A Beginners Guide to

Home Canning & Food Preserving

Recipes Jams Marmalades Jellies Chutneys Relishes Plus More...

Mel Jeffreys

A Beginners Guide to Home Canning & Food Preserving: Recipes, Jams, Marmalades, Jellies, Chutneys, Relishes Plus More…

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Preface

It is an undeniable pleasure for the modern individual to look at the work accomplished by his or her own hands with a sense of pride and ownership. While humans will no longer generally starve to death if we don't preserve food at home (as we once would have done) we still enjoy the self-reliance that doing so brings.

Also, with the wide variety of food-borne illnesses, allergies, and intolerances, knowing exactly what is in our food, and how it was grown and

prepared, gives many a peace of mind that is unquantifiable.

With the author's personal experience combined with that of other experienced home canners (for lack of a better term!) we bring to you over one hundred years of knowledge, wisdom, and insight. This information combined with up to date equipment and methodology data will be of great service to both the novice and experienced food preservationist.

The appeal of a back-to-nature movement or even economic strife can open a person up to developing forgotten skills. For these folks and the run of the mill home economist alike, preserving

food in the home can bring about a great sense of security.

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Introduction

Whether you are new to food preservation in the home, or are an old hand at it, this book will serve you well. The short history of the subject may provide a greater understanding of how various methods came to be used. *Food safety, our highest priority, is also addressed early in the book.*

Sources for tools, equipment, and food may introduce you to a new shop, or motivate you to explore your nearest farmers market. You may also decide to start a small container garden, or expand

what you already have.

Additional information, such as adjustments for altitude and how to decide which method is right for you and the end product you wish to achieve is also provided in the first sections of this book. The tables provided assume you are at or near sea level. If this is not so, be sure to follow the recommended changes noted so that you and your preserved food remain safe.

As with any science and what is cooking if not a science? New discoveries may show a need to adjust a process or recipe. Whether you are a novice who just planted his or her first tomatoes in

an old wine cask out on the balcony, or an experienced homesteader with antique Mason jars, it is important to keep abreast of new information regarding food safety. *You might also find a new recipe to try out.*

When the work is done, and tools are cleaned and put away for the next year's harvest, you can look upon your work with a well-deserved sense of accomplishment.

History of Food Preservation

The need for food preservation has existed for as long as people have. It has not, however, always been as foolproof as the options available today. To be sure, the road to developing safe, predictable methods of preserving foods is littered with illness, worthless food, and even death. Thankfully, we get to reap the knowledge learned in the past. And if we use this information wisely, we can avoid repeating those mistakes.

Most areas of our world cannot be harvested all year. Nor is it wise to hunt all year even if your chosen prey is available. So, how do we feed ourselves in the "off-season"? We must prepare for these times, as they are most certainly coming. Food planning became more than going over the hill to see if the berry bushes were ripe yet.

Over time people developed ways of preserving food.

Dehydration, it was found, eliminated the moisture content of meats, fruits, herbs, and vegetables. This moisture was, in part, the cause of these foods to rot. Thinly sliced and hung or laid out in

the sun to dry was the simplest means of food preservation.

Salting, brining, and smoking followed. All of these methods were inexpensive and simple enough that each household was able to care for its own needs.

As science progressed, bacteria and enzymes, and their effects on foods were discovered; preventions were learned. If food was brought up to a certain temperature, and then sealed in air and moisture resistant containers, removing any air in the container during the process, it could be stored for great periods of time. “Canning,” as this convenience was known, was invented.

Following World War II, as the electrical grid came to even the furthest out-lying farms and ranches, and prices for various metals came down with the increase of industrialization, freezing food became a reliable method of food preservation.

Although the canning process is the most labor intensive procedure, all methods promote a sense of pride, accomplishment, and self-reliance. There's nothing like opening the pantry or freezer door on a frigid winter's day, where the snow – already up to the window sills – is coming down so hard you can't see your mailbox, and finding row upon row of neatly labeled produce

and meats and remembering once again that if the world ended outside your door, your family would still eat well.

