sure that all the eggs are immersed.

If the crock does not have a tight fitting lid, cover the surface of the solution with melted paraffin. This is to prevent the liquid from evaporating.

Store in a cool place.
Making Baking Powder

- 1 scant pint flour
- 1 lb soda
- 1 lb very best cream of tarter

Sift eight times together and store in tightly closed boxes

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Page last updated: 20 Sep 99
Boiled Salad Dressing

- 1 tsp salt
- 1 tsp flour
- 1 tsp dry mustard
- 1/4 tsp pepper
- 3/4 cup sugar
- 1 cup strong vinegar
- 3 well beaten eggs

Cook this altogether in the top of a double boiler until it thickens. Put in a sealer and when it is to be used thin it down with either sweet or sour cream.
**Paste for Scrapbooks**

- 1 qt. water
- 1 cup white sugar
- 1 cup flour
- 1 Tbsp powered alum
- oil of cloves

Boil together until clear, then bottle. It keeps well.

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Page last updated: 20 Sep 99
Tried and True Remedies

[Editor note: Please think twice before using these remedies as a few of the ingredients are now known to be poisonous.]

HEAL SORES OR CRACKS IN THE SKIN OF MAN OR BEAST: Use pine tar to Coat the sore area well to keep off insects and promote healing.

SLACKED LIME: Dust on animal cuts to seal injured area and promote healing.

FOREIGN OBJECT IN THE EYE: Drop a flax seed into the eye. The particle in the eye will stick to the flax seed and the flax seed is easy to see and remove.

COUGH REMEDY: 2-3 drops of kerosene on a tsp of sugar.

COUGH REMEDY: Equal parts of oil of peppermint, friars balsam and tincture of red lavender. Mix and use drop by drop on a tsp. of sugar to alleviate the condition.

COUGH SYRUP:

- 1 tsp Honey
- 1 tsp glycerin
- Juice of 1 lemon

Mix well and use when needed.

CANKER AND COLD SORES: Collect the berries from wild rose bushes and make a tea from them. (These berries may be picked and dried for winter use.) Drink a little of this when you feel a canker or cold sore coming and it should clear up. (This is nothing more than vitamin C.) A little pot ash daubed on a cold sore will also clear it away.

SUNBURN AND STEAM BURNS: Sprinkle area with vinegar.

DYSENTERY AND DIARRHEA:

1. Take a liberal amount of black pepper on a tsp and cover this with thick cream and take this to relieve the situation.
2. Toast bread until almost burned pour boiling water over this. Drink the brown water for diarrhea.
**PIONEER LINIMENT:** Beat one egg slightly and measure the beaten egg. Add to the egg the exact amount of turpentine as egg and the exact amount of apple cider vinegar as the egg. Mix altogether well and store in a covered jar. This is very good for Arthritic and Rheumatic pain.

**HONEY:** Honey has been used through the years to cure many things. Taken internally, it has been known to relieve arthritis. Externally it is good first aid for wounds and burns. Bacteria will not live in honey. [Editor Note: This was before we learned about honey being able to harbor botulism.]

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Page last updated: 20 Sep 99
More Tried and True Remedies

[Editor note: Watch out for those recipes with turpentine in them!]

**Burn Salve**

This recipe has been passed down through the Hovey, Clark, and Hardy families since the 1860's. This salve is reported to be very effective in healing of burns. [Editor note: I've heard personal testimonials from the old timers about how well this recipe works - bad burns - no scars!]

- 1 tea cupful lard
- 1 tea cupful mutton tallow
- 1 tea cupful olive oil
- beeswax the size of an egg
- resin the size of an egg
- 2 tsp carbolic acid

Dissolve all ingredients on the stove except the olive oil and carbolic acid, which you add upon removing from the heat. Mix well and store in covered jar.

**Flu Ointment**

An early Lethbridge druggist, J.D. Higgenbotham, made this ointment for the flu epidemic of 1918.

- 2 large jars white Vaseline
- 2 oz. turpentine
- 1/4 oz. menthol crystals
- 2 cakes of camphor gum
- 1/3 oz. oil of peppermint
- 1/4 oz. eucalyptus
- 1/4 oz. oil of wintergreen

Melt and mix well over low heat and store in covered jars.

**Black Currant Tea**

(An infallible remedy for a sore throat)
- 1 Tbsp black currant jam or jelly
- juice of half a lemon
- 1 pint boiling water
- sugar to taste

Simmer altogether for 15 min. the hotter you are able to drink the tea the better.

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**Mustard Plaster**

[Editor Note: You have to be careful with mustard plasters. A woman E-mailed me several months ago after trying a different mustard plaster recipe at this web site saying it gave her a very bad burn. This is powerful stuff!]

Good for chest colds
Use the white of an egg instead of water with the dry mustard. The egg will prevent blistering of the skin. Mix egg white with half dry mustard half flour, cover the mustard mix on a cloth or paper. Cover the plaster with gauze or soft cloth and hold in place on chest with tape.
Poultices to relieve Boils and Other Inflamed Areas

1. **Flax seed poultice.** Flax seed should be mixed with a little boiling water over heat. Stir constantly, using a knife to blend. When thick enough to drop from a knife, remove from heat and stir well. Spread 1/4 inch thick between antiseptic gauze, Turn over edges of gauze and put on hot plate and cover with another hot plate then carry to patient, or cover and place on a hot water bottle until ready to use. **Test before applying,** and if too hot, cool a minute or two. Cover a small area first, then gradually the entire surface. A poultice should not remain on longer than one hour as it cools it becomes uncomfortable. After half an hour or so another hot poultice can be applied.

2. **Soap poultice.** Grate a bar of brown or yellow soap such as Sunlight, add a little sugar, moisten and tie over boil to draw.

3. **Bread and milk poultice.** Break bread into small pieces and moisten with milk and tie to area to draw out the infection.

4. **Bacon rind.** Tie a piece of bacon rind over the boil or other infected area with the skin side of the rind on the outside. This will really draw out the infection.

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Page last updated: 20 Sep 99
Cleaners

Cleanser for Woodwork

- 1 bar white soap
- 1 can Bon Ami
- 2 qts boiling water
- 2 Tbsp coal oil

Mix and let stand overnight, beat with an egg beater the next day. This is a real aid in spring cleaning.

Oven Trouble

When baking dishes bubble over in the oven, cover the area with salt, it will stop the smoke immediately as well as eliminate the odor.

Window Washing

Either a little kerosene or vinegar added to clear water will do a good job of washing your windows. Polish them dry and to a shine with old newspapers.

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Royal Hand Lotion

Put 1 pint tepid rain or soft water in a glass jar. Add 1/4 oz gum tragacanth, let stand until well dissolved. Give it a shake once in a while. Add 2 oz. eau de cologne, shake and bottle. Very good for chapped hands.

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Page last updated: 20 Sep 99
Your caution about the use of turpentine is well advised, but not explained. In the days of our fathers when they didn't have a clinic to visit, and hospitals were the place people went to die, medical needs were met by the women of the farms, or the ranch cook.

Yes, they had doctors in their day, and these doctors were a hardy bunch, having to run a circuit through their territory. By today's standards, they were extremely barbaric, usually called upon as the last resort to set a badly broken bone, deliver a difficult birth, or preform an amputation. Internal medicine as we know it today was non existent. In those days every farmstead and ranch, in addition to their family garden, had a herb, or medicine garden to grow the plants needed to make their home remedies. In addition to this, every barn had a jug of turpentine.

I don't know how it works as a topical agent, but it does. Do not use on a contaminated surface, or to treat bug bites or skin rashes! One of the curative properties of turpentine (turp) is it's a carrier and penetrating agent. In other words if you put turp on a bee sting, not only will the inflamed area spread, it will penetrate deeper.

However if turp is put on a cut, it will stop the bleeding immediately, and cause the wounded area to start healing at a rapid rate of speed. Another quality of turp is it nullifies the 'after throbbing' associated with a deep cut.

I would advocate the first time use of turp to be applied to a cloth bandage and wrapped around the cut area for one day, and then the next day inspected. The cut will have pulled together, and started it's bonding process.

Turp also works well on burns. Case in point, when I was about 3 I fell into a burning fireplace. I received 3rd degree burns from my neck to my thighs. When my father (an old timer in those days) saw me at the hospital, he doused me down with turp, right through the bandages. Of course the nurse kicked the both of us out of the hospital. Today I don't have a hair from my adams apple to my thighs, but I'm not burdened by scars. Was it the turp, or was I just lucky?

Most of us are familiar with DMSO, the magic liquid that helped to relieve arthritic discomfort. This is a cousin of turp, it is a byproduct of the wood pulp industry, unlike turp a refined pine pitch. DMSO is the chemically reduced product of wood fiber, and its liquids (pitch), so what is so scarry?

To my knowlege, I haven't taken turp internally except maybe as a small
Remember Mama’s Recipes - Your Comments - Turpentine

kid in a home remedy or two. So I won't say how effective it is in small quantities. The old timers did it, and they survived, but their life expectancy wasn't as great as it is today. I would use a real jaundiced eye before doing this.

The day of the old circuit riding doctor is gone; medical science has greatly improved. The marvels of modern medical science are truly wondrous, and yet I am skeptical of the practitioners who treat the symptom and not the illness. Is return business that necessary? In the day of my father, if someone got hurt on the farm, turp was called for, and if it was a bad cut, Grandma grabbed her sewing basket too! Turpentine stole a lot of money from the doctors in those days, as I'm sure it could today if the AMA didn't poo-poo its use.

I'm not a rich man. I can't afford $40 visits to a doctor to sew me up, and another $40 visit just to have the doctor take the stitches out after a few weeks. I'm happy to do these things for myself. I'm old and crotchety, it is my nature, and it is my way; it works for me.

The above is only my opinion and not meant to be taken as fact. I have no facts showing proof for any of it. I do not advocate everyone to use turp, this is my decision, take care, and in whatever you do, enjoy life and don't take yourself so seriously.

Rusty Oxydado

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Way back when grandma was a baby, one of the best plants to have in the garden was "peppermint", yes it made a refreshing tea, and some people used it in poultices, yet by far the best use of peppermint was as a cure for a sore throat.

Pioneer women used it to soothe and treat their babies who suffered from colic, as it soothed the inflamed nerve endings in the throat, and allowed the inflamed tissues to heal.

Today in my kitchen I always keep a small bottle of (pure) peppermint extract, I am far from being a baby, though some of my friends will disagree regarding some issues, however back to the subject.

In the spring when the pollen is heavy, and the fall and winter when it is chilly and wet, my sinuses go hog wild, soon I'm coughing, and hacking to clear my throat, and my nose is running in overdrive.

For me this if not treated will bring on a sore throat (from all of the hacking and coughing) I simply take a dose of Peppermint strait from the bottle, and within a few moments, I feel all right with the world. And I have refreshing breath to boot!

For me the dosage is only one drop of the fluid right on the tong, it is here where I should give you some warning, this stuff is strong! It stings at first so I hold it on my tong for a few moments before I swallow it, this is best, as you if you try peppermint you will quickly learn why!

For children I advocate a watered down version of peppermint. Simply boil about 2 cups of water, take it from the stove and add a cap full of peppermint extract to the water. Add about 2 teaspoons of sugar per cup and serve hot, while your child is sipping his/her tea, you can join in with a cup of your own too.

When you take peppermint strait, at first it stings the tong, and then the sting goes away. When you swallow it, the fluid coats your throat stifling the coughing reflex, soothes the sore tissue, and then as you breath the fumes cause your sinuses to dry up, and any garbage that is stifling your lungs is loosened up so you can pass it on out.

I find my peppermint in the spice section in most grocery stores, right next to the imitation vanilla, and other extracts. It is not that expensive, and I feel it is far better for my system than the over the counter pharmacy chemical...
garbage. Who knows what is in it, or if it's usage will build a resistance to medications needed during an emergency?

I have taken peppermint my whole life, I haven't built a tolerance to it, and to my knowledge it doesn't counteract with any medications.

All in all, it is only an old home remedy, it doesn't taste bad, and to use today's terminology, it is a pleasant "time out".

Rusty Oxydado
1. Arthritis: Dissolve 3/4 teaspoon powder pectin (or 1 tablespoon liquid pectin) in a glass of purple grape juice. Drink once a day. This from an Amish doctor near Wooster, Ohio. It helps about 60% of the people who try it. Nobody knows why. The liquid dissolves better than the powder.

2. Poison Ivy (oak, sumac, etc). Make a paste from fels naptha soap and apply. Do not cover. Let it dry and flake off by itself. One application usually does the job. This from the 1930's.

3. Eat 3 almonds a day and you will not die from cancer. An Edgar Cayce reading.

4. Burns. Apply ice wrapped in damp washcloth until pain stops. No scaring will occur.

5. Bee sting. Remove stinger without squeezing poison sac. Apply moist baking soda to neutralize the formic acid poison.

6. Warts. Make a paste of baking soda and spirits of camphor and apply every night. Cover with a bandage. Remove in morning. Removes all kinds of warts, even stubborn planter's warts that resist every and all "medical" treatments. This is from another Edgar Cayce reading.

7. Insomnia? Try a small bowl of warm tomato soup (made with milk), just before bedtime and avoid eating protein.

8. Protecting your eyes. In a study of beer drinkers from England, Germany and Holland; people who drank DARK beer had fewer eye problems in their old age. "To your health," takes on a new meaning. Your eyes need LUTEIN daily. Found in green and yellow fruits and vegetables. You need to eat bushels to get the proper amount. Supplement with 6 to 20 mg every day.

9. Reduce HEART ATTACKS. Eating tomato (in any form) is twice as
effective as taking a lycopene supplement. Eating tomato with olive oil improves your protection many fold.

10. Eating PECANS reduces CHOLESTEROL, but Chinese medicine warns not to eat too many.

11. Many suspect that many diseases start in the mouth, and that good dental hygiene is very important to good health. Every day, use a stimulator, floss between teeth, rinse with a plaque remover, and brush your teeth. Then, rinse with one of three washes:
   - A. salt water.
   - B. baking soda solution.
   - C. a splash of hydrogen peroxide in water.

Alternate between the three. They say that following these steps will add years to decades to your life span.

12. Beets beat cancer. Alexander Ferenczi, MD a Hungarian doctor, claims that he has cured every type of cancer by having the patients eat beets. He reported this in 1974, in the Hungarian Journal of Medicine. The article has been translated and reprinted in many journals since then. The treatment works with raw, cooked, baked, or pickled beets. The juice is good too. One warning from the doctor. Overdoing the treatment can lead to overloading the liver with demolished cancer cells, so take it easy.

13. Walking is the best exercise you can do. Every time you lift a foot, blood fills the bottom. Every time you put the foot down, you force blood back up to the heart. So, walking is like having 3 hearts pumping your blood. Dancing works too, and is more fun, as two people are exercising. Walking, running or jogging the same distance uses the same energy. Walking takes more time, but old people have plenty of that; and walking is less strenuous for old and/or overweight people.

14. Peel potatoes before cooking them. Potatoes are sprayed with a poison that stops sprouting. Cooking potatoes with the skin on forces this poison into the potato. Also, never eat the green part of a potato. It too is poisonous.

15. Wash all vegetables and fruits that you buy to remove oils, waxes and sprays on them. Use cold water with vinegar, and a very small dash of bleach to clean them.
16. Food going through the distribution system is exposed to insecticide spray and dust through the entire system, even in your grocery store. Wash the lid on any can you open, wipe off the lid on any jar or bottle you open. Clean fruits and vegetables as described above.

17. Diarehhia. Eat two coconut cookies. Some say it cures Chrones disease.

18. Control cholesterol. Make a mix of 4 cups of apple juice, 3 cups of white grape juice and 1/2 cup of apple cider vinegar. Drink 3/4 cup of mix every morning.

19. Stop food poisoning with vinegar, a strong medicine. It kills e. coli bacterium. A world traveler carried a flask of vinegar, and would put some in his drinking glass at the start of every meal. He would sip from the glass during the meal. He never got sick with food poisoning. Maybe first eating a salad with vinegar dressing would also work. During the black plague, a group of thieves robbed the sick, dying and dead with impunity. When captured, they were offered a full pardon if they would reveal how they avoided the plague. They said they washed themselves with vinegar that had bay leaf and other spices steep in it.