Definition of Preservation Methods

Canning – Processing food in airtight containers for preservation. This process uses containers made of aluminum, tin, or glass. Hot food is packed into the container and sealed either under pressure or a boiling water bath.

Dehydration – Simply put, removing the water from food products for preservation. In early history, food was thinly sliced and placed on flat rocks in

the sun to dry. Later, as people became less nomadic, racks were built for hanging long, thin slices of meat, think of jerky.

Commercially purchased dehydrators utilize mesh screens for racks, and electric fans to continually pull air across the food. The mesh screens allow the air to reach both sides of the food, while the fan speeds the process. Bacteria must have moisture to grow and multiply. Eliminating the moisture in food eliminates the bacteria that cause spoilage.

Example of a dehydrator available can be found at amazon.com: Waring DHR30

Professional Dehydrator

Dry-Salting – This process draws moisture from food using a great deal of salt. This moisture dissolves the salt into brine, which inhibits the growth of micro-organisms. Only small or thin foods can be preserved this way. Small fish are often preserved in this manner. Done properly, fish can then be refrigerated for as long as two years.

Fermentation – Although very similar to brining, fermentation requires very exacting measurements of salt, vinegar, and temperature. Caused by benign micro-organisms interacting with salt brine, they convert vegetable sugars into

acids.

Dill pickles are made in this method, which can take three to six weeks to prepare. If processed (using pressure canning) following the fermentation period, these foods can be kept indefinitely.

Freezing – Placing protected food in an environment that keeps it at 0°F [-18°C]. This method of food preservation is the easiest. It also keeps most foods closest to their original form. Not including the original investment in the actual appliance, freezing is a very economical way of preserving food. A quick blanch to halt enzyme production, and

protection from the frigid, dry air is all that is required in preparation.

Jelling – Preserving with sugar seems to be a contradiction in terms. It is true that micro-organisms thrive on weak sugar solution. In a strong concentration sugar has a dehydrating effect, similar to that of salt, inhibiting the development of micro-organisms.

When pectin is added, the fruit being preserved gels, or jellies. Jellies, jams, marmalades, and preserves are all made with similar processes. They are then put in sterile containers, sealed with paraffin, and stored in a cool, dry environment. Only fruit butters, cheeses,

and preserves of whole fruit pieces should instead be water bath processed.

Irradiation – Although not available to the in-home food preserver, this method of preservation is being utilized more frequently as the technology improves. In its simplest definition, food is exposed to a dose of ionizing radiation.

The dose of radiation and time of exposure varies. This process works by damaging the microbe's DNA in such a way as it is unable to repair it. When this occurs, the microbe cannot mature, nor can it process cell division, its method of reproduction. If the dosage is high enough, the microbe is killed

outright.

Although the food itself cannot become radioactive (the particles transmitting the radiation are not themselves radioactive), and this method of food preservation is used in more than fifty countries worldwide, because of its association with the nuclear industry, some people in the USA still find food irradiation to be controversial.

Pickling – Also called brining, this method infuses wonderful flavors into the food being preserved. Brine is made, usually containing salt, sugar, and vinegar. Herbs or other flavoring ingredients are added to the brine and

then heated.

The food being preserved is then immersed in the brine. Ice can be used to prevent any fermentation from occurring. Depending on the food being preserved and the amount of flavor to be infused, brining times can be as little as fifteen minutes or as long as months.

Smoking – In the same way dehydration preserves meats, smoking also depletes it of moisture. However, the aroma of the wood smoke is absorbed by the meat, flavoring it in a way that cannot be otherwise duplicated.

From lightly scented maple wood to the heady flavors derived from the smoke of

oak or hickory, the choice of wood is a great consideration for the end product desired. Smoking times can vary from just a few hours to a week or more. Meats preserved this way do require refrigeration. Smoking may also be used in conjunction with salting or brining.