**Controlling Bad Critters**

1. Put Oasis oranges in the corners of the house to keep out spiders and bugs. They last for a couple of years.

2. Kill ants with a can (or bottle) of regular Coke (R). It's supposed to be really good at eliminating fire ants.

**Attracting "Good" Critters**

1. Wash pulp from melon seeds and bake in 350f oven for 15 minutes. Then put out for the birds.

2. Birds will eat fat in the winter time, but will not touch it in the other seasons. I soak cheap bread in the fat and the birds eat it up. Why wash grease, fats and oil down the drain or bury it with the garbage? This method recycles at the highest level. You have happy birds and a cleaner environment. Also, put out fried skins from chicken or turkey. They will gobble it up. Better fat birds than fat people.

**Avoiding Colds And Flu:** A virus coated with grease is totally immune from
everything. strip away the grease coating, and it can be killed or washed away. People get colds and/or flu from repeated infection from their dishes, cups and silverware. When you wash them is soapy water, soap washes away the virus. When you put that utensil into a sink full of clean rinse water, the soap disperses into the clean water, leaving the virus again coated with protective grease, and it sticks to the utensil. You keep re-infecting people when they use that utensil. The cure is to rinse each utensil separately in running water. This was taught to me by the late Dr. Albert J. Lewin, MD. of Cleveland, Ohio. He was a man who truly deserved the title of "Doctor". Note! Adding a splash of bleach to the wash water helps also.

When you wash underwear in the washing machine, bacteria found in them contaminates everything in that wash; dish towels, wash cloths, handkerchiefs, etc. There is a danger of E. Coli infecting you through everthing in the wash. Not only that, but some of it remains in the botton water of the machine. This water then contaminates the next load of clothes, and on and on it goes. The cure? Add bleach to the wash water to kill the germs.

Phillip J. Stevko (Pop)
Diabetes, Diet and Exercise. The three are inseparable. To control DIABETES, you must DIET and EXERCISE. Read about any prescription drug for diabetes, and the first sentence always says that "X" with diet and exercise will control diabetes. I have been taking a prescription drug (let's call it X) for several years. It barely controlled my blood sugar level. Normal blood sugar range is 70 or 80 for a low to 140 for a high. My long term (6 month average measured by the amount of sugar stuck to my red blood cells) readings were over 150. This was with diet and exercise. If I didn't do either, the readings were much higher.

Then I read about taking cinnamon to control blood sugar. So I tried it. I put 1/2 teaspoon of cinnamon on buttered toast (cinnamon must be dissolved in fat), once in the morning and again at night time. My evening readings were going down into the 60's and 50's. It scared me. I was going too low. I tried various combinations of diet, exercise, X and cinnamon. Diet and exercise were essential, and so was cinnamon OR X. So, I stopped taking X. Six months later, my doctor was surprised to see my long term blood sugar reading of 120. Cinnamon alone (with diet and exercise) was controlling my blood sugar better than X ever did. Cinnamon costs me 50 cents a month, X cost me 50 dollars a month. I felt much better. If you read the data sheet that comes with X, you find out that it can kill you very quickly.

If you want to try taking cinnamon, then be sure to closely monitor you blood sugar daily, or even a couple of times during the day. This is not something you want to fool around with if it's not working for you.

DIET INFORMATION you get from most hospitals and dietitians today is usually a dozen sheets of information taken from the book "Doctors Clinic 30 Program" by Dr. J.T. Cooper, MD. The book has 108 pages of useful information that those handouts do not have. You can buy the book at any book store or from Green Tree Press, Inc. for about $13. Read the book, and if you agree with two statements:

1. You cannot eat everything you want.
2. You will never again be able to eat everything that you want...

Then you are ready to diet. You calculate how much you weight and what you want to weigh. The book tells you which diet (daily calories) to use. You make up your meals from so many units of starch, protein, fat, veggies, fruit and milk per day. You can arrange them in any pattern you want for your breakfast, lunch, supper and night time snack. I put a starch, fat (for my buttered toast with cinnamon) and milk for breakfast and night time snack. Tables tell you how much of each food you are allowed for these units. You quickly learn that items (like corn) you thought were veggies are really starch. There are also lists of free items (items that don't count) like lettuce. One of the tricks to keeping on the diet is to keep your stomach busy. I have a huge salad before lunch and supper (it doesn't count). Another way is the "negative calorie" soup on page 97. You can have it any time you want and as much as you want. NO CALORIES. And, it is really delicious. Another trick is to use three cups of pop corn for one of your starches. You won't feel hungry if you keep your stomach busy. A happy stomach will not bother you with hunger pangs. The book has more. It gives the exchange rate for many popular grocery store and fast food items. I can't emphasize how much useful information the book contains. Look it over. You will be amazed at how comprehensive it is.

Thanks for mentioning my book. I didn't realize hospitals and dieticians used it that much.
Regards, J.T. Cooper, M.D.

EXERCISE is up to you, but I find a leisure walk suits my old body pretty well. Now, some important facts to remember from the book. Each meal must be finished within an hour. No lingering over this or that. There must be at least one and a half hours between meals (preferably more). And, most important of all. At 20 to 30 minutes after a meal, start at least 30 minutes of exercise. This is the time when your body digests food and starts storing it as fat. But, your exercise tells the body to STOP! You need that energy for your exercise, not for storing as fat.

This is how I beat diabetes. Cinnamon, Diet and Exercise. I also lost some weight and feel much better. It also reduced the pressure inside my eyeball to normal. Diabetes is known for damaging eye sight and lots of other things.

I also supplement my diet with chromium, vanadium and dozens of other minerals.

Phillip J. Stevko (Pop)
In October of 2001, my sister started getting very sick, she had stomach spasms, she was having a hard time getting around, to walk was a major chore. It took everything she had just to get out of bed, she was in so much pain. By March 2002, she had undergone biopsies, and was on 24 various prescription medications.

The doctors could not figure out what was wrong with her. She was in so much pain, and so sick, she knew she was dying. She put her house, bank accounts, life insurance etc. in her oldest daughters name, and made sure her younger children were to be with her oldest daughter. She wanted her last hooray, so she planned a trip to Florida (basically in a wheelchair) for March 22nd.

On March 19th I called her to ask her how one of her tests went, and she said they didn't find anything on the test, but they believe she had MS. I thought, oh, my.... then I recalled an article a friend of mine emailed to me... and I asked her.... Do you drink Diet pop? She told me yes, as a matter of fact she was getting ready to crack one open that moment.... I told her not to open it, and stop drinking the diet pop.... and I emailed her the following article.

She called me within 32 hours after our phone conversation and told me she stopped drinking the diet pop, and she can walk... she went up the stairs, and the muscle spasms went away. She said she didn't feel 100% but sure felt a lot better. She told me she was going to her doctors with this article and would call me back when she got home.

Her doctor was amazed, he is going to call all of his MS patients to find out if they consumed artificial sweetener.... In a nutshell, she was being poisoned by the aspartame in the diet soda, dying a slow death. When she got to Florida, March 22nd, all she had to take was one pill, and that was a pill for poisoning.... she is well on her way to recovery..... and she is walking!!!!! No wheelchair!!!! This article saved her life!!!! The life saving article:

See the following sites for more information on Aspartame:
http://urbanlegends.about.com/library/blasp.htm
http://www.holisticmed.com/aspartame/
http://www.dorway.com/
http://presidiotex.com/aspartame/
http://web2.iadfw.net/marystod/
http://www.nexusmagazine.com/Aspartame.html
If it says "SUGAR FREE," on the label, DO NOT EVEN THINK ABOUT IT!!! I have spent several days lecturing at the WORLD ENVIRONMENTAL CONFERENCE on "ASPARTAME" marketed as 'NutraSweet', 'Equal', and 'Spoonful'. In the keynote address by the EPA, it was announced that in the United States in 2001 there is an epidemic of multiple sclerosis and systemic lupus, that it was hard to understand what toxin was causing this to be rampant. I stood up and said that I was there to lecture on exactly that subject.

I will explain why Aspartame is so dangerous: When the temperature of this sweetener exceeds 86 degrees F, the wood alcohol in ASPARTAME converts to formaldehyde and then to formic acid, which in turn causes metabolic acidosis. (Formic acid is the poison found in the sting of fire ants.) The methanol toxicity mimics among other conditions multiple sclerosis. People were being diagnosed with having multiple sclerosis in error. The multiple sclerosis is not a death sentence, where methanol toxicity is! Systemic lupus has become almost as rampant as multiple sclerosis, especially with Diet Coke and Diet Pepsi drinkers. The victim usually does not know that the aspartame is the culprit. He or she continues its use, aggravating the lupus to such a degree that it may become life-threatening. We have seen patients with systemic lupus become asymptomatic once taken off diet sodas.

In the case of those diagnosed with Multiple Sclerosis, (when in reality, the disease is methanol toxicity), most of the symptoms disappear. We've seen many cases where vision returned and hearing improved markedly. This also applies to cases of tinnitus. During a lecture I said "If you are using ASPARTAME (NutraSweet, Equal, Spoonful, etc.) and you suffer from fibromyalgia symptoms, spasms, shooting pains, numbness in your legs, cramps, vertigo, dizziness, headaches, tinnitus, joint pain, depression, anxiety attacks, slurred speech, blurred vision, or memory loss-you probably have ASPARTAME DISEASE!" People were jumping up during the lecture saying, "I've got some of these symptoms: Is it reversible?" Yes! Not drinking diet sodas and keeping an eye out for aspartame on food labels, yes!

We have a very serious problem. A stranger came up to Dr. Espisto (one of my speakers) and me and said: "Could you tell me why so many people seem to be coming down with MS?" During a visit to a hospice, a nurse said that six of her friends, who were heavy Diet Coke addicts, had all been diagnosed with MS. This is beyond coincidence! Diet Coke and Diet Pepsi etc. IS NOT A DIET PRODUCT! The Congressional Record states that it makes you crave carbohydrates and will make you FAT. The formaldehyde stores in the fat cells, particularly in the hips and thighs. Once off these products with no significant increase in exercise, etc., Dr. Roberts in his lecture stated that he...
had a patient who lost an average of 19 pounds over a trial period.

Aspartame is especially dangerous for diabetics. We found that physicians would believe that they have a patient with retinopathy, when in fact the symptoms are caused by aspartame. The aspartame drives the blood sugar out of control. Thus diabetics may suffer acute memory loss due to the fact that aspartic acid and phenylalanine are neurotoxic without the other amino acids found in protein. Thus it passes the blood brain barrier and deteriorates the neurons of the brain, causing in diabetics (as well as in patients not suffering from diabetes) various kinds of brain damage, seizures, depression, manic depression, panic attacks, rage, violence. (The Aspartame in thousands of pallets of diet Coke and diet Pepsi consumed by men and women fighting in the Gulf War, may be partially to blame for the well-known Gulf War Syndrome.)

Dr. Roberts warns that it can cause birth defects i.e. mental retardation if taken at the time of conception and early pregnancy. Children are especially at risk for neurological disorders and should NOT be given NutraSweet. I can relate different case histories of children having mal seizures and other disturbances being on NutraSweet. Unfortunately it is not always easy to convince a mother that aspartame is to blame for her child's illness. Only by trial and success will she be able to warn other mothers to take their children's health in their own hands.

Stevia, a sweet herb, NOT A MANUFACTURED ADDITIVE, which helps in the metabolism of sugar (which would be ideal for diabetics) has now been approved as a dietary supplement by the FDA. For years the FDA has outlawed this sweet food because of their loyalty to MONSANTO. Books on this subject are available: EXCITOTOXINS: THE TASTE THAT KILLS - written by Dr. Russell Blayblock (Health Press 1-800-643-2665) and DEFENSE AGAINST ALZHEIMER'S DISEASE - written by DR H. J. Roberts, also a diabetic specialist. These two doctors will be posting a position paper with some case histories on the deadly effects of Aspartame on the Internet. According to the Conference of the American College of Physicians "we are talking about a plague of neurological diseases caused by this deadly poison." Here is the problem:

There were Congressional Hearings when aspartame was included in 100 different products. Since this initial hearing, there have been two subsequent hearings, but to no avail. Nothing has been done. The drug and chemical lobbies have very deep pockets. Now there are over 5,000 products containing this chemical, and the PATENT HAS EXPIRED!!!!! I assure you,
MONSANTO, the creator of Aspartame knows how deadly it is. They fund among others, the American Diabetes Association, the American Dietetic Association, the Conference of the American College of Physicians. This has been exposed in the New York Times - to no avail. These Associations cannot criticize any additives or convey their link to MONSANTO because they take money from the food industry and have to endorse their products.

Senator Howard Hetzenbaum wrote a bill that would have warned all infants, pregnant mothers and children of the dangers of aspartame. The bill would have also instituted independent studies on the problems existing in the population (seizures, changes in brain chemistry, changes neurological and behavioral; symptoms). It was killed by the powerful drug and chemical lobbies, letting loose the hounds of disease and death on an unsuspecting public.

Phillip J. Stevko (Pop)
For Dyreah (Diarreha)

Red oak bark offen (off the) north side of tree makes strong ooze and drink for dyreah. George.

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Venison Patties

Take off all fat from the venison. The fat is strong.

- 5 lbs. of lean venison.
- 2 lbs. ground pork
- 2 T. ground black pepper
- 3 T. ground nutmeg
- 3 T. salt
- 2 T. onion powder
- 1/4 tsp. garlic powder

Pattie may be formed and fried in beef suet or butter. Pack in jars and seal with fat, or now days you can wrap in foil and freeze for 3 months.

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Turtle Soup

- 2 c. boiled fresh turtle meat
- 2 lb. beef bones
- 2 carrots
- 2 onions
- 2 T. butter
- 3 T. flour
- 2 qts. beef stock or water
- 1 small can tomatoes
- 1 small can tomatoe puree
Roast bones and vegetables with butter until brown. Add flour and brown again. Add water or beef stock, tomatoes and tomatoe puree, salt, black pepper to taste and a few whole cloves. Boil 2 hours, add grape wine. Strain soup through cheesecloth. Then add boiled fresh turtle meat cut in small squares, lemon and eggs cut up. Boil up quickly and serve. Emma Johnston, Grapevine, TX.
Hi - I enjoyed your pages for the Old Timer's. I'm 67, and I remember my mother's home remedy's on us five children in the 1940's. During the depression and war, we didn't have money for medicines, and no car to go get them if we could.

For a chest cold, my mom would rub our chests with Vicks, then she heated a warmed soft cloth with an iron, put it over our chests and we'd sleep like that all night. For a bad cough, she melted some Vicks in a teaspoon over a flame, making sure it didn't get too hot, she add a touch of sugar and we'd gargle with it. ISometimes it made us vomit, but usually it just made us choke until we coughed up the phlem. It helped, and I remember doing the same with my kids when they were young in the 50's. It does work, but it tastes bad.

Also, I'd put some Vicks in a pan of hot water and let it simmer so the vapors could flow through the house, thus, a humidifyer (I was broke most of the time too, with 4 children of my own.) For bee stings and mosquito bites, she made a creamy paste of baking soda and cold water. She'd dampen a washcloth in it, and hold it on the bite. It would take away the sting. I then used the same remedy on my own children because it worked. We'd walk around with the paste still drying on our bite, but it didn't hurt anymore.

When we had the measles in the 40's, which several kids got at the same time, we'd all be in the same bedroom, with the shades pulled down, as "the sun would have made us blind." We were given cool or lukewarm baths with uncooked oatmeal in the water to stop the itch and heal the sores. I guess it worked. I also did that with my own kids, as the vaccines had not come out yet. By the time my kids got measles or chickenpox in the 50's, I knew the rooms did not have to be dark.

Mom used the butter or lard for burns. There was a black ointment in a small round tin can that was used for boils. Spread that ointment on a boil, and the next day the pus would pour out. I don't know what it was called, but someone told me it may have been a balm used on cows udders. My dad always had goats, so that is a possibility.

I hope I have helped. This is very interesting to me.

Thanks for your pages of remembrances.

Emily
Hi. A friend just sent me the URL for this site, and I find it quite interesting! I was reading some of the comments, in particular the one about the use of turpentine and thought I'd pass along a "recipe" that my great-great-great-grandma Elizabeth Robbins Crawford wrote from California as a P.S. to a letter dated July 1865 to her brother Moses Robbins in Indiana:

"I am going to rite you a receipt to make liniment. Take half a pint of lintseed oil and three tablespoonsful of fine black peper - steep the peper and oil together half an hour -- when cool ad one once of el_____ (Marilyn didn't know what this ingredient was) an one once of camphor dissolved in a vial of opium an one once of turpentine -- put it in a bottle and shake. Put on your joints once or twice a day and get you a liver pill and take every night for five nights and then take one every other night."

Marilyn Nickless
Hi,

I enjoyed reading the old home remedy section and thought I would tell you of one that most people have never heard of.

For sunburn, apply liquid Glycerin UNDILUTED to the burned area. This will draw out the pain and heat. Apply every few minutes until the pain is gone. Once you have tried this you will never try anything else.

Thanks, Jerry
The first line of Julie's Apple Pie recipe reads, "To make the best apple pie you must first send your 10 kids up to the orchard to pick some ripe yellow transparent apples..." Julie wrote these stories of her childhood for her grandchildren. But I think old and young alike will fall in love with Julie's stories and unique writing style.

Julie grew up during the depression on a farm just outside Midway, Utah, up in the mountains above Salt Lake City. These stories are a reflection of those times when Julie was first put to work as a tiny child doing her part to make the family go. Lucinda, her sister also has an article on this web site in the self reliant peoples section where she tells of growing up during the Great Depression. A reference or two is made to "Grandma Lundin." This is Julie's mother. If you like what Julie has to say in this section, I'm sure you will enjoy Lucinda's story as well.

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Introduction

The purpose of this collection of recipe's from life is to inform my children and grandchildren or how things, every day things, were done, from scratch.

These recipe's should not be followed exactly, but the methods are factual, so pay attention, for this is really how life was lived, as I grew up on that wonderful farm in Midway, Utah.

All of these chores were accomplished with the guidance of our two honest, hard-working parents.

We, seven girls and three boys, learned how to work and have fun while doing so. Every seven sisters should have three brothers, but it would be less work for the sisters if it were the other way around.

Every 10 kids should have a loving caring mother to guide them and also a father that keeps order, builds things, repairs the machinery and invents anything the kids need.

I am very happy that I was born and raised in these good old days, when everything was made from scratch. As you read these recipes you will realize that in those days, one didn't just run to the store and buy all these goodies. We did it the old fashioned way, food made from scratch.

Thanks to our wonderful parents, we had it good! We never went hungry and certainly learned to work and how to live honest lives in the process. Thanks Folks!
Grandma Lundin's Original Sauerkraut Recipe

To raise the best cabbage, for this purpose, sew the cabbage seed in a hot bed, near the barn. When the plants are about two inches high, pinch off the two outside leaves and then find a small sharp stick. Poke a hole into the soft, well fertilized soil, insert the cabbage plant into the hole. Be sure the root doesn't curl back up or the little cabbage plant won't know which way to grow, up or down.

Water the plants with water that has been run through the cow barn so there is lots of good fresh cow manure contained.

When the little cabbages start to form, fire up the wood burning stove and burn lots of scrub oak to make lots of ashes. Take the cooled ashes and sprinkle this onto the cabbage plants. This kills the larva, hatched from the eggs of the white butterfly, commonly called the cabbage butterfly, that flits around the gardens each spring and summer.

When the cabbages are big enough that they start to split, take a big butcher knife and sever them from the stocks. To raise good big cabbages, the cow manure is essential.

After cabbages have been harvested, take one wooden barrel, scrub it clean and set it in a shady place, (under an apple tree will be fine.) Then send one of your 10 kids to the neighbor to fetch and borrow the cabbage shredder. For some reason all farmers and gardeners don't have one of their own. The reason for this is probably to make the neighbor feel that he is a part of the sauerkraut making process.

After a big tub of cabbages have been washed and checked for worms, put the cabbage
on the shredder, one at a time, and slide it back and forth, over the sharp cutting edge, (like on a wood Planer). It takes lots of time and muscle to shred enough cabbage to fill a 50 gallon barrel!

The next step is to send someone to town for a 100 lbs of rock salt. Now the time has come to find several small boys and girls, scrub their feet to a shine and after putting a layer of about a foot of cabbage and a sprinkle of rock salt into the barrel, place a kid, one at a time, into the barrel, down in the dark and tell him or her to start running around in circles until the juice comes up over the layer of cabbage. Juice must rise above each layer, before another layer of cabbage and salt is added.

If the kid yells, from the barrel, "Mom I gotta go," remove him quickly and replace him or her with another scrubbed-up kid. The kid will need a rest, anyway, because after a half hour his or her feet will be all white and shriveled looking. Remember that these kids have been running around all spring and summer without shoes and their feet probably have many chapped places from being in and out of so much water. So pay attention to his cries of pain and take pity on him by removing him for a while.

After the barrel is plum full, there should be juice of cabbage and salt standing on the top of the cabbage. Please don't add any water, just have the kids resume their tromping until the process is completed to your satisfaction. To keep the cabbage under the liquid you then go in search of a huge rock. Find a clear stream of water, preferably a stream that is uncontaminated. Scrub the rock up until it shines, cover the cabbage with a clean cloth, (a flour sack will be fine) and place the lid of the barrel on top.

Get help, if needed to lift the hugs clean rock up onto the lid. The rock should be very heavy for if any cabbage floats above the liquid it will turn brown and rot.

In a week or two, a month is better, the cabbage will ferment and then it's called sauerkraut! This mixture will keep all winter, in a cool cellar and is best cooked with pork spare ribs. Simmer on the back burner, preferably on a wood burning stove. And my, the delicious aroma of this wonderful sauerkraut will bring the kids running, when the call goes out, "COME AND GET IT!"

Some people prefer to eat sauerkraut with freshly grown, good farm potatoes, but that is another story, of how to raise good farm potatoes. Happy eating!!
Before planting time arrives, which is usually the Friday before Easter, get your mother to take you into the dark cellar, with the sow bugs crawling around, and sprout the winter supply of potatoes that are left. At this later date you can take a #3 galvanized tub full of potatoes out into the sunlight and she'll show you how to cut the potatoes for seed.

First you get a sharp knife and cut each potato into at least six pieces, being sure each piece has at least two eyes. In harder times it has been known to just plant the peels, and eat the rest of the potato. If the potato has a dark ring inside, discard this one, because your mother will tell you that this potato is diseased and if planted the disease will spread the rot to the whole field.

Cut these potatoes until the wash tub is filled with seed. Then hitch up old Dick the horse and take him and the potatoes to the garden, which has been tilled and ready. A one horse plow is then hitched to the single tree and your father will guide the plow and Dick up a straight course.

Gather up your 10 kids, in a row, each with a bucket full of seed potatoes and instruct them to take their shoes off and walk in the deep furrow. Take a step and drop one potato and step on it and continue on until you reach the next kid, who are all stationed up the furrow.

The plow, coming the other way will cover the seed, and this process, coming and going, will get the job done. The kids will enjoy the cool damp earth on their hot feet, that have been confined in their school shoes all winter.
After the weather warms up the potatoes will sprout and put out nice green clumps of leaves. Then take the hoe and cut out any weeds that want to compete with the new plant. The mother is usually the one that does most of this work, I think because it is a way to get away from her 10 kids for a while.

Occasionally the potatoes should be irrigated with the water that has run through the cow barn. One should be cautious, however, not to fertilize to heavily, or this will burn the new potatoes and leave ugly scars on the skins.

In October, during school break, usually teachers convention and deer hunting time, and after the potato vines have frozen down, gather your 10 kids together for the harvest.

Since this is usually deer hunting time it is hard to find enough grown boys to help dig potatoes, because they are out hunting deer.

In this case it is nice to have at least 7 girls--this will do nicely. Then hitch up old Dick again. This time to the potato digger, which is a plow with a gadget that throws the potatoes out on top of the furrow. The kids often call this a clapper, because it makes a clapping sound as it goes up the furrow. Then instruct your 10 kids to follow the plow and fill their buckets with the beautiful big potatoes and pour them into the nearby wagon. Some kids will be instructed to come along behind, on hands and knees, and dig the sides of the furrow towards the center. This is just like treasure hunting because they often find lots of potatoes that the first crew have missed. When you have 10 kids to feed through the winter it is wise to not let any of the potatoes stay out in the garden where they will freeze, and won't even be fit for the pigs.

Then a team of horses is hitched to the wagon and the potatoes will be carried to the cellar where they can be emptied down the chute, into the dark damp cellar, where the sow bugs reside.

This whole process will probably last all day, with time out for a good dinner, served by your mother. Mothers are very nice to have around, for all purposes. A family of 10 kids shouldn't be without one. Now the winter supply of potatoes is safe from the cold frosts of winter, and when spring comes this process is repeated, year after year. Thank goodness for GOOD FARM POTATOES.
Home Made Bread

Since Home Made Bread is essential when the kids have a midnight snack of bread and milk, Mother must make her own bread. This is very time consuming and Mother has to stay around all day to do it right. First you have to get a yeast starter prepared. I am not sure how the starter is made from the hops that grow up the side of the house, but if it works for beer it must work for the bread yeast. Find a half gallon jar, add a yeast cake, maybe, water and some of those good farm potatoes, cooked and mashed until they are like pasty glue. Recruit one of your many kids for this job. It will keep them out of mischief for a half hour. Mother's say you can't have any lumps in this paste. Add a teaspoon or so of sugar to the water potato mixture and set the jar on the warming oven of your wood burning stove. (Keep Julie away from this jar or she might spill the contents and trying to hide her mistake, fill the jar up with dish water.)

Let the yeast ferment, at least over night. Then you are ready to start making your bread!

Find a big pan, dump half of the jar of yeast into the pan. Add a tsp. salt, a little sugar and some flour. If you want sweet rolls, just add some more sugar. Be sure your father has just been to the mill with his wheat, to be made into flour so you will have enough flour to complete this batch of bread. The local grist mill is the best place to buy your flour, because it is not as refined as the stuff you might buy in the store. It probably is more nutritious, and that is what we are looking for here today.

Make sure your hands are cleaned and also your finger nails, because you'll be getting into the dough a lot. Keep adding flour, a cup at a time, to the yeast liquid. Knead about 10 minutes, after the dough gets past the sticky stage. Leave it sit to rise for a while. They call this resting. Then knead some more. Cover the big ball of dough with a clean flour sack and let the dough rise to the top of the pan. This usually takes about twenty minutes. You can now go out to the garden and hoe a few rows of potatoes, if you wish.

One gal got impatient and didn't have faith in her yeast. The dough just didn't rise fast enough so she threw the dough out in the garbage can and started another batch. The sun came out and the dough rose above the can, pushing the garbage can lid aside. Don't let this happen to you, have faith in your yeast!!
Then divide the dough into parts, depending on how many loaves you want. Grease your loaf pans and set aside. Let each lump of dough rest a few minutes and then, after kneading each, until you are tired, plop them into the greased pans. Butter the top with some of that good farm made butter that you just got through churning. I hope you have reserved a small amount of dough so you can make FLAT BREAD. This is made by getting the heavy rolling pin out, that your father made from a chunk of scrub oak and roll the dough out into a circle, like you are making noodles. Then pick it up and toss it in the hot oven to bake to a nice tan brown. By the way, did you heat up the stove yet?

Before the bread rises above the pans you must go out and get a big arm load of that good dry scrub oak that, hopefully your father has sawed into nice stove sized chunks for you. Start a fire in the stove and get it really hot. The oven will get hot too and you have to have experience to know when to put the bread into the oven to bake. Time will give you this experience. If you don't succeed at first, try again the next time.

When the oven is warm enough, as you open the oven door and feel a blast of hot air come out, then you can pop the bread in the oven. Instruct your 10 kids to not jump on the floor, at least for the first half hour that the bread is baking, because if they do the bread will sink in the middle and be a lump of dough.

Like I say, experience is the best teacher for this job. If all turns out well, pull the browned loaves out on to the oven door and dab some home made butter on top. Shove the bread in the oven again for at least another five minutes. This softens the crust and makes is delicious.

Now the best part has arrived. Get some flour sacks spread out on the table and gather up a couple more for hot pads and lift the hot loaves out onto the table. If you have baked three or more leaves in one pan, pull the leaves apart so they can cool. Tip the individual pans over and smell the beautiful aroma of your HOME BAKED bread.

If your mother has been too busy, hoeing potatoes to get the batch of bread started early in the day, the kids will love it when the bread is baked after dark. This gives them a chance to sit in the darkened kitchen, with their mother and watch the fire flickering in the stove. The kitchen smells like heaven and all's right with the world.

THEN comes the tasting of this delicious HOME MADE BREAD. Mother will get out the plum jam, HOME MADE BUTTER, Milk from the Jersey cow, and tear off chunks of that heavenly bread and she, Dad and the kids will have a midnight snack.

Doesn't that sound GOOD? Now it is your turn to try, but maybe you had better not depend on this recipe. The method is great, but maybe Betty Crocker has a better recipe. GOOD LUCK!!
Creamed Potatoes

First of all, make a trip to the cellar and fetch a bucket of the good farm grown potatoes. Wash them in the nice clear stream that runs by the house. This stream is usually the one that is uncontaminated with cow manure. Start up the wood burning stove, by first carrying an armload of dried, chopped scrub oak, into the kitchen. Find a stick match and some of the kids old home work papers, stoke up the stove and get it going hot. Put the washed potatoes in a big kettle and put the lid on, after covering the potatoes with clean water. Bring to the boil and cook for an hour, or until a fork can be inserted easily into the potato. Remove from stove and drain the boiling water into the slop bucket that should be sitting near by. The pigs will no doubt enjoy the added nutrition of the boiled potato water.

If you want to keep the potatoes warm for a while, don't put the lid back on the pot, because this'll keep too much moisture in the potatoes and make them all soggy. The best thing to do is put a flour sack over the pot and it will absorb some of the moisture and keep the potatoes warm until they are ready to be used.

If creamed potatoes are on the menu, cool the potatoes a bit and peel them with a knife, Hot potatoes are very hard to hold and leave your hands all red and hot. Dice the potatoes into a large frying pan, add salt, pepper and diced onions. The more diced onions the better. Then get a quart of good Jersey milk that has just been brought from the stable and add this to the diced potato mixture. Simmer until heated through. If the cream gravy is too thin, make a flour paste, by adding just enough milk to a half cup of flour to make a thin paste. Too much liquid, right away, will leave you with lumpy paste. This really doesn't matter if you are adding the thickening to the potatoes, because it will blend right in with the lumpy potatoes.

Serve the creamed potatoes with green beans or corn or peas, all fresh from your garden. Whether or not some kind of meat is served with the meal is often not as important as doing a good smooth job on the potatoes. The new potatoes and vegetables, from your garden will satisfy most hearty appetites.

After a hardy meal, go take a short nap and then get up and finish your days work.
Chicken Noodle Soup, The Old Fashioned Way!

If you want chicken in your soup the first thing you have to do is go to the barnyard and catch an old hen that has done her time, laying eggs and raising biddies.

If you are lucky, you can find one of your kids that can shoot a match head off at 30 paces, and have her shoot the chicken for you. If you can't find someone as talented as that, just run the chicken down. This will give you the exercise needed to reduce your cholesterol (unknown in those days.)

After you have caught the poor thing, grasp it's two legs firmly in the right hand, (left hand if you are left handed.) Oh, first you must alert your father that he should sharpen the ax. After this is done, you lay the chickens head on a chopping block that is made from the scrub oak that your men have dragged from the mountain, and hold the chicken so it won't move. With one mighty blow, you hope, the head will be cleanly severed from the chickens body.

Then throw the chicken out into the grass and let it flop around until all the blood has drained from it's body. Soon it will be ready for the next step!

I am getting things, sort of, in the wrong order, but anyway, before you chase after the chicken you should have planned to start a fire in the wood-burning range and carried a tub of water from the ditch and have it boiling by this time. Then immerse the carcass into the boiling water and then you can sit down on another oak stump and enjoy the smelly task of plucking the feathers off the bird.