Food Safety

The *whole purpose of preserving food, no matter the process,* is to keep it safe for consumption at a later date. In keeping with this premise, the author advises adherence to all tips and warnings given throughout this book. Infections resulting from bacteria, fungus, or parasites can lead to anything from indigestion to death. These infections and their causes are never to be taken lightly.

According to the *Center for Disease Control and Prevention (CDC)*, in the

United States of America, roughly 48 million people are sickened each year by foodborne pathogen. Of those, 128,000 are hospitalized and 3,000 die. In 2011, the latest information released by the CDC, the most common illnesses were caused by Norovirus, Salmonella, and Campylobacter. Why do foodborne diseases and infections occur, and why are there so many today? These are reasonable questions asked by reasonable individuals and statehoods. The answers are both simple and complex.

Were you aware that Tuberculosis, Typhoid Fever, and Cholera were common foodborne illnesses less than a

century ago? Today we have Hemolytic Uremic Syndrome in children (a type of acute kidney failure) caused by E. coli O157:H7. We also know that Guillain-Barre Syndrome an autoimmune disorder causing weakness in muscles, can be caused by a Campylobacter infection.

Easy transportation allows infectious agents to spread more quickly than in the past. Also, these microbes continue to evolve, changing their characteristics and the symptoms of the illnesses they cause.

Unsafe production methods, environmental impacts, ecological factors, production practices, and even

consumption habits all impact whether a microbe will find its way into our food supply.

Laboratory tests also continue to evolve, allowing the capability to recognize far more infection causing organisms than ever before. Also, the impact of instantaneous world-wide communication should not be discounted.

As scary as this information may be, the best way to avoid causing illness for your family or yourself is ***common sense***. In regards to food preservation, most foodborne illness can be avoided if you:

- Rinse produce under running water, rubbing the entire surface with your clean hands. Soaps or detergents are not necessary; friction of the hands loosens bacteria-holding dirt and grime, and running water washes it away.
- Don’t allow produce to soak. Use colanders or sieves for small foodstuffs, and make sure to keep layers shallow, so that all surfaces of each individual berry, bean, or other food are rinsed as thoroughly as possible.
- Never allow fluid from raw meats to touch, even with miniscule

splatters, any equipment or utensil that will come in contact with fruits or vegetables, or with the fruits or vegetables themselves.

- Sanitize everything that comes in contact with raw meat or its juices.
- When preserving any foodstuffs, always use sanitary practices.
- If sterilized containers or equipment are called for, make sure to sterilize them.
- Keep raw, cooked, processed, and unprocessed foods separate at all times.

The extra steps may seem like a lot of work requiring extra time and energy; however, when compared to the time

required to recover from a foodborne illness, not to mention the cost of possible hospitalization and medication, it is a minor inconvenience at worst.

Food preservation, whether by salting, sugaring, canning, or freezing is the art of killing microbes, or at least keeping them from reproducing to toxic levels.

Refrigerating or freezing food prevents bacteria from growing, preserving them in a state of suspended animation. Unfortunately, there are at least two bacterium that can grow at refrigerator temperatures. High salt, sugar, or acid levels also keep bacteria from growing.

Only heat actually kills the microbes. A

temperature above 160°F [78°C], if held for even just a few seconds, is sufficient to kill parasites, viruses, and bacteria, except for one. The bacteria Clostridium produces a heat-resistant spore that can only be killed at temperatures above boiling. Pressure canning produces the temperature necessary to kill these spores.

The toxins produced by bacteria are not all affected by heat. Therefore it is very important to preserve only good quality foodstuffs. Avoid:

- Bruised fruit
- Split peels or skins
- Evidence of insect attacks

- Nibbles by birds or animals

Make sure all foodstuffs are as fresh as possible, and processed in small, manageable batches as quickly as possible. Processing on the same day as harvested, and handling in a sanitary way, produces the *highest quality preserved foods*. Again, food safety should be your paramount concern when preserving foodstuffs for future use.