Save the small feathers for pillow making, at a later date, because you must not waste anything. Do not save the big feathers, because they poke through the pillow ticking and this does not make for comfortable sleeping!

After all feathers are removed find a wood match, some of your 10 kids homework papers and light the torch. Hold the chicken above the flame for this singes all of the little hairs and the small down that may be left on the bird. Rub your hand around the chicken to
remove the singed hairs-feathers and you are ready for the next step.

Have you instructed your father to sharpen the butcher knife? If not do it now, for you will need the knife sharp so you can remove the chicken's entrails. Save the giblets, because they will add flavor to your soup. First take the craw and cut it lengthwise and remove all of the gravel that the chicken has in there to grind up it's food. Don't save the gravel for the soup, because they may prove harmful to the teeth.

After this is accomplished, take the chicken down to the clear, un-contaminated stream and wash the chicken thoroughly. Cut the chicken into serving pieces and toss them into a big pot. Boil until tender. If the hen has been around for a few years, this tenderizing may take a long time!

NOW, if you want noodles in your soup you must break about 5 fresh eggs into a large pan. Salt and pepper them to taste. Then add several cups of flour, that has been ground at the nearest grist mill. Make a stiff dough, flour a big place on the table, get the heavy rolling pin down, that your father has carved out of a large oak stump. Roll the stiff dough into almost paper thickness. Flour the dough, generously on top. This will prevent the dough from sticking together when rolled. Starting at any edge, roll the dough into a nice tight roll. Your father has already sharpened the butcher knife, so starting at one end of the roll slice the dough into 1/8 inch rounds. Then call your 10 kids. They will want to help you unroll the little slices and line them up on a floured table. Let noodles rest and dry out a bit before dropping them, a few at a time, while stirring, into the hot chicken liquid.

One must not drop the whole glob of noodles into the boiling liquid all at once, or they will cook into a big wad and you will have to call them dumplings! The best way is to stir the liquid as you add the noodles, so they will cook separated.

If you want some peas and carrots added, you should have thought of this sooner. If the vegetables are not already gathered and cleaned you have to summon your 10 kids again and have them go out to the garden and pick a big batch of peas. They should also be instructed to pull a big bunch of carrots. They may have to be told a few times to get going, but after they gather them they should be instructed to take the carrots to the ditch and wash them. Instruct them to twist the tops off the carrots, but this may take longer, because they will want to slap each other with the wet carrot tops. They also will have to shell the peas. This will possibly delay supper a bit, but you have plenty of time!

Dice, or slice the carrots and add them before you add the peas, because carrots take longer to cook than do peas. The peas can be added a short time before the soup is ready. This whole process of gathering vegetables will take a while, because the 10 kids may eat the first batch of peas raw and have to go for another batch to shell for the soup.

Oh, I forgot the potatoes! If you want potatoes in your soup you should have already sent
some or your 10 kids out to dig a few. Tell them that they are only to take the potatoes that are exposed to the sun. Some potatoes always push away from the soil, when they are growing. These should be used first. After the potatoes are cleaned in the ditch and pealed with the sharp butcher knife, they should be diced into the hot liquid. If you dice them small enough they will cook as fast as the carrots.

Now it is time to call the crew in for a delicious feast. You will have to tolerate watching your 10 kids suck up the noodles, because the only way to eat the long noodles is to put one end into the mouth and suck! Grose, you say!? Yes, but what fun for the little darlings!

Now doesn't that sound more fun than opening a can of chicken noodle soup? Much better, also!
Home Made Cider, Worms And All!!

You must plan ahead to first get your father to construct a cider press. He will first have to go behind the barn and find an old wooden hub of an old wagon. He will pound big nails into this drum and then have to decide how to attach it to a shaft and add a handle on one end. Then he will have to build a frame for this contraption. It must have four solid legs and a smooth base for the juice to run on. Then he will have to build a hopper to put the apples in before they are ground by the big nails.

Then he must go find a nail keg, cut it down so it will fit under the apple grinder and be sure it has the steel bands intact. Then he has to find a lid for this barrel. If he is lucky he will have this grinder done before the kids can carry the apples down from the orchard.

The next thing he has to figure out is how to press the juice from the ground up apples. He may decide on building a press into the old elm tree that was planted back in 1893. The frame is completed and now, what to use for a press. He spies the big heavy house jack and knows this will work perfectly. He gets a long stick that will fit into the hole at the top of the big jack and we are in business.

The 10 kids should be busy gathering up all the apples that have fallen to the ground. They must carry them down the hill and wash them in the un-contaminated stream of water. This done, the grinding begins. The 10 kids should be lined up to turn the crank, for this is a long hard process.

As soon as the little barrel is full of ground apples it is carried to the elm tree press.
As the juice starts to flow, "Did you get the dish pan to catch it in?" Someone should run, quickly and get a pan and a clean flour sack to strain the juice through. Cloths pins will hold the cloth on the dish pan, so don't forget them. I hope you get there in time so none of that delicious juice will spill out on the ground.

With 10 kids gathered around to sample that wonderful nectar you just may have to keep the kids running up the hill for more apples.
Calf Dance, Grandma Lundin's Special Custard

When one of the cows gave birth to a new calf the milk was very yellow and nourishing. Since the little calf didn't need all the cow would give, Mother would milk the cow and bring the sticky yellow, thick milk into the house. She would then pour it into a large shallow pan and pop it into the hot oven. (Need I tell you how to get the oven hot, again?) The thick milk would bake into a custard and we would eat it with cream or some of the good Jersey milk. We could add cinnamon, which made it quite good.

This is what she called CALF DANCE!
Apple Pie

To make the best apple pie you must first send your 10 kids up to the orchard to pick some ripe yellow transparent apples. These apples will be the first apples to ripen in the late spring. Instruct them to hurry, because you know that if you don't tell them that, they are liable to take a hike up to Deer creek before bringing the apples to you.

After they bring the apples, hand each of them a sharp paring knife and tell them to peel and cut up the apples. This will probably bring lots of grumbles, but keep reminding them how delicious the pie will be if they help out.

After the apples are diced up, add a cup of sugar and one fourth cup of flour and maybe a sprinkle of salt. Set aside.

Some mothers may want to add some cinnamon and a little nutmeg to the apples. Others may want to just add the cinnamon, but not too much.

Then, if you have not butchered the hog to get some lard, you must instruct the father to get this job done. This is quite a long process, so it will be explained at a later date. After the hog is slaughtered, get some of the fat from the belly of the hog and chop it up in little pieces. Put these pieces of fat into a big frying pan and go out and get some dry oak sticks, that your men have dragged from the hill. Start a fire in the wood-burning stove, by first finding some of your 10 kids old homework papers and a wood match. Light the fire and get the stove hot. Take the lid off the stove and put the pan, with the lard, right next to the flame. The grease will melt and you can drain it off into a clean can, then let it cool, for pie making.

This should have been done days before you decide to make your pies. After the grease is hardened it is called lard and it is ready to make the pie crust. This is fun to do, but don't get too exuberant and handle the dough too much. First take a cup or two of flour, put it in a bowl, add a teaspoon of salt, a cup of the lard and chop the lard up into the flour until it is in lumps about the size of the peas in your garden. If you don't know how big that is just go to the garden and fetch a pea for comparison. Add some of that nice clean water from the canal, a few drops at a time. Don't stir the dough, just sort of roll it around in the bowl until it is easy to handle. Take a wad of it up in your hand and lightly knead it. Put some flour out on the table (not too much), get the rolling pin out that your father has carved from that oak stick, and roll
lightly until you have a nice round piece of dough a little bigger than the pan you are baking the pie in.

By this time, if your 10 kids, haven't eaten all of the sugared, spiced apples that you set aside, pour the apples into the pie shell and repeat the rolling process with the other half of the dough. Lay it gently over the apples and crimp the edged with a fork. You will have a better pie if you get some of that heavy cream that is skimmed off the bucket of last nights milk. Dab it around on the crust and then poke holes in the crust so the apples can breath.

Don't do the way your father tells it, of the Chinaman, in Park City. He will tell you that he watched a cook make lots of pies and position them all on the table before him. He then filled his mouth with good thick cream and sprayed all the pies at once. It worked for him, but please don't you try this.

I sort of got off the subject, didn't I? Well we still have to bake the pie, so see that the oven is hot, by the method that was used in the above instructions. When you open the oven and a blast of heat comes out at you, that nearly singes your eye brows, pop the pie in the oven and sit patiently. Since you can't see into the oven, wait about 30 minutes before peeking into the hot oven. If the pie is bubbling over it is probably done and you can get a flour sack, all rolled up, and remove the pie.

If you have 10 kids I hope you made more than one pie, because one certainly won't fill the bill.

Dried Apple Pie.

If you wish to make a dried apple pie, follow the above directions, but first soak the dried apples in some water until they are back to their normal size, before proceeding with your pie making. A dried apple pie is delicious, as are pies made from the fresh apples.

If you like Home made ice cream on your pie, then you should have thought about it long before you made your pie, because ice cream making is another long process!!

You may prefer to eat your apple pie with a hunk of home-made cheese, but that to, should have been thought of before you started making your pies. Making home-made cheese is another long process that I will cover at a later date.

Good eating!
Flour Sacks

I guess I should explain about the flour sacks that I have been telling you about, all through my fun recipes. Well, in those days, the miller always put the flour in cotton flour sacks. These sacks, sometimes, had flowers printed all over them. The sacks were used for a multitude of things. Besides all the uses in the kitchen, our mother also made underwear for her 10 kids. She made bloomers, slips and even swimming suits, that we only used in our private swimming pool that our father and brothers had blasted out of that hard pot rock. This pool was up behind the barn, near the orchard.

We also learned to embroider on these sacks. We learned to do the outline stitch around all of those flowers that were printed on those sacks.

We dried many apples and they were stored in flour sacks and hung everywhere in the kitchen. Well, all I can say is they were the most useful item that ever entered our home, there on the farm. I miss the flour sacks!!
Butchering The Hog

I did promise you that I would tell you how to butcher a hog so you could make the lard for the pies. This job is one for the men of the family. They have more of a stomach for this sort of duty than the women do. They first have to slop the hogs for at least two years to make them fat enough to slaughter. Make sure that in the process of feeding the hogs that you don't make the mistake of feeding them the hard cider that your father doesn't want you to be drinking. Feed them grain, table scraps and such. Usually, the fall or early winter is the time for butchering the hogs. Since you don't have a freezer or refrigerator to keep the meat from spoiling, you don't want to do the job in the summer when the flies are out.

Again you will want to start up the wood stove and put tubs and tubs of water on to boil. After the pig is slaughtered you have to get a big oil drum, hoist the hog up above it and lower it into the big vat of scalding water. Then you take a big, sharp knife and scrape the hair off the hog.

Some folks may want to build a bon fire outside then build the scaffolding over the fire. Place the big oil drum on the burning coals and fill it full of water. By the time the hog is butchered the water should be boiling if someone has been feeding the fire with the oak brush that the men have dragged down from the mountain. Oak burns very hot and the water should get to scalding soon. Then hoist the hog up higher than the drum and lower the hog, head first, into the vat. Then it is time to get the sharp knife out and scrape the hair off. You need to get the hair off or your slabs of bacon will have hair on the rind.

After the hog is cleaned, cut it into pieces, like hams, ribs, roasts and bacon. Then you must build a smoke house so you can smoke the hams and bacon. Salt them both down and hang them by wires in the smoke house. Build the fire up under the smoke house and let only the smoke go up around the pork. This takes a few days and then the hams and bacon are cured and ready to hang up into the kitchen. A piece of binder twine will do for the hanging. Then watch them swing whenever an earth quake comes along. This has been known to happen, but don't be too alarmed, because earth quakes only last a minute or two.

Smoked hams will last a long time, if the family isn't too big, but 10 kids can make short work of a couple of hams. The roasts can be popped into the oven right away, or cooked and bottled, for future use.
Be sure, to cook up a batch of that good sauerkraut that you made this fall, and add some of the spare ribs. This, with the new farm potatoes will make a delicious meal for all 12 of you.

GOOD EATING!!
Head Cheese

As I say, I am more than willing to admit that I don't know all the ingredients in my recipes, but I have an idea how they came about. I was just a tad when some of these delicious foods were being prepared, But!

I do remember my mother making head cheese. The process went like this. After the hog has been slaughtered the head was severed. After lots of scraping and cleaning, again the wood stove was stoked up and a big canning kettle was filled 3/4ths with water. This water was brought to a boil and the hog's head was inserted into the water. The head was boiled for a couple of hours, until the good meat could be pulled off easily. This meat is full of good gluten, like Jello. Take the head out of the boiling water and patiently scrape every morsel of that good meat off. Then chop the pieces of meat up into fine chunks and put it into a pan. Salt and pepper the meat and add some sausage seasoning, if you wish. A spicy flavor is always good for head cheese.

Put the meat back on the stove and cook for an hour. When it cools the head cheese will set up. It can then be sliced and eaten with a slice of that good home made bread, with home made butter on it. Then get a glass of that good fresh milk, from the barn and enjoy a very good meal!
Milking A Cow

As soon as your 10 kids are big enough to sit on a stool, get them out in the barn and put them to work, milking a cow. You first have to go out to the wood pile and find a nice oak stump, about a foot high and about 4 inches in diameter. Then find a slab of wood about 6X12 and find some shingle nails and a hammer. Nail the slab across the top of the oak stump and square the bottom off of the stump so it won't tip sideways. It will confuse the kid if his stool tips over while he is under the cow.

Some folks prefer to make their stools out of an old 2X4 that they find out behind the barn. Either method will work fine. Then give the kid a milk pail, set him near the hind quarters of the cow. Be sure the cow is secured in the stanchion before starting. Then instruct the kid to reach under the cow, where the utter is, and take hold of one spigot and squeeze. Time will strengthen his little fist so at first he may get only one or two drops of milk. Tell him not to give up, keep trying.

Then one should be aware of the cow's tail. If the cow has spent the night in the barn, with it's tail in the contaminated water that runs through the barn, don't be too surprised when the cow goes to switch a fly and this wet tail will hit the kid in the face.

This action will no doubt startle the kid so much that he will kick the bucket over and the few drops of milk that he has worked so hard to get will run down the trough and out into the garden. Don't let him cry over spilt milk, because the milk will fertilize the potatoes and he will find that nothing is wasted on a farm!
Saturday Night Baths

I guess I had better tell you how it is to give 10 kids their bath. It is no small task when you have to carry the water from the ditch in the winters. It is no problem in the summer, because all you have to do is send them up to the swimming pool, behind the barn.

First you have to have your kids help you carry water from the ditch, then put the boiler on the stove to heat. It is no problem getting the wood burning stove going, because in the winter it is always stoked up. When the water is warm you get that galvanized tub down and place it on the floor. You pour plenty of water in the tub, but not too much, or when the kid gets into the tub the water will slop all over the floor.

Then you call the girls in and one at a time they are run through the water. The mother will let you scrub yourself and when you are through she will pour a pan full of clean water over you and then you step aside for the next kid. For some reason the girls get to go first. By the time the three boys get in the water is a little murky, but they too get the pan of clean water poured over them so it turns out all right.
When the seven girls are taking their baths the boys will stay in the front room and then the girls leave the boys alone for their baths. It takes some doing, but eventually everyone gets cleaned up for the next week. Then the boys will have to dump the water outside, where it will freeze, so they shouldn't dump it in the pathway to the outhouse.

The outhouse is a cold place to go, when you have to, but the kids don't stay any longer than they have to. You have to sit on your hands, or you might freeze to the seat!
Raising Your Own Flour

In order to have flour, for that delicious home-made bread, you must have wheat. The first thing you must do is get your father involved, and maybe your three brothers, also. They will go and hitch up a team of horses, hook them to the plow and head for the field.

If the field has been plowed up before, for some reason, the task won't require too much extra work. Usually father will prefer to rotate his crops so he will decide to break up a new piece of land. At any rate, he will plow the field and then he will hook his team up to the disk, and then onto the brush drag. This brush drag should be made from some oak brush nailed between two strong 2 X 4's. Then chains will go from there to the double trees so the team of horses can be hooked onto it. After one balances on this brush drag all day the field should be ready to plant the wheat.

Then the father will go to the granary and sift out a lot of wheat, for seed. One doesn't want to plant all of the weed seeds along with the wheat so this grain should be sifted. The 10 or so little containers, on the seeder should be filled and set to the right amount for planting. You want so many grains to the acre, so set it accordingly.

Drive the team around and around until the field is all planted. Then wait for the birds to come in and help themselves to the seed. Usually they only take the seed around the edges of the field, so there will be plenty left for growing.

Irrigate all summer and watch the beautiful grain grow. In the fall when the grain kernels are ripe, (they will be tested by the father, by shelling out a few heads and chewing them to see if they are hard enough). Then the Binder is put into condition.
This will require the father to go to town and buy lots of binder twine, which comes in neat rolls. The binder will be threaded and you are all set to hook up the team and head for the field.

This is a very exciting time for the 10 kids, for they follow along behind the binder and tie any bundles that have slipped by the knotter, without being tied. Then the kids will be required to take each bundle of grain and stand them up, teepee style. This will give the grain a chance to dry out and not get moldy, had it been left on the ground.

After the father says it is time to haul the grain in from the field, the old wagon is brought to the field. This job is left up to the experts, because when the bundles are thrown on to the wagon, the loader will have to lay the heads of grain to the inside or else as he stands on the grain it will be shelled out and left in the field, The wagon isn't filled as high as the hay would be, because of the care needed to not shell the grain out, before it gets in to the stack.

A place is cleared near the south barn and the bundles are placed in a big circle, with the heads of the grain to the inside. Of course some of the bundles will be placed inside of this circle, but the boy on the stack has to step around as lightly as he can. Load after load is brought in to be stacked until the stack is as high as the barn. If you have raised barley, another stack will be placed near this one, with a space for the wagon between.

Then it is time for you to call the thresher crew. When you see that big steam engine coming up the road, run by your father, the excitement will run high for the 10 kids. They are told to stand back while they watch. The threshing machine will be backed into the space between the two stacks and the big belt will be put onto the pulley, from the tractor to the thresher.

The crew usually follows along behind the thresher so you can put some of them to work. Two on the grain stack, one to direct the straw blower, and a couple to sack the grain and haul the beautiful stuff to the granary.

The crew will often take grain for their pay, instead of cash. If the job finishes before noon, they usually move on to the next job. But they will probably make sure they get done, just in time to eat at your house. They seem to know who furnishes them with the best food so they dally along to make sure they end up at the right place at noon. The mother will be busy all morning making pies, and getting the 10 kids to help cook this wonderful meal for the crew.

The next day or so, the father will take a few sacks of grain to the Miller Johnson and have the wheat made into flour. At the same time he will pick up a big sack of oatmeal to feed his 10 kids each morning.

Now you will have the flour you need for making your bread, pies and noodles.
Eggs For The Noodles

Did I tell you what we have to go through to get the eggs for the noodles? Well this, too, is a long process. First we have to order the little chicks on about February 1st. When they arrive at the Heber Creeper depot, your father will start up the old Chevy truck and head for town. The chicks number about 100 or so and it is crucial that they be kept warm on the way home. Heavy quilts must be brought along to put around the box of chicks.

When you get the chicks home they will have to be put in the warm kitchen so they won't get chilled and die. For the next month these little chicks will have to be pampered and fed and watered. At night if they are not kept warm they will all crowd together and some will smother, because 100 little chicks can be quite heavy when crowded together. It is best to keep them warm enough so they won't crowd together like that.

The little chicks will soon sprout their pin feathers and before you can move them out into the cool chicken coop they should have their big feathers that will keep them warm. This can be a trying time, raising 100 little chicks in the kitchen, but the 10 kids will enjoy watching them grow and maybe they will help keep the box clean.

When the days get warmer the chicks will be moved into the big chicken coop and there they will continue to grow into big chickens. Later in the fall the pullets will lay small eggs that are good to eat and later the eggs will get to a bigger size. Then nesting boxes must be made in the corners of the coop. They will be filled with new straw and kept clean.

When the days get warmer the chickens will sit in the windows and sing. Have you ever heard a chicken sing? They have a real chorus going of their caws. Each with a different tone makes for good music. A happy chicken will start laying eggs in the fall and continue on through the winter. The 10 kids, than, are instructed to go into the coop each evening and carefully gather the eggs from the nests. Sometimes, by spring a hen will decide to start brooding and she will resent anyone who takes her eggs from her. If this happens the hen will probably peck at your hand as you reach under her to get her eggs.

So you will take the eggs that you gather to your mother and she can then make the noodles that are so delicious.
Choke Cheery And Other Jellies

Here is where your 10 kids will come in handy, because they will have fun going out and picking the choke cherries, currents and plums for your jams and jellies.

Furnish them each with a bucket or pan and tell them you want some fruit to make jelly. They are usually very willing, because they like to hike and seek out the berries. Sometimes they will have to travel a mile or two so they will go to the field, catch the horses and then ride to where the berries are. Picking choke cherries is easy, because they grow in big clusters and your bucket will fill up fast. Currents are a little harder to pick and your bucket doesn't get full so quickly.

Take the berries home to your mother who will wash them and put them on the wood-burning stove to stew. She will then put them in a flour sack and hang the hot berries under the kitchen table, on the board that is there. The sack will hang there for a day or so or until all the juice drains out into the pan that is set under it.

Then your mother will boil the liquid down, about half and then add a bunch of sugar. When the juice sheets off a spoon the jelly is ready to put into the jar and seal.

After the cider is made in the fall, your mother will fill the big copper kettle with cider, build a fire outside, place the kettle over the coals and boil the cider with a big wood paddle that your father has carved out of a big stick. You must keep the liquid moving or it will scorch and spoil the whole batch. This is a long process, since you have to stand there and stir and stir, until the liquid gets ready to add the 50 lbs of sugar. Then boil the liquid until it is jelly. You know when it is done when the liquid sheets off the wooden spoon.

Then you must wash and sterilize big half gallon jars. For 10 kids and two parents it takes a large amount of jelly. Don't fuss with pints of jelly, because they won't go very far. When the jars are full take them into the house, where it is warm so the jars won't crack while they cool.

This process is repeated for plum jam as well. Also when the Blue Damsen plums are ready, after they are frosted and sweet, make jam with the stones and all. This will make a
wonderful flavor, but when you eat the jam tell the kids to watch out for the stones. You have to sort the stones out as you spread the jam on your buttered bread. GOOD!

Your mother might want to cook up a few apples, make a sauce and then boil it a long time, add spices and then this is called apple butter. This is a rare treat for the 10 kids. When the jars of jelly are cooled your 10 kids can carry them, carefully, over into the cellar that you put your potatoes in. While you are making the jelly your father has been busy making shelves for you to set them on. Then it is time to can your peaches.
Canning Peaches

Since your father’s sister, Anna Anderson, lives in Provo, your father will want to buy his peaches from her. She and her husband moved there way back in the 1905 and have a big orchard with peaches, pears and such.

Arrangements have been made with her, by your father, to trade peaches for a hog. This requires catching a nice fat hog, putting it into a gunny sack and throwing it into the old truck. All 10 kids can't go after the peaches because the hog will take up most of the room in the truck, so your father and perhaps two brothers will go along.

They will bring back a truck load of tree ripened peaches and unload them in one corner of the kitchen or the living room. Then jars must be washed and the canning will begin. The best way to can the peaches is by the open kettle method.

First one must start a nice hot fire, get some water boiling and drop the peaches into the scalding water. Then they are removed and your ten kids can help slip the skins off the peaches. By this time you have washed and sterilized your jars and rounded up enough lids to do the job. One should buy new lids each year, but if you can't afford them just sort out the old lids and hope they will seal.

Put the peeled, pitted peaches into an enamel kettle and boil. When they get steaming hot, take a ladle and fill each jar to within one fourth inch from the top. Wipe the jar clean and screw the ring on tight. Later if a jar doesn't seal you can always put the contents into a pan, boil again and feed it to your family of 10 kids. On a farm nothing is wasted.

Pears can be canned with the same method, but each pear must be pealed with a knife and cut into sections. Boil, with a bit of sugar, and pack into jars and seal.

All of this effort pays off when the cold winter is upon you. There is nothing better than a peach that has been canned, open kettle method, when you eat them with your big bowl of oatmeal in the morning, before you go off to school.
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Winter Supply Of Wood

Gathering the winter supply of wood is a job for the men in the family. First it is good to wait until there is snow on the ground. Then it is well for your father to build a bob sled and head for the mountain. The men will chop down the scrub oak and load the logs onto the sled. The tops of the brush will be left on so as the load is dragged down through the field as nice groove will be dug in the snow. This trail will later be used for a sled, toboggan or ski trail for your 10 kids.

Your 10 kids will have a great time playing on this trail and the oak will provide some cozy evenings in the long hard winter. The oak will be cut into pieces that can fit into the stove and stacked in neat piles near the house.
Peddling In Park City

If your father decides he needs a bit more cash to buy clothes for his 10 kids he will tell the family he wants to peddle some bounty of the farm. Since he was raised in Park City, which is a mining town, he knows how good fresh vegetables would have tasted in those days.

In order to do this, he and Mother must plan a year ahead. First the father will build a little frame, hot house against the south barn and fill the bottom of it with horse manure. Then he will go to the garden and haul enough of that good soil to add to this. After the weather warms up, about February or March, Mother will plant her cabbage and lettuce seeds. With a window pane on top of this hot house the seeds will sprout and soon the little plants will be big enough to transplant. The little plants will be transplanted at least once, before the weather is warm enough to put them out into the garden.

Then the father will get his team of horses and hook them to the big plow so he can till the garden soil. After the harrow is dragged over the garden then the leveler is brought out. The soil will be ready for planting.

After the potatoes are planted it is then time to plant the cabbages and head lettuce. Cabbages and lettuce will stand a bit of freezing weather, but not too much so don't get too anxious to get them out into the garden. When the mother says it is right, she will find sticks for her 10 kids, line them up along the straight rows that the father has made with the plow and instruct them how to plant the tender plants. She will tell them to pinch the two big outer leaves off the cabbages and head lettuce, poke a hole in the nice soft soil and insert the tender root into the hole. She may tell you to pinch off the very ends of the roots, which make the root sprout out better.

After the cabbages and lettuce is planted, then the carrots will be seeded in. Beets will be planted at the same time. Then after the seedlings sprout they should be thinned so the vegetables will have a chance to grow big. After many days of irrigating the garden, with that good water that has run through the barn, a lot of weeds will grow so this is where your ten kids come in handy. Teach them the difference between a weed and the plant that you want left and hope for the best.

About August, the vegetables will be ready to harvest and take to Park City. The evening
before the trip, all the kids and the mother will gather vegetables.

I neglected to tell you that you must always plant lots of peas, because the miners will love the fresh peas you bring them. The day before the 10 kids will pick big gunny sacks full of the peas and have them ready for the next day.

Everyone will be busy pulling carrots and beets and seeing that they are washed and ready by the next day. Later on in the season you will harvest the cabbages. Fresh green beans can be added to the sacks and the load is ready to go. If someone has ordered chicken or horse radish these must be prepared also. Most of the ladies will want to butcher their own chickens, it must be put in a wire cage and tied on to the side of the wagon or truck. If you have an order of horse radish, this can be a fun job for the 10 kids. You must first send your father out to dig the roots. Since you have lots of it growing on your lawn, this should be no problem. The root must then be washed and peeled. The grinder should then be attached to the kitchen table and your kids called to come and turn the crank. It will take a lot of kids taking turns at this job, because once the grinding starts the tears will flow. The fumes coming up from the grinder can clear your sinuses in a hurry and send the kids outside to get a breath of fresh air. The best place to grind the horse radish is outside, but this isn't always possible.

The horse radish is then packed into pint jars and then filled vinegar in until it covers the root. This will preserve the horse radish and add zing!

Then it is time for the father and boys, or girls to load the goodies into the wagon or truck. This trip will take all day, for it is almost 20 miles to Park City from the farm. After reaching the town, the boys and the father will have to go door to door to sell their produce.

If you are making the trip soon after you have butchered a hog, the ladies will all want some of the pigs blood to make blood pudding. Your sales slips will read something like this:

Zabarti--Eggs, 3.00, Lettuce 10 cents
Mrs. Smith--Vegetables and flowers, $1.10
Mrs. Thomas--cabbage 30 cents
Ray Fley--apples, 50 cents
Novak--Apples, 10 cents and horse radish, 50 cents

Well, this will give you an idea how rich you will be at the end of your day, but at least you have the satisfaction of getting some nice clean vegetables to those poor miner's and their kids.

You might decide that 50 cents for a pint of horse radish will bring tears to your eyes without the grinding. At any rate, you have kept your 10 kids out of mischief for a few hours and that should be worth something.
Making Your Own Cheese

I don't profess to be an expert on making cheese, but I will relate what I think I know. First you have to go up to the pasture and find a cow that gives milk. Run her down to the barn and secure her in the stanchion in the stable. Get your bucket and the stool that your father has nailed together, sit and squeeze out enough milk to fill a pail or two. Then take the milk into the house, stoke up the wood-burning stove, fill a large kettle full of the fresh milk and bring it to a boil. Be careful that you don't scorch the milk, or your cheese will have a scorched flavor. When the milk is to the boiling point, pour in a few drops of rennet. If you don't know what rennet is I will tell you. Rennet is made from the mucous membrane lining from the fourth stomach of a suckling calf or sheep, which is capable of curdling milk.

Are you still with me? If so, after the milk is curdled, drain off the liquid, which is called whey. This liquid will look like green water. It will be good to feed the hogs or you can drink it for extra nourishment. Little Miss Muffet ate the curds and whey.

You can take the curds and put some salt and pepper on it and eat it right now, or you can continue the process and make cheese by putting the curds into a press, your father has made, and press every bit of the liquid out.

After the curds are pressed into a solid mass you then dip the cheese into hot wax and cover it with cheese cloth. The hot wax will adhere to the cloth and seal the cheese from the air. Then pop the cheese into the cheese cupboard that your father has built out of boards and tin. This cupboard usually sits in one end of your big kitchen and the cheeses will stay there until they are cured. With 10 kids waiting to eat the cheese I am afraid it won't be able to stay there very long. They won't be able to wait months so you had better make several at once.

Once the cheese is cut into, the mother will take the slices and pop them into a hot frying pan and it will melt so the kids can put it on the slices of that good home-made bread. One cheese won't last long. Kids never had it so good! If one of the girls decides to go hitch hiking, she will take one of these cheeses, tie it into a big flour sack and head down the road. It will provide good eating for her until she decides that leaving home wasn't such a good idea and she will return to the plenty of the farm.
Milking A Pig

This may sound funny, but if your German neighbor asks you to do something exciting you should do it. You first have to find a sow that has a litter of pigs. She will already have dozens of little ones pulling at her belly, so one more won't even be noticed. All you have to do is wait until she lays down, then you can get your cup handy. Get right in there with the piglets, find a spigot, that isn't being used, and start squeezing.

It won't be long before you have a nice full cup of that foamy rich milk for the lady. You may want to know why she wants this milk. She will tell you that she has this grown son that drinks booze a lot and beats up on her. She has heard that if you put the pigs milk into the man's coffee it will stop him from drinking the booze. The man only wanted some more of that thick cream so it didn't work the way it was supposed to. He only wanted more. At 10 cents a cup you may as well continue to milk the pig. This is really an easy way to make a dime!! Or is it?
Churning The Butter

First you have to have a lot of heavy cream. You could let your milk set over night and skim the cream off or you could start up the cream separator. This isn't easy and you will have to have the help of your father and your three brothers. The fresh milk has to be poured in the round container above and miraculously cream will come out the spout. Don't ask me to explain this one, for I don't know. But now you are ready to take all or this thick cream, pour into the butter churn and turn the crank. The paddles inside the churn will keep the cream moving and finally after a long time you will feel something bumping around in the churn. This will be the butter. When you open the churn up you will see a big lump of beautiful butter stuck to the paddles. Take the paddles out and scrape the butter off into a flat pan. Drain the whey off and stir it to get every bit of moisture out. Then put it into a large bowl and add some salt to taste. Now it is ready to spread onto a big slice of that nice home-made bread. Add some of that fresh plum jam and get a cup of the nice fresh milk from the Jersey cow. ENJOY!
Nettle Gravy

Your mother will probably send you out in the spring to gather nettles. She knows they contain the iron you need for your spring tonic. She will tell you that "Nettles don't sting this month." You believe her and get so brave you grab the nettles with your bare hands. You will soon find that she has played a joke on you. When you complain she will say, Nettles don't sting this month, but they sting you."