Sourcing Tools, Equipment, and Food

Many of the tools used for canning are typical utensils used in daily food preparation. But there are others specific to the various preservation methods. Some are essential; substitutions can be made for others. Should you find you have questions regarding equipment, tools, or procedures, your local Cooperative Extension office may be able to provide answers and alternatives. The services they provide are usually free.

Canning

For water bath canning, a *deep kettle* is needed. Food is heated to boiling, put immediately into clean, hot jars, which are then closed and placed on a *rack* in boiling water deep enough to cover the jar completely plus another inch above the jar. Processing times vary according to the food being preserved. Water temperature is maintained at the boil the entire time.

Pressure canning requires a *pressure canner*. These are heavy pots that have screw-on lids with rubber ring seals, pressure relief regulators and safety valves. While simple enough to operate,

all instructions must be followed closely to avoid under-processed food or an explosion of the pot itself.

You will find that a pressure canner you purchase today will look very much like your grandmother's, as the science itself has not changed since then. There may be more bells and whistles, but the essentials are still the same. You can buy new pressure canners directly from Amazon.com: Presto 01781 23-Quart Pressure Canner and Cooker

Older style pressure canner

The choice between water bath processing and pressure canning is made based on the acidity of the food being preserved. Whichever method is used, a *wire rack* is used in the pot to keep the jars off the bottom. A *wide-mouth funnel* and *ladles* are useful for filling jars with hot food.

Clean rags or *dish towels*, useful for protecting work surfaces and wiping jar rims should be abundantly available. A *jar lifter*, a tool much like a set of tongs but shaped to fit above the jar's shoulder, helps prevent scalding while putting jars into the boiling water as well as when removing them.

Additional racks are used to set the processed jars on during the cool down time. These racks allow the room temperature air to touch the jar's entire surface. A *regular set of tongs* will be useful for removing lids from water simmering in a shallow pan. Of course, *jars, lids, rings*, or *jars* that use *rubber rings* and *bails* are essential.

All of these items can be found in local hardware, discount, or department stores. Some smaller stores may stock them only in the summer and fall, during the harvest seasons. Replacement seals (rubber rings) for pressure canners are also stocked, and you should probably keep a spare on hand. If you have

difficulty locating any of these items, the Cooperative Extension office should be of help.

Dehydration

Although very useful if you will be dehydrating large quantities of food, a commercially purchased *dehydrator* is not necessary. But if you are planning to purchase one, look for a quality appliance. The fan should be positioned so that all the racks receive air movement equally.

Racks should be mesh that can be easily cleaned, framed in a sturdy fashion. Proper spacing between the racks should allow air to flow easily. The longer it

takes for the air to dry the food, the higher the risk of microbial growth. A small *toaster oven* or your home's regular *oven* can also be used for some items. Herbs can be gathered, tied with twine, and hung in a spot out of direct sunlight to dry.

Dry Salting

Although this method is one that requires a lot of time, the end result is worth every bit of it, especially if you are an anchovy aficionado. All that is required is a *shallow dish*, an abundance of *coarse salt*, some *sterile canning jars*, a *spoon* for skimming the surface, and *refrigeration*. Coarse salt can be

purchased in grocery stores or wherever canning supplies are sold.

Fermentation

Like dry salting, fermentation is a lengthy process. Vegetables are mixed with a high concentration of *pickling* or *coarse kosher salt*, packed into a sterile *crock*, covered with a clean *cloth*, and weighted down with a *plate* on top of which is placed a water-filled jar.

A *spoon* or *ladle* is useful for removing the foam from the surface during fermentation. When the process is complete, the food must then be either refrigerated or processed in a boiling water bath. Pickling/kosher salt is

available in grocery stores or wherever canning supplies are sold.

Freezing

Aside from a *deep freezer* (which can be purchased wherever home appliances are sold) that can maintain the required temperature of 0°F, containers must be sealable to maintain air tightness. Plastic containers from deli or dairy products will not protect food well enough. Purchase *containers* that are made for food preservation purposes.