She will take the nettles and put them in the creamed gravy and you can put the gravy on your farm grown potatoes. Not too bad!!
Making Pop Corn

To make the best pop corn, one has to first fire up the wood-burning stove in the kitchen. If it is winter time the stove is already stoked up and this is the best time to make the pop corn.

You must first find a square of fine screen and cut it into a square about 30 X 30 inches. Then take each corner and fold them to the center. Pour in a cup of popcorn, (regular corn won't do). Your father might, at one time try to raise his own popcorn, but if it crosses with your good eating corn it will not pop. So save up your dollars and buy it from the country store.

Set the screen cage onto the stove and after it heats up have one of your 10 kids start to shake it back and forth. When the kernels start to pop keep shaking the cage back and forth to keep the corn from scorching. Don't be too particular about this, because some kids will like it better if the popcorn has a scorched flavor. When all the corn is popped, empty the nice fluffy corn into a big pan. Put some of that home-made butter into a small pan and melt it on the stove. Pour this over the popcorn, sprinkle a little salt over all, and Enjoy.

When the popped corn is cleaned up there will be some scorched un-popped kernels in the bottom of the pan. The kids will fight over those kernels and call them, "Old Maids." They will be hard on the teeth if chewed too hard, so alert your dentist.
Going To The Dentist

If you have ten kids it is important that you have a kind old dentist who takes vegetables and fruit for pay, because you couldn't afford to pay otherwise.

The kids will be scared stiff when they are sat down in his big chair, but soon he, with his gift of gab, will charm them with his stories. He will say, "Open Wide" and they will be too scared not to do as he says. He will say, "Ah, Oh, and Yes," and then tell your father that that tooth has to come out or that tooth needs a filling.

When he decides to put a filling in, he will get that scary drill out and drill the decay out of it. Sometimes it will hurt, but if he thinks it will, he will first stick this big needle in and deaden the surrounding area with Novocain. The kid will think this is the worst part of getting his teeth fixed, but if the drill would hit a nerve he would take the Novocain gladly.

Then the dentist will get two or three little bottles off the shelf and dust a few drops of each into a little ceramic cup. He will then start to stir and mix and stir and mix until the powders grow into a small ball. He will then take this ball into his hands and knead it between his thumb and finger until it is smooth and ready to put into the hollow tooth. This procedure will fascinate the kid and he will forget the pain the dentist may have caused.

The dentist will then get some long cotton balls out of his jar and pack them around the tooth. He wants the tooth dry before he puts the cement into it. He will then take his little atomizer, put it over his little bunsen-burner and draw in some of it's heat. He will then squeeze the little bulb and blow the heat into the hollow tooth to take any moisture away. This will feel good after all of that scary drilling. Then he will press that little wad of silver into the hollow tooth, smooth it out with his little knife and you are set, for now. "Don't bite down hard or drink hot liquids for a while," He will tell you. Then you will be happy to be free to go home.

Your father will take his order for what the dentist wants for pay and this will be delivered at a later date. We know, from our experience that his family will enjoy those fruits and vegetables from the garden.

Going to the dentist is not as scary as letting your father pull your teeth. Just the sight or
those big pliers coming at you is enough to put the fear of the banshee into you. The other method your father may use is to tie a strong cord around your tooth. If you see that your father doesn't have a strong cord and is sitting there rolling this string along his leg, you know what is ahead. He is making a strong string out of a tiny weak one. He may sit there for a long time rolling this string, with his hand, until the string gets twisted into a nice strong cord. Then he can tie it around the tooth and, give the string a yank and out will come the tooth. The dentist has the right tools for this job and it is not quite as scary.
You Can't Fool Your Mother

If you ever feel like not going to school and pretend you are too sick, your mother will know. Mothers always know. If you are found out to be faking you could get the Yarrow treatment! Your mother will brew up a big cup of Yarrow tea that will make you wish you hadn't stayed home from school. It will be so bitter that it will make you sick, if you already aren't. The chamomile, spearmint and catnip teas are good in comparison, when you are not feeling well, but please don't drink the yarrow tea. Go to school!!!
Make Your Own Ice Cream

If you have 10 kids it is wise to spend some of that hard earned money that you made peddling produce in Park City, for an ice cream freezer. Since you don't have electricity you should buy the kind that uses kid power. This will be fun for the little ones and will surely keep them out of mischief for a couple of hours.

It is best to make your ice cream in the winter time when you have plenty of snow to pack around the container. You must also make sure that someone has gone to town and bought some more rock salt. Perhaps you have lots left over from making sauerkraut so you had better check first.

You will need lots of that rich cream that you just ran through the separator, a cup of sugar and a dozen eggs. (Remember, you have to make enough for 12 people.) Put the sugar, milk and eggs into a double boiler and heat until the mixture boils. By the way, did I remind you to start up the wood-burning stove? Of course the stove is already going since it is winter! (If you are in a hurry, just take the pan out in the snow and leave it for a few minutes. Don't leave it there too long unattended or some varmint will come and lap it up.) The mixture will thicken. Then drain a jar of those peaches that you canned this fall and drink the juice. Add the peaches to the cooled mixture. Pour it all into the ice cream maker and clamp the lid on tight. Then you summon the kids, for this will be a long hard haul. At first the 10 kids will fight for a chance to be first, but as time goes on they will realize how hard it is to turn the crank and they won't fight over it anymore.

After about an hour the turning will get harder and soon your ice cream will be ready to eat with a piece of that apple pie that your mother just made.
Some of the varmints that might eat your ice cream mixture that is left out in the snow to cool!
MY DEAR KIDS,

This should cover what I am trying to put across to you. Life in the 1920's and beyond wasn't always easy, but as you know, life is not easy now. If you just do the best you can you will be fine. I know you have lived a very different life than I have, but you still are having fun and have learned to work. I hope.

As I have said before, when we lived on the farm we couldn't run to the store every time we needed something to eat. In the first place we had no money to do this so we got out and planted and got it from the garden or whatever. If we hadn't raised our own food I am afraid 10 little ones and two parents would have starved. We either worked, planted and harvested or we wouldn't have been able to eat.

In the fall our father had to sell some steers so he could buy clothes for his 10 kids. Then he would sit down with us and make out an order to Sears And Roebuck or Montgomery Ward. The catalogs were our wish books. The boys got new pants and shoes, but Mother made their shirts. The girls had to just order material so our mother could make our dresses, slips and bloomers we needed. Besides that, she would order the flannel and cotten batting to make quilts for our beds. This was no small task, but after the first quilts were made we just covered them with new flannel each year. We ended up with some awfully heavy quilts, but we couldn't waste anything. What can you do with a quilt, but put new covers on it. Nothing was wasted!

Our mattresses were made from ticking, which is a heavy, almost like canvas material. Then we took them out to the straw stack after the threshing was done and fill the big sacks with lots of new straw. We had to really stuff them full, because as the winter went on the straw would pack down and we ended up with a thin matresses.

Well, this was a pioneer way of living, but we had a good life. In fact we have packed away a lot of good memories that will never die. So I hope my Recipes of my life will give you a few laughs and I hope you do enjoy them. You can relive the Good Old Days along with me.
In the old times, wells were dug by hand with a pick and shovel. With the huge amount of effort that was involved in digging even a shallow well which could last weeks and sometimes dragging into months for deeper wells with lots of rock, they certainly wanted to have some kind of assurance their efforts would be successful. Because of this, dowsing found wide acceptance during the colonization of the United States during the 18th and 19th centuries. We think you'll find this Old Timer page most interesting. It's from an interview with Rod Hendricks, a present day well driller that's been finding water in this way for the majority of his life.

Rod Hendricks:
I've been finding wells since I was 6 years old. Let me start with a little bit of history about how I got into it. My dad's been drilling wells since 1959. I was born in 1965 so I kind of grew up in the drilling business. Dad taught me to find water using brass rods when I first started following him around on the drilling site. It used to be kind of a neat little hat trick when I was a kid. We'd go out onto a job site, jump out, and Dad would say, Rod, run out there and work us up a good location. Well, of course, the customer thought that was funnier than anything, watching this little kid out there wondering around with a brass rod in each of his hands. After I came back I'd say, "Yup, Up found one." Then Dad would take the rods and say, "Is it over here?" And I'd say, "Yup." Then Dad would find the same exact spot that I did.

I get a lot of questions ask me about how and why it works. All I have is an opinion. Nothing has ever seemed strange to me about finding underground water. Finding water is just like tying your shoe to me. Up lived with it my whole life. And I've tuned it as I've tuned lessons from different people. There isn't a mystery in my mind about why it works. The metal rods to me are nothing more than a visual aid to tell you what your body already knows. We only use somewhere 7% and 9% of our brain's capacity. There's that other 90 percent of our gray matter that's not really being used for a lot that we know of. I think the human body is a lot more in tune with the things that go on around us than we understand. Our subconscious mind can sense things that aren't readily apparent to our conscious minds. We don't use enough of our brain capacity to be able to comprehend this and really understand what we're feeling and have a hard time sorting the different messages out. Whether it will work for a person or not depends on what kind of mental block they have in place. I've only had a handful of customers that it wouldn't work for. When I find a spot to drill for a customer, I'll hand him the rods and let him play with them. The very few that it didn't work for were dead set against believing it could work. To me, the brass rods are like the gas gauge in a car. The gage tells you how much gas is in the tank. The
device for finding water isn't nearly as important as the person doing it. The only thing the rods are there for is as a visual aid for you to see what you're already feeling. Of course, this is personal opinion on my part after 29 years experience.

I grew up using brass rods. But I've also done it with coat hangers. Coat hangers work just as good but they are kind of flimsy and don't stay in your hand as well. A 1/4 inch brass rod is a nice stiff rod and stays in the hand nicely.

Some people have used a forked branch off a willow tree. The reason we use brass rods is because they are easy to keep. You don't have to worry about going out and having to cut something down. I believe it doesn't matter what you use. Use whatever you feel comfortable with. One guy believed it would only work with a green branch from a cherry tree. That guy had this idea cemented so deeply in his mind that for him, he was right, only a green cherry tree branch worked work for him.

I also like brass rods because that is how my dad taught me. I think it's easier to do it that way than with a stick. I've seen another guy with a coiled piece of bailing wire. He wrapped the wire around something like a round medicine bottle with a straight section of wire on the end of it pointing straight down. He had to hold onto it in a special way, across the back end of the wire then he'd count the bobs. I saw another guy who was looking for an artesian well or a flowing well. So he took water out of another flowing well, put it into a Bayer aspirin bottle and taped it onto the end of a stick so it would find a flowing well for him. That didn't work. Once I saw a 96 years old guy from Sweden use a silver pocket watch. He did a really good job. He dangled his watch from it's chain and walked around with it. When it started making circles he knew he was over a water source. So, I've seen a whole bunch of different things.

Two weeks ago I drilled a well up in the hills. The man and his son were standing there waiting on me when I arrived. The man was about 45 years old and his son was about 16 years old. We were 'talking away' as I looked for a good drilling location for them. After I found the spot, the guy said, "Let me try that." He grabbed those rods and sure as anything, right in the same spot where they crossed for me they crossed for him. Then we gave them to his son and he roamed the entire hillside looking for water and marking different underground streams. Neither one of those two people had ever even seen it before. Both of them picked it up just like ducks to water. You don't have to be a special person to do this. Granted, the knowledge helps to give you an idea of what some of the possibilities are.

During all of my well drilling I've only missed on two wells. This was 15 years ago, one right after the other. On the first site we hit a clay strip about 80 feet down. When we stopped drilling at about 500 feet we were in that same clay strip. Then I looked for another location, drilled it and got the same thing. We hit clay at 80 feet and were still in the same clay layer when we stopped at 500 feet. This was the occasion when we ask the old guy who immigrated from Sweden to come up. He walked up to the first well with his silver watch and said, "You guys had nothing but clay, didn't you." We said, "Yup." Then he walked over to the second well and said, "You had the same thing here, you had clay all the way." We said, "Yes." Then he said, "You weren't focusing on what you were looking for. The clay is naturally damp and has moisture in it, and that's why you found the first two spots." Then he walked over to the other side of the property and said, "If you'd have drilled here you would have hit water." So the things this gentleman said got me a little more in tune.

But I've had many other learning experiences as well. We had an older guy
from Oklahoma that worked for us about 8 years ago. One day he said, "So you just use those brass rods to find water? You can use them to find anything."

I said, "No, no no. Brass rods are for water."

He said, "Brass rods are for anything you want. It doesn't matter what you are trying to find, what does matter is what you are making a mental picture of." So he set up a little demonstration with a piece of black poly pipe that was laying there, a block of wood, an old tin can, and a ring that he took off and laid down. He walked from one item to the next, focusing his mind on the ring. When he got over the ring his rods crossed. Expanding my vision a little bit, I've used this method now to find several different things. I've been called out to find septic systems, water pipes and gas lines.

About a month ago I was called out by a guy to find a water line as he was confused as to where it ran for his house. I initially started finding the water pipe by running "water line" through my mind. I crossed one and marked it out. Then I thought, "I'll come from the other direction and make another mark, then figure the water line lies somewhere between those two marks." Next, I went to the edge of the yard with my rods down then returning, I picked my rods back up again and started thinking "water line" again. Expecting the rods to cross in the same place, I was surprised when the rods crossed five feet away from the first mark. "Wait a second here." I took another step and they uncrossed then crossed again over the first spot. "We got two water lines here." Then I went through and marked out both water lines for him.

He said, "I'm going to dig them up. Are they plastic, metal or what?" So, I went across the two lines again but this time I was concentrating on "steel pipe." When I crossed the first one nothing happened. When I passed over the second one the rods crossed. "Steel Water Line." So I thought, the other water line must be black poly because that's all we run in this country - black poly or steel. But nothing happened as I centered my mind on 'black poly' as I walked over the spot. So I went back over it again thinking "white PVC pipe," not knowing what else it could be. This time the rods crossed. We dug down and connected to the steel line as he was sure the steel line was the pipe that brought the water into his house. Later, a lady came over whose father built the subdivision. Talking to her I said, "This is kind of strange. There's two water lines buried here. One is steel and I think the other one's white PVC pipe." She said, "Yes, my dad went through and put PVC water line to each lot so when people built their houses all they had to do was tap into it. What he didn't realize at the time was when you sell someone a one acre piece not everyone is going to put their house right in the center of it." And because of this, they didn't even mention the PVC pipe when people started building their houses.

I already mentioned the guy who felt he needed a green branch from a cherry tree. He wondered all over his hill and said, "Ok, here's the water." I grabbed my brass rods. "Here's a vein," I said. "There's another vein over here and there's a vein up here."

"Nope," he said, "The only one I can find is this one right down here. It's the only vein on the property."

So I ask him, "Tell me, what are you focusing on?"

He said, "I'm looking for 'clear, cool spring water.'" There was a difference here. I was just looking for 'underground water flowing in an aquifer.' This guy was looking for clear, cool spring water. We drilled where he wanted and it was only 20 feet down to a natural underground spring that didn't have quite enough pressure to come to the surface on it's own. The reason he only found this spot...
was because of the mental picture he had in his head. He had already walked over several prevalent sites with plenty of water but hadn't found them.

The valley I live in has one of the fastest moving aquifers in the whole world but only moves 2 inches a year. It's more like a great big underground pond. You'll hear people say, "The well driller came out and tapped right into an underground river." Well, that's not quite how things work.

Underground rock is normally fractured or broken in different places. Water is going to take the path of least resistance. Ground water is the same as surface water in that it will also flow in the path of least resistance. If you turn a hose on the water will move through the path of least resistance through the hose to it's opening. Water in the ground does the same thing, following the path of least resistance though the cracks and fissures in the rocks. Many underground aquifers are in very tight formations such as shale, basalt or granite. You'll find the water will follow the cracks and fissures through the rock. The whole purpose of the rods is to find the cracks and fissures where the water is moving through the rock formations, then tap into that rather than going down into solid rock where no water is found.

There have been times I have drilled into a crack that's only a foot wide and I'll get 10-15 gallons a minute out of it. Then there are other times when I've drilled into a crevice that's 8 feet across and have only got 3 gallons a minute out of it. But how deep does that crack go? Is it only 1/8 of an inch thick or is it two feet thick? I tell the customers we will pick them a location but I don't guarantee how deep it's going to go or how fast it is going to flow. Although when searching for it, I do form mental pictures in my mind of how it will produce; how deep it's going to go and things like that. I do this by saying within my mind, "The water is 20 feet down." If the rods don't cross I make another statement in my mind going deeper and do this until the rods cross. Forming different pictures in my mind, I can also determine about how much the potential well will produce. I'm not real accurate on this aspect of searching for water and think it's probably because I've lived my whole life with my dad telling me 'you can't do that.' So I probably have my own mind block on getting that information.

We just drilled a well in Idaho Falls for a guy named Phil about 3 months ago. He needed 25 gallons a minute to run his sprinkler system. I went through his whole field and he followed me around while I yacked to him about it and how it worked. I found one spot on his property that I felt would produce between 20 and 23 gallons per minute. Then, Phil walked all over his property with my rods and found streams and did the gallon per minute test as well. When he came back to that same spot, he told me he thought it would do 26 gallons per minute. We drilled the well and found that it produced 26 gallons per minute.

Two or three years ago I was ask to drill a well in Teton Valley, Idaho, up on in a subdivision they were putting on top of a mountain. The guy called me and ask, "How much is it going to cost to drill a 1,100 foot well? I sit 900 feet off the valley floor."

I said, "Your elevation above flat ground doesn't necessarily mean you will have to go down further than the valley floor. We could hit water before that." After finding a location I said, "Don't expect to get more than 12-15 gallons a minute." He needed 30 gallons per minute to get permission to build the subdivision. We drilled the hole down 750 feet and he had 12 gallons per minute on the button. Searching for another location I found the same thing. I said, "I think you are throwing your money away. You're never going to find more than 12 gallons per minute on this mountain." We drilled in this second location and
we got 14 gallons per minute. This guy was beside himself and didn't know what
to do as he'd already invested all his money in this project. Asking me what I
thought he should do, I suggested he call Jim in Pocatello. "He's going to charge
you to come up and find your well but who knows, maybe he will come up with
something more than what I've found." Jim came up and marched all over the
mountain and found a convergence of several streams.

Then he stated, "You can't get 30 gallons per minute but you should be able
to get 29-29.5 gallons per minute, but it's going to be right on the edge." Jim
said we'd start into the water at 540 feet down and would pick up more water
until we got down to 690 feet. Then after that, he said, we wouldn't find any
more water so we might as well stop at 700 feet. We laughed and thought that
was pretty funny. When drilling the well, we struck water at 536 feet. The last
zone of water we encountered was at 689 feet down and went out of that right
into some really hard rock where we stopped. We lowered a pump down into the
well and found that it pumped 29.5 gallons per minute, close enough to 30 gpm.
Jim did perfectly on that one but on other jobs down in Pocatello he blew them
all. But on that hill in Teton Valley I stood there with my mouth open in
amazement. He wrote it all down on a paper of what we could expect before the
hole was ever drilled. If you look at our lithologic log compared to his pre-hole
estimate of the site, they both match each other almost perfectly. Jim used brass
rods to locate the water, then he walked off in a line from that location and when
the rods crossed again he measured the distance between the two points and
that gave him his depth. I've never seen it done this way before.

After I find a location, I'll mark the exact spot with a wooden stake. When
my helper with the truck comes, he finds my stake with the word 'well' written
on it, pulls the rig right over the top of that stake and drills the well.

I think anyone who is open minded enough to give it a chance can do this. I
drill 150 wells a year. I use my brass rods on about 50 of them. Out of those 50
wells a year we have been drilling since 1977, we always, always give the
customer, if he's on site, the opportunity to play with the rods. So, figure 20
people per year have picked up my rods and have played with them over the last
20 years. That's 400 people. Out of those people, there's been maybe 10 people
who couldn't do it. And each of those people had a huge mental block against it.
It was nothing but a bunch of hooey to them and they wouldn't permit their body
to tune into it.

When it comes to finding water in this way, I don't think I'm special. I've
been playing with it since I was a kid. Anyone with a good attitude about it and a
pair of coat hangers can find water. You can't sit there and say, "This is never
going to work. This is stupid, this is hokey, it'll never work." Guess what! If you
think that way, it won't. This is one place where the axiom, "Whether you think
you can or you think you can't, you're right," bears true. But if you think, "I want
to drill a well. They cost $5,000 and I want to make sure there's water. Let's try
this. It'll work." And boom, it's going to work.

Rod Hendricks
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**How To Find Water With Rods:**

Take two brass rods 3 feet long. The diameter may be as small as a 12 gauge wire or about the same diameter wire as a stiff clothes hanger all the way up to a 1/4 inch diameter rod. Bend the last four inches on one side of each rod at a 90 degree angle so the rod forms an "L." In each hand, hold the short leg of each rod, keeping this part of the rod as vertical as possible with the long part of the rod on the top of the hand. If you are doing this correctly the long end of the rod should be running parallel with flat ground.

Now, go outside. Using your mind to form a picture of what you are seeking, slowly walk back and forth over the known object and observe the rods crossing and uncrossing. Outside your house there should be several things you can concentrate on - your water line, sewer line, natural gas line or underground electrical line. When you feel comfortable with this, try going out into an open area where you don't know where things are and try finding veins of water. I can only expect you will be as amazed as I was with this most interesting wonder.

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Water. We can’t live without it. It's been a main focal point throughout history. Today, most of us in North America take water for granted. But in the history of the world this is a recent phenomenon. Until recently, if you wanted water you had to go out and get your own.

A hundred years ago and before, several methods were used to get water. The ideal solution was to build your house beside a stream. People also caught the rain water running off the roof or sometimes they hauled it in barrels from a nearby stream. Occasionally, they dammed creeks and dug canals to bring water to their homes and farms, and when time permitted, they dug a well.

Even if there was a creek or lake in the immediate vicinity of their homes, the old timers often dug a well anyway. This might not make too much sense today, as they had water right there where they could fill their buckets. But even in those early days they had to be concerned with water contamination and having safe water to drink. The old timers used the earth between their well and the water source as a filter of sorts. First, only a shallow well was necessary as the water from the stream or lake would seep through the rocks and earth to fill the well. Often, although usually not true today, this was all that was needed to insure their water was safe to drink.

A hundred and fifty years ago when a homesteader wanted a well, he had to dig it by hand. The space required for digging it required that the diameter of the well be quite large so the well digger would have room to maneuver with his pick, a short handled shovel and a heavy steel bar.

For homesteaders that weren’t lucky enough to have a piece of land bordering a stream, a well became much more important. Without a well they were required to haul the water, sometimes over long distances in a horse drawn wagon. Usually, when the homestead was first moved onto, they’d haul their water. But every spare moment was spent digging a well, eagerly awaiting that exciting last swing of the pick that would often send a flood of water filling the bottom
of the well. This process could take weeks, and if there were layers of rock, months, in their downward search to find the water table. Always, it was a joyous occasion when their well became active and they could discontinue the long treks to the nearest creek or river to fill their barrels.

Yes, a well was truly a luxury, something to be sought after. But there was still a lot of work involved getting the water out of the well. Many families had the traditional windlass under a small roof over the well’s opening. But there were also many other systems rigged up by early pioneers to get the water to the surface. Some simply had a bucket on the end of a rope that had to be pulled up. Other wells had a large wooden beam over the top of the well opening, with a cable going from the bucket, up through a pulley on the beam, then the cable was hooked to the harness of a horse or mule which pulled the water up in a very large bucket. When they could afford it, farmers, bought a windmill which drove a water pump, dumping the water into a trough. But a bucket was always kept handy for those days when the wind didn’t blow. Often, between uses, the top of the well was covered with boards to prevent children, pets and foreign debris from falling in the well.

Digging a well was amazingly difficult work fraught with danger if not done correctly. More than one well digger has lost his life from the side walls of the well caving in on him. Most of us today, when we think of an old, hand dug well, think of a neat, round well shaft lined with brick. Interestingly enough, in the early days this rather expensive method wasn’t the standard way well walls were reinforced. The typical well shaft of 150 years ago was square, rather than being round. And instead of bricks, the walls of the well were reinforced with rough boards commonly referred to as curbing.

Digging the first few feet were always the easiest with the dirt and rocks thrown out of the well by the person digging it. But just as soon as the well got a little depth to it, well digging became at least a two man job with an additional person on top. His job was to raise the bucket filled with dirt, empty it, and lower it back down into the well. The person in the bottom of the well used a pick, shovel, and sometimes a long, heavy steel rod maybe 6 feet long. The rod was thrust down into the ground, breaking up the rocks, clay and gravel. Then he’d fill the bucket, give a shout, and the bucket would ascend yet again. The person on top not only hauled the earth up but he also lowered the boards, nails and hammer into the well. After digging down another two feet, the person in the bottom of the well would stop digging. Using the boards lowered down to him, he’d box the walls in preventing a cave-in. This was necessary throughout the length of the well shaft except where it passed
Digging A Well By Hand

through especially hard earth or rocks where there was no worry about the walls giving way. Often they hit layers of rock. If they couldn’t be easily broken up with the steel bar or pick, holes were drilled into the rock. These self reliant peoples often made the bits for the rock drilling themselves on their personal forges. Dynamite was inserted in the holes and the rock was blasted away. Yes, digging a well could end up being quite the project!!! But finally, if they kept digging long enough, the long awaited payoff came. Water! And if they were extremely lucky they might even find an artesian well whose water would flow to the surface and run out the top. But this didn’t happen very often. If they were unlucky, they might find the new-found water was unfit for drinking. It was always possible for it to be red with rust from iron rich earth, have so much sulfur that it smelled like rotten eggs or some other mineral that made it unfit for anything but maybe watering the garden.

It seemed the work was never done on the well, even after it was put into operation. At least once a year someone had to go down into the well and clean it out. The wind blew leaves, insects and everything imaginable down into the well which often contaminated it. Unless the water was too far down, mice, frogs and snakes could smell the water and fall in resulting in coliform bacteria getting into the water. Usually, one of the children got saddled with the annual clean-up job. This was really a dirty job. By now, the boards near the water were covered with moss and algae, slick and slimy. He’d clean this off the best he could and send up buckets of mud. Every five years or so, someone else had to go down and replace the rotting boards. The rotting wood formed tannic acid that made the water unpleasant to drink. If they waited too long to do this, the side boards could break and permit a cave-in meaning the well had to be dug back out. This created a lot of unnecessary work that could be avoided with a little vigilance and prevent the temporary loss of their water supply.

Those old wells often doubled as refrigerators in the old days. Milk, cream, butter, and anything they wanted to keep cool were often lowered down into the coolness of the well shaft.

The hand-dug wells of yesteryear are mostly gone now. Gone also are many of the really difficult times that came with taming a new land. Modern wells can now be drilled with rigs that can progress at a rate of hundreds of feet on a good day. An electric pump is then lowered down the steel casing into the water and the top of the well is capped and sealed to prevent anything from ever getting into the well and contaminating it. Like most things in our times, digging a well has changed dramatically.

We are looking for a couple of old-time wells to feature on this page. If you have or know of an old well that’s still in use and would like to see it showcased here, please just let us know.

Thanks, Al
A little water well story about my grandpa as told by my mom...

"...I spent the first years of my life on a tiny little homestead in the mountains of Idaho during the Great Depression. Our tiny farm produced little and what could be grown, because of the depression, couldn’t be sold for enough to do anything with. Usually, there was precious little to eat. Daddy used to call the place 'Poverty Flats.' As a little girl, our suppers usually consisted of home made bread and milk. Sometimes, Mother would let us sprinkle a little sugar over the top of the bread. We put it in our glass and that was our supper every night. It was good and we loved it. We didn’t have any other food. Not willing to see his little family eat nothing but bread and milk, Daddy went up into the mountains and shot a moose out of season then hung it up in the barn.

"Once a car came along the road that passed 1/4 mile from our house. It stopped and a man got out to open the fence to drive in. Daddy was petrified it might be federal officers. He ran to the barn, unhooked the moose hanging there and lowered it down the well. We knew they’d never look there. The car ended up being some of the neighbors who had come for something. After they left, we took the moose out of the well and put it back in the barn. I have bright childhood memories of a huge moose roast sitting on an otherwise scantily set table. We never wasted a thing..."

Links to a couple of interesting pages I found on the web:

How one guy recently manually drilled a [20 foot well](http://waltonfeed.com/old/well.html) in his garden.

A [hand powered percussion drill](http://waltonfeed.com/old/well.html).

The [Modified Chicago Method](http://waltonfeed.com/old/well.html).

Ground Water Wells for School Children from the [US Geological Survey](http://waltonfeed.com/old/well.html).

[LifeWater Canada](http://waltonfeed.com/old/well.html); a humanitarian well drilling project.

A [really interesting story](http://waltonfeed.com/old/well.html) of an old timer who accidentally fell into a 140 foot abandoned well and how he got out.

[The world's largest hand dug well](http://waltonfeed.com/old/well.html) at Greensburg, Kansas.

References:

Rob Hendricks, Blackfoot, Idaho

Bill Hogenson, Stirling, Alberta

Bob Harker: Blackfoot, Idaho

My mom
Memories, by Libby Maxwell

This short story is filled with bygone ways of doing things, written by a lady who remembers these days fondly.

Story written by Libby Maxwell
Algood, Tennessee
Born 1928

In 1903 my newly-wed grandparents lived in the country. They had received from their parents a few items to help them "set up housekeeping," as it was called. For them their own survival was dependant on farming, gardening, and animal-tending.

As 6 children came along, my grandparents had to be real good managers, as well as being thrifty. Nothing was to be wasted.

Each child was trained to be responsible by helping with any chores befitting their ages. They scrubbed "plank" floors with lye, and tended to the children who were younger than they. There was no tolerance of laziness.

The family not only was very industrious, but did a lot of 'recycling" -a familiar term used today.

One of the daughters, my mother, (born in 1907) told of the many ways they managed, and of the pride instilled in her and the will to create other uses of their aged-possessions. This remained with her until her death, at age 87.

She told of quilts, hand-piece from their old garments, and then either quilted or "tacked" by weaving the needle through each block, with the thread ends remaining on top and being tied off. (We might think of the appearance as "tufted" threads).

The old material from the men's clothing was heavy and dark-colored, being
Memories, by Libby Maxwell

mostly greys, dark blues, and blacks. These made such heavy quilts that it was difficult to reposition one's body when under these covers.

The daughters were aware of their "drab" appearance, and for face powder, would dust their faces with flour. As mother recalled this, she thought it must have looked freakish.

The "duster" (powder-puff) was made from mole skins. The dead moles were skinned; the skins scrubbed with potash & salt. Much later this was removed and powdered sulfur & salt was rubbed into the skins. This was stretched onto a hand-made frame and dried - resulting in a powder-puff.

Crepe paper was being generally used for making paper flowers for the deceased or home decorating. If my mother and her sisters could get a piece of the red, it was moistened and rubbed on the lips and cheeks, as a cosmetic.

Chickens, eggs, and garden produce was exchanged at the country store for items needed by the family. Now, by looking through the old, early 1900's Sears and Roebuck catalog, one can find the variety of supplies were pretty substantial.

One of the needs was shoes for the family. Each child got 2 pairs a year - a summer pair and a winter pair. Those new shoes were for special occasions, which meant mostly school and church-going. They walked bare-foot to school until cold weather, but all rode in a long-bed wagon to church. They couldn't wear the shoes until in sight of the church, and had to remove them when they were re-loaded in the wagon. This care was to preserve the shoes from "scuffing."

Shoe polish was a mixture of lard and soot removed from the underneath side of the cook stove caps. Mother said that every speck of dust clung to the shoe-polished surface and looked terrible. But they were forced to polish them by the parents, hoping to preserve the leather.

Brooms and mops were treasured. The handles were hewn from small sapling trees, and whittled until smooth. The broom-head was wheat sheaves or crushed corn stalks; trimmed to a desired length and tied to the handle. The mop heads
were usually made from old worn clothing, cut into strips and tied to a handle. These lasted surprisingly well, mother said.