For liquids, or near-liquids, *canning jars* may also be used with their seals. Whatever container is used, be sure to

leave the required “head space” for the expansion that freezing causes in the food. Meats and some vegetables (like corn on the cob) can be wrapped in plastic-lined *freezer paper*. If the paper is not labeled for use in the freezer, it will not be enough protection from the frigid, dry air of the freezer.

Freezer burn from frigid air touching the food does not render the food unusable, but is rather ugly and can change delicate flavors. *Trays, cookie sheets*, and *racks* may all be useful in laying out individual items to be partially frozen before wrapping or placing in containers for freezer storage.

Tape for sealing freezer paper and *marking pens* are the only additional required tools. Freezer paper and tape is sold in grocery stores and generally wherever canning supplies are sold.

Jelling

Sugar and heat are the main preservatives in this category. Jellies and clear citrus marmalades require the addition of *pectin*, which is available in most grocery stores and wherever canning supplies are sold. Poured into sterile *jars* at the end of the cooking time, jellies need only be covered with a thick layer of melted *paraffin* to protect it from outside microbes.

Jams, preserves, butters, and cheeses do not require the addition of pectin. Preserves, in fact, do not need to jell at all. However, all these need to be processed in a water bath after being placed in sterile *jars* and sealed.

Pickling/Brining

Brine is usually made from boiling *pickling salt*, *sugar,* and *vinegar* in water, to which flavoring herbs, spices, or other vegetables may be added. All of these ingredients are available at your local grocer. After flavoring with the brine, the food is then packed into canning *jars* and water-bath processed.

Smoking

The addition of smoke to the dehydration process is done outdoors. A commercial *smoker* can certainly be used. However, smoking on a small scale can be done with a homemade device that requires only a rack for hanging the food (usually fish), a supply of *wood chips* of the appropriate species, a *heat source* that causes the wood to smolder while being kept at a distance from the food itself so that it is not cooked, and something as simple as a *cardboard box* that can contain the smoke to the food.

As this is mainly a way to add flavor to preserved foods, additional preservation is required, usually by refrigeration.

Finding good woods may be the trickiest part to this activity.

Some places that sell smokers and grills often stock commonly used woods, like mesquite. But you might be better off to contact your local orchard or wood mill. You can age the wood yourself by simply letting it rest in a dry, airy spot.

Do not use wood from the lumber yard, as it is frequently either treated with insect inhibitors or is of a sappy soft wood. Both of these are to be avoided. Wood from fruit and nut trees are very aromatic and would make for pleasant flavoring. Commercially available smokers can be purchased at

most hardware or lawn and garden supply centers.

Food

Nothing beats the freshness of homegrown fruits and vegetables, or a freshly butchered, hand-raised cow. But if time or resources do not allow you to take part in this ultimate activity, *farmers' markets* are wonderful alternatives.

Most food sold at these markets is harvested less than 24 hours before the market opens. Shop here as early as possible to get the best choices. *A lot of vendors harvest their foodstuffs by hand.* Not only does this protect the food

from mechanical and packing damage, but also allows them to do an initial quality sort. While a bruised apple may be eaten out of hand after cutting away the bruise, it is not worth using to make a batch of apple butter; it could spoil the flavor of the entire batch.

If absolutely necessary, grocery store produce may be used, but unless it is locally sourced, these foods could have been harvested a week or more prior to them hitting the sales floor. *In food quality, time is its biggest enemy.*

Removal from the vine triggers enzymatic changes that work on the sugars stored within the vegetable or

fruit. Harvesting equipment may damage otherwise healthy specimens, allowing bacteria or insects to infest it. Choose the food you wish to preserve carefully. *The more perfect the food, the less preparation work is necessary, and the better your end product will be.*

If hunting is not your thing, and you have no friends that hunt, the local butcher shop may be your next best bet. To be sure, they carry fresher, higher quality meats than groceries. They are also able to cut to order. This is a skill that many grocers no longer offer. Often, though, the local butcher carries meats from undomesticated animals, such as deer and buffalo, or specialty meats, such as

rabbit, and even offal. Most will accept special orders.