Occasionally, the boys were allowed to have an old "handle" to ride as a stick horse. That was a sought-after toy. If they didn't have a stick horse, they rode the rail fence, which was the only type fencing material in their area.

You might consider some of the ideas for entertainment to be "brain storms," as they did have to create their play. In the summer the girls' play houses were under shade trees. Moss was plentiful and they used it in their "houses." Sticks were positioned to resemble partitioned rooms and the moss was placed for their dolls to sit on. These were rag dolls, made by my grandmother, or one of the older daughters. Their balls were made by stuffing an old sock with discarded clothing.

This play-time included mud pies, with the mud being placed in old, worn one piece canning lids, dried in the sun, emptied from the lids and used for whatever the need was. Toy dishes were pieces of broken glass, tree leaves, and bark, with ideas, seemingly, plentiful.

Most of the farm homes had an unfinished attic in which one could stand erect. The access to it at my grandparents' home was by ladder-like steps nailed to the wall and going up from the kitchen. The kitchen had only the bare necessities, some of which today are treasured antiques. There was a "pie safe" with inlaid tins on the front doors; a cook stove; a flour and meal bin; a water-stand to hold a hand washing vessel and the water bucket with a dipper. There was a long dining table with benches on each side for seating. Most of the dishes were kept in the pie safe, or a setting for a meal was left on the table and covered by a cloth. A handmade table held two large dishpans, one for washing dishes and the other for rinsing them.

Depending upon where your residence was, water was either carried from a cold-water spring, or drawn from a well. During warmer weather, if a "spring" was accessible, the perishables were put into containers, and placed on rocks that were in the water. These containers were lard "stands" (buckets), syrup buckets, etc. with lids. Water was carried from this spring, along with the perishables when needed, usually at meal times.
During the cold weather, if the temperatures dipped to below freeezing, various foods were placed outside. Mother could remember the drinking water inside the water-bucket freezing. The kitchen was always cold in the winter-time. The only heat was from the cook stove, with the other rooms having fireplaces. These also gave off very little heat, unless you stood in front of them. My grandmother made all their clothes, and would sew at night, by fireplace light, or by lamplight, with my mother holding the oil lamp near the sewing.

I mentioned the dining table, which was placed in the center of the long kitchen. A very strange thing occurred involving this table. A pet female cat had gotten into the attic somehow, and gave birth to her kittens. One of them died and the mother cat chose to bring it down during one of our mealtimes. About half-way down the ladder-stairs, she jumped, landing in the middle of the table with the deceased kitten still in her mouth. It was a startling event for the family.

All surrounding family dwellings had the "outhouse" landmark. It was used in conjunction with the night time bedside "potty." With a large family, the members had supervision of using both the outhouse and potty, depending upon the urgency of the need. My grandparents outhouse was a 2-seater. Mother could recall that at times when she and a sister were occupying it, her brothers would make weird noises, forcing the scared girls to vacate their "perches." This was later a cause for laughter.

Not only did my grandmother preserve her produce by canning it, but she also dried vegetables. Green beans were fastened onto string then bunched, and hung in the attic to dry. They were called "leather britches." When needed they were re-hydrated by soaking until plump, then cooked.

My uncle, at about the age of 17, began to possum hunt. He had a large, brown wooly dog, named "Boy" who went along to "tree" the possums. This night time hunting would yield as many as six or more. They were treasured for their skins. My uncle had made wooden frames that resembled small ironing boards. After cleaning the skins, he stretched them on the boards to dry and cure. The skins were sold for enough to keep my uncle in pocket money. I've often wondered what the purchaser did with them.
Wherever my grandparents lived, an underground storm cellar was dug. Sometimes the above ground part looked like a World War II pill box. This not only functioned as a storm shelter, but also for storage of root vegetables, canned goods and apples. This was after they moved to a location that had no cold "spring water" for storage. They gradually had more conveniences, but still practiced frugality and management.

The entire family was taught to be self-reliant - a trait that's gone by the wayside mostly. This trait was so instilled in my mother, that she practiced and taught it to my brother and I. I attempted to teach this to my son, but "city-life" was without the necessary hardships endured by my mother, and there wasn't the same training needed. I'm much more self-reliant than my son - and as the generations progress there is less and less self-sufficiency. IF BLAME IS DUE, TO WHOM OR WHAT?

I enjoyed writing this little story,
Libby Maxwell.
The first homes of the early settlers were log cabins. Saw mills soon followed, with the next generation of homes being made of crude sawed lumber. The two homes on this page come from this time - around the turn of the century. They were tiny by today's standards, and were often uninsulated, unpainted, and very modestly furnished. Usually, the only source of heat was the kitchen stove which was kept going both winter and summer as it was also how they cooked. They put off a lot of heat which was sometimes good - and sometimes bad. Hopefully the following stories will give you a small hint of what it was like to live in those times - or fond memories for the rest of you.

Homestead Home in the Mountains of Southeastern Idaho

As told by: Isabel Walker (born 1919) and Walter Durtschi (born 1921)
© by Al Durtschi

Alfred Durtschi (my grandpa, the top photo on the home page) built his house, then in 1915, he rode his horse 90 miles to the nearest railroad station where he caught the train to Salt Lake City to find a wife. This was a large and modern house for the time and area, about 30 feet long and 15 feet wide. There was a bedroom and kitchen downstairs. Upstairs were two tiny bedrooms with
slanted ceilings for when the children would be born. Ingeniously, it was insulated with saw-dust. Steep narrow stairs led to the upstairs. There was no railing on the second floor. It was a miracle no children ever fell through it in the dark.

After the children were born, Arnold and Walt had the bedroom at the top of the stairs. A wall in the center of the room separated their bedroom from a smaller room their sisters slept. In each room was a bed the children shared.

During the winters everyone huddled around the wood burning kitchen stove, the only source of heat. Before bedtime the kids got out their peach pits, and put them in the stove to heat. Sometimes Arnold heated a big rock. Then a few moments before bedtime the door to the upstairs was opened to let a bit of heat up to the bedrooms. After evening prayers the peach pits were put into bags and the children flew up the stairs, ripped off their clothes and jumped into bed with their warm bags. After the fire went out downstairs it was just as cold as if they had been outside. Inside the beds the children were kept warm by the thick wool quilts their mother had made. Outside the bed, frost formed on the tops of the blankets.

In the mornings the children scrambled to escape the cold. They jumped into their clothes and dashed down to the kitchen to a warm fire their father had built in the kitchen stove before he went out to do chores. After warming up, they each took their turns hurrying out to the two hole outhouse just west of the house. The kids remembered these mad dashes in the middle of the winter as absolutely horrible. Some of those mornings when the air was moist it seemed like they got froze to the seat.

Then the children took turns doing the chores before they went to school. The cows had to be milked, and water was fetched 120 yards from the creek running behind the house. And the chamber pot had to be emptied in the outhouse, then washed out in the creek. The chamber pot stayed under the girls bed upstairs. It was passed around a certain amount but it's normal resting place was in the girls room. On wash days the children helped their mother wash in her new washing machine powered by a gasoline engine.

Baths were taken in a small metal bath tub in the kitchen. After the big job of heating the water on the stove, the same water was used by everyone. The smallest children were bathed first, followed by the older children, then the parents. When the kid’s dad, Alfred, undressed, the girls turned their backs until he was in the tub. When everyone was finished, he took the tub outside and threw the soapy water on the snow or grass.

When the Westons first came to America, Otto stayed with the family three or four years and slept upstairs with the boys. Once when Otto was in bed a bat flew in the open window. As he flew around, Otto moved fast getting under the covers. Bats always flew around, with Arnold and Walt not paying any attention to them.
The Christmas tree was decorated with candles which were lit three or four times during the holidays. The family spent Christmas Eve at their Aunt Elizabeth's. After the two families had visited for a while, Alfred always said he had to go out and hold Santa Claus's reindeer. Soon, a knock came on the west window. With excitement, the children looked out the window as Santa's robust face shone in. The children were always afraid of Santa Claus. Santa masked his voice, and talked in a high pitch. Alfred’s children never figured out it was him. Santa brought the Christmas presents as well as candy, nuts, and sometimes an orange. Then they sang songs and ate home-made Ice cream.

Homestead Home on the plains of Southern Alberta

As told by Glenn Adamson (born 1915)
© by Al Durtschi

Our house was a mile east of town. It was a small house about 18 feet by 30 feet with two rooms on the ground floor and two bed rooms for the kids upstairs. The upstairs room’s ceilings were slanted like the steep roof above them. Then perhaps four feet from the floor, the slanting ceilings changed into a vertical wall. These walls were set in about three feet from the main outside walls of the house. This was because the floor of the upper level was even with the outer gables.

There were no stairs in the house, and in order for us to get upstairs, we had to go out side, around to the end of the house and up a ladder that leaned up against the 2nd story door. The upstairs bedroom was lath and plastered with a window in the west end. Claude and Lewis, and now I also slept in the only bed in this little room. I generally had to sleep in the middle. For a mattress we had a straw tick. When the tick straw got pounded up too much we'd put new straw in so we had a fairly comfortable bed.

There was an old stove pipe hole in the floor between the upstairs bedroom and the kitchen. In the winter a very small amount of heat came up through this hole, but the room was mostly cold. One day I was downstairs and noticed the cat ready to pounce down through this hole. Before I could catch it, the cat jumped down onto the hot kitchen stove and burned it's feet. It moved quick getting off that stove. Through this hole we also heard our dad calling every morning, "Come on, get up and hear the birds singing." This was his way of waking us up in the morning. For light in
this little upstairs bedroom we had kerosene lanterns. We didn't spend much time up in our little bedroom except to sleep. Once in a while we went up there in the summer time when it was warm to get away from everything. But not during the winters. It was too cold.

There was a small bedroom downstairs. The other room was the main living quarters. In this room was the kitchen and was also the dining and living area. We called it the kitchen. The walls were painted with a cream colored calcimine, a type of paint. On the partition wall separating the two rooms was a black cook range which burned coal or wood. We usually burned coal in it which we mined ourselves on the river bottom. Our stove had a water reservoir on one side of it. We had to fill this with a bucket, and get it out with a dipper. On the other side of the wall was the bedroom. It had a small round heater which connected into the same brick chimney as the cook stove. The chimney was built into the wall. Next to these two stoves was a doorway into the bedroom.

The kitchen was a fairly large for it's time. An outside door was on the south wall in the southeast corner. There was a small landing or step just outside the kitchen door about one step above the ground. Next to the door was a washstand for washing our hands and faces. Above it was a small cupboard where we kept our towels. When we finished washing, we opened up the door and threw out the dirty water. When we wanted water we poured it out of the bucket which was kept on the side of the wash stand. If we wanted hot water, we took it out of the stove reservoir. When we wanted more water we had to go outside to the cistern with the bucket and get it.

Next to the wash stand on the south wall was a hide-a-bed that went up against the wall when not in use. When the bed was put away it looked like a big cupboard. Dad slept in the hide-a-bed whenever he was home. My sisters more or less claimed the bedroom and that was where they slept. Some of us kids sometimes slept on the hide-a-bed with Dad, but us boys usually slept upstairs. In the center of the room was a table about five feet square.

When I first saw this table, I noticed a deep crease in the top. When I asked what it was, my family pointed to a hole in the window frame of the double wide window in the west wall. It seems some years before Ray was standing back from the table with a 22 rifle. Fooling around with it, he didn't realize it was loaded. The gun went off, and the bullet glanced off the top of the table. After it had dug the little ditch in the top of the table, it imbedded itself in the window frame. Jenny happened to be sitting in a chair leaning back against the wall next to this window. Her head was just 4 or 5 inches from where this bullet imbedded itself.

Between the double window and the table was a home made three seat bench. There were other chairs here and there around the table. At night the table was moved back to make room for the lowering of the hide-a-bed. Sometimes when more people were at home, we'd even set up some bed springs on blocks. This was placed against the north wall of the kitchen next to the table. When not in use, the bed springs were stored outside in the coal shed. On the north wall toward the east end of the room was another window. Beyond the window was a narrow cupboard. This was next to the door to the bedroom. In this cupboard we kept the china plates and other utensils we used every
day. Our dirty dishes were washed on the table in a wash pan, then dried with a hand towel and put back in the cupboard. The room was full, yet it wasn't so cluttered we couldn't get around.
...I was five or six years old when we got electricity put in the house. I had the measles, chicken pox, or something and was upstairs in bed. And while I laid there thinking about how miserable I was, a stranger came up the stairs and started drilling holes in the floor, and wall between the bedrooms. Then he pulled some wires up through the hole from the downstairs into my bedroom where I was.

It wasn't long before he had a wire running through the wall into the girls bedroom, and one stapled up the wall and ceiling where he left three feet of it swinging in the center of Arnold's and my room. Soon he also had a wire dangling in the center of my sisters bedroom. Then he went downstairs, only to return a few minutes later with some metal things he called `sockets.' He connected one of them to the end of each dangling wire in the bedrooms then pulled a white glass thing he called a `light bulb' out of his pocket and screwed it into the metal thing.

All the while I watched this with the greatest interest. By now, I was not alone. My sister, Isabel, was paying quite a lot of attention to the activity in her room as well. When the man was finished, a `light bulb' hung in the center of each of our rooms with a chain and string dangling from each of them. By the time he went downstairs for the last time I had completely forgotten how sick I was. In fact, I wasn't even in bed.

Of course, we had to play with the pull cords some, even before they turned on the electricity. We pulled the cord very carefully at first. Would we ever be in trouble if we broke these things! It was fun just listening to the switching sound it made as we gently pulled down on the cord, time and again.
Then, later, when they actually turned on the electricity to the house, we really had fun turning our lights on and off. I tell you, we gave those pull cords a real work-out the first couple of days! But the real exciting thing didn't happen until the sun went down. As it started getting dark outside, inside it stayed almost as light as it was during the day. It didn't get dark inside! We couldn't believe it. There was absolutely no comparison between how much light a coal oil lamp gave out and our new light bulb. Before, when it got dark outside, we were in the dark inside. But not any more! We would never have to be in the dark again. Of course, it didn't take long for us to put away our suddenly antique oil lamps, for a new day had dawned.

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Home Page: http://waltonfeed.com/

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Revised: 2 May 96
Getting Water for the House

As told By Isabel Walker (born 1919)
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When we were young, we got all of the water for the house out of the little creek running behind the house. In the winter time we often had to break through the ice. This chore fell to us children and was a task we quickly grew tired of. Unless we needed a lot of water for wash day or some other special purpose, we generally got water in a tea kettle. It was kept on the stove and was also a source of hot water. We also had a reservoir on the stove which heated the water. We carried water for everything. On wash day we carried water until we were tired! Momma washed cloths on a scrub board in a wash tub. She put the boiler on the stove and boiled the whites until they were glistening. Then she rinsed them. Those clothes got sanitized!

On one occasion, Arnold was sent to the creek to fill the tea kettle. He was out of sorts about something and while he came back up the trail some water splashed on him which made him more upset. He dropped the kettle and kicked it all over the pasture. He had that thing bent every way that it was possible to bend it. Papa happened to be standing at the corner of the barn and saw it all. Perhaps I shouldn't mention what happened next. We didn't have the means to get another tea kettle so even though it was all bent up we still used it. It was a sad looking thing sitting up there on the stove.

Something that was even better than the new electric lights happened when we got water in the house about the same time. A well was dug by hand 30 feet deep. At 28 feet they found water and went down two more feet for good measure. Papa put an electric water pump in it. Then we ran a water pipe out of the well, up the outside wall of the house, then through the wall to a sink Papa put in the kitchen. He then put a faucet on the end. Our first running water consisted of a faucet sticking through the wall over the sink. There was no more going to the creek every time we needed water! This was true luxury. Of course there wasn't any hot running water. This thought wouldn't cross our minds for several years yet. Nor would the idea of an indoor bathroom. It was also years before we didn't have to take our waste water out and throw it on the ground or the garden. But to us kids who had the job of hauling water from the creek, it was a miracle to see the water running out of the tap.
## Our Pioneers' Way of Life

**How Our Ancestors Lived**

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