Whenever possible, use fresh, washed herbs for flavorings. When dried, herbs lose their essential oils, causing a great loss of flavor. Again, starting with the highest quality foodstuffs allows you to produce the highest quality end product, be it beautiful, sparkling jellies, or sumptuous smoky meats.

Canning

Safety Precautions

Canning is a time honored, proven way of preserving a harvest or hunt for a very long time. In the course of a day one can "put up" enough tomatoes (or other item) to last until the next year's harvest. However, to prevent illness or injury during the process, all instructions must be followed completely. There are no shortcuts when preserving food, no matter which method is used.

Let's start with a brief description of

how and why canning preserves food. To preserve food, microbial growth and enzymatic changes must be halted or eliminated altogether. In canning, food is brought to a boil for a specified period of time to sterilize it.

It is then packed into sterile jars, and sealed with sterile lids. Stopping here would keep the food edible for only a short period of time. You might be asking how, if everything has been properly sterilized, any microbe would exist to spoil what you have so carefully prepared. *What is in the jars?* Your carefully prepared food is there, yes; but also there is air – non-sterile air, to be exact. *How do we get rid of the air?*

If the food is acid enough, it can be processed in an open water bath. Boiling does not kill the spores of the botulism bacteria (*Ciostridium botuiinum*); however, the high acid prevents these spores from growing. The hot, sealed jars are set on a rack and placed in a kettle of boiling water for a set period of time.

The water must be kept at a brisk boil the entire processing time. Should the water fall below the boiling point, it must be brought back up to boiling and the processing time started over. Also the level of the boiling water must be kept at least an inch deeper than the height of the jars (do not mix jar sizes in

the batch).

This process is sufficient for driving the air out of the jars. After the processing time is complete, the jars are removed from the water, the rings or lids tightened as needed, and set on wire racks to cool. Almost immediately you will hear that satisfying “pop” of the lids concaving, showing that a vacuum has indeed been created in the jars. After the jars have cooled, test each one by pressing on the center of the lid. If it flexes when you push down, it is not sealed. Any jar not vacuum sealed must be reprocessed or refrigerated and eaten within a few days.

Pressure canning is necessary for foods that do not contain a high enough acid to prohibit the growth of botulism spores. While the temperature of boiling water (212°F) is not high enough to kill this bacteria's spores, pressure canners can increase the temperature to 240°F, holding it there long enough to kill them completely.

- Two to three inches of water is brought to a simmer in the canner.
- Using the same preparation as water bath canning, hot, sterile food is packed into hot, sterile jars, and sterile lids are put in place.
- The jars are then placed on a rack

in the canner.

- Fasten the canner's lid into place, but do not set the weight on the vent or close the petcock (depending on which your canner uses).
- Turn up the heat to its highest setting and allow the water to come to a boil and stem to flow from the open vent/petcock in the shape of a funnel.
- Allow this steam to exhaust for ten minutes (use a timer!).
- After this time is up, close the petcock or set the weight over the vent. Pressure will now begin to build. If your canner has a pressure gauge (my personal preference), allow the pressure to increase

quickly to eight pounds.

- Turn the heat down slightly, allowing the pressure to increase to the desired level. If there is no gauge, do not reduce the heat until the weight begins to jiggle and rock.
- Processing time begins now. You will probably need to adjust the heat a few times to keep the pressure constant at the desired level.
- When the amount of time needed has passed (again, use a timer), turn off the heat and allow the canner to depressurize on of its own volition.
- The time it takes for the pressure to fall is needed for proper

processing. Do not try to speed this process up in any way.

- Forced cooling can lead to contamination of the food.
- Forcing the canner open before the pressure has been resolved can lead to severe injury by steam and projectiles.
- After depressurization, and before the canner is completely cool, open the lid, lift out the jars, placing them on a wire rack and tighten the rings if needed. *You will quickly learn to enjoy the music of lids popping into the concave position, proving your success.*
- Test each jar for the correct seal, as instructed above.

- When using separate lids and rings, the rings may be removed once the jars are cooled and the seals are proven.
- Gently unscrew the ring and set aside for your next batch.
- Admire the product of your hard work and then store the jars in a cool, dark place.

Whether your recipe calls for the food to be hot or cold, it must be packed loosely, and boiling water poured into the jar to eliminate air pockets. Jars are never filled to the brim.

Food swells during processing. If it oozes out of the jar, it can prevent the lid

from sealing securely to the jar. If the jar is not packed with enough food and water, too much air filled space is left and the air is not completely exhausted during the processing time. Either event will allow spoilage to occur. This space is called "headspace". The amount needed is specified in each recipe and needs to be adhered to. Use a ruler to ensure you have it correctly.

Work surfaces, tools, utensils, and equipment must all be clean (and in some cases they must be sterile) and in good condition. If pressure canning, the lid's gasket (rubber seal) and rubber safety valve cover must be of the correct size (check for stretching or shrinking),

have no cracks, and must be inserted into the lid and seated correctly. Follow the instructions provided by the manufacturer.

Pressure canners are sturdy vessels made of cast aluminum or stainless steel. They can last multiple lifetimes if properly cared for. If you received your pressure canner without instructions, as can happen with hand-me-downs, you can usually find them on line. Begin this search by looking for a website for the manufacturer. It might take a little digging to find, but most are there. If not, there are websites devoted to only instruction and owner's manuals available in PDF formats, usually for no

cost.

Should you need to replace the gasket, these are readily available in most places that sell the cooker. If you have difficulty finding the one you need, they can be ordered on line. These items are inexpensive, at the time of this writing they are generally around $10 (US).

They are frequently sold in a kit that includes the rubber stopper for the safety valve. This is because if the safety valve has been blown, both it and the gasket need to be replaced before using the canner again. Also, find out the reason it blew out and avoid making that mistake again. After interviewing several

canners, and in my own experience as well, I have never heard tell of a "blow out". But I was always reminded to follow instructions carefully.

Jars must be manufactured for the canning process. These jars are properly tempered for the extremes in temperature and pressure they will be placed under. Never use old peanut butter or commercial jelly jars. Your jars should be free of cracks and chips. If using rings and lids, the rings should be round and screw onto the jars easily. Lids, with a rubber-like seal embossed onto it, are meant to be used only once.

Never reuse last year's lids. Lids should

not be dented. Remember, you are trying to produce not only an air-tight, water-tight seal, but also a vacuum in the jar. The seal must be sturdy enough to maintain this vacuum. If using jars with rubber rings and bails clamping the lid into place, these too must be in good condition. The ring must have no cracks and must be of the correct size, covering the entire rim of the jar.

Separate lids and seals nearly disappeared from the marketplace; however they are now making a comeback. If using these, careful inspection should be made of each item to be sure it is in serviceable condition. Also coming back are screw-on lids that

require no separate ring. But like the flat lids, they are embossed with a seal. While very handy to use at the time, they are not reusable.

Recipes are also to be followed carefully. Although some seasonings can be adjusted to taste, salt, sugar, vinegar, or alcohol should be measured accurately. These are the anti-microbial elements that ensure your end product is safe for consumption.

Altitude Adjustments

It is always possible to find a regional cookbook that has already figured in altitude adjustments, but this is highly unusual. Every book I have seen assumes

you are at or near sea level. *Why is this important?* Because altitude affects the temperature at which water boils. If you live below 1,000 feet above sea level, you have no corrections to make to the process.

If you live between 1,000 and 2,000 feet above sea level, you need to begin making adjustments. There is no need to adjust pressure canning yet; but if water bath canning an adjustment is needed. When above 2,000 feet adjustments need to be made in pressure canning. Use the table below if you live above 1,000 feet. If you live above 10,000 feet, consult with your local extension office.

Water Bath Canning Altitude Adjustments	
Altitude (US Feet)	Increased Processing Time (Minutes)
1,001-3,000	5
3,001-6,000	10
6,001-8,000	15
8,001-10,000	20

Pressure canning requires no change in processing time but does require changes in the amount of pressure held so that the temperature inside the canner reaches 240°F. This temperature is what kills the botulism bacteria. More information about this can be found in the Pressure Canning Details.

Water Bath Canning Details

High acid foods, such as most fruits (tomatoes included) do not need to be processed under pressure because the natural acid inactivates enzymes and bacteria. While the acid in these foods has no effect on molds and yeasts, processing the jars in a kettle of boiling water is enough to raise the temperature of the food to beyond their killing point. Yeasts and bacterium are destroyed by temperatures ranging from 140° to 190°F [60° to 88°C.] Food commonly

processed in a water bath is listed in the table at the end of this section.

Food canned in large pieces will require longer processing to heat it through than food that is cut small. Food that is raw and cold when packed also requires longer processing time than if it were already hot when packed. Another consideration is the size of jars used. Large jars require more time in the bath than do small jars so that all the food contains reaches the required temperature.

After the jars have cooled and been checked for a good seal, they should be stored in a cool, dark place – preferably

40º to 60ºF [5º to 15ºC]. Most foods kept this way will keep for up to a year.

NOTE: Any food whose odor or appearance is questionable when the jar is opened should be discarded at once. Never test it by tasting it. Botulism can be deadly!

To preserve as much of their fresh color and flavor as possible, many fruits and vegetables may be "cold packed". The food is washed, peeled, cored or seeded just as for ordinary cooking. Most are cut to a uniform size (this must be done to ensure uniform heating of the food) and placed into the jars.

Light colored fruits (like peaches) should be dropped into water containing a bit of lemon juice to prevent the flesh from darkening. *This is called 'acidulating'.* Allow one teaspoon [5ml] of lemon juice per quart [1 liter] of water. Most fruits can be packed raw. Do not allow the fruit to soak – just drop the pieces in and lift them out with a slotted spoon or sieve.

If the food was blanched, it is drained. Whether or not it was blanched, it is then packed into jars loosely and boiling water or other liquid is poured into the jar to cover the food. Remember to leave the appropriate headspace (see chart). Most canning jars, with the

exception of fragile clamp-top (wire bail) jars, are then placed into already a deep kettle that already has simmering water.

After adding the jars, ***do not allow them to touch each other,*** the water is then brought to a full boil. After the water comes to a full boil, the lid is placed onto the kettle and the timer can be started. After the processing time has been accomplished, turn off the heat and lift the jars out of the kettle. Set them on a wire rack or towel to cool, leaving at least an inch of space between them.

If using clamp-top jars, these must be placed in tepid water, which is then

brought to a boil, covered, and the processing time is then started. At the end of processing, the heat is turned off and the jars are removed only after the water reaches room temperature. Again, these special arrangements are because of the fragile nature of the jars.

Sugar syrups can be any strength, from very light to very heavy, depending on the amount of sugar per quart of water or juice used. Artificial sweeteners can be used in place of the sugar, however any preservative quality is unsubstantiated. Also, commercial unsweetened juice may also be used, either as is or diluted with water. Plain boiling water can also be used.

Fruits canned without sugar will be softer in texture than if sugar is used. The whole purpose of the liquid is in eliminating air, so make sure to remove any air pockets, particularly when canning such things as peach halves. The cavity where the pit resided needs to be faced up so that air is not caught in it. If desired, the table below shows the different strengths of sugar syrups. The water and sugar are boiled together in a pan until the sugar is completely dissolved, about five minutes.

Desired Syrup Thickness	Sugar Percentage	Sugar (cups per quart of liquid)	Yield of syrup (cups)
Very light	10	½	4 ½
Light	20	1	4 ¾
Medium	30	1 ¾	5
Heavy	40	2 ¾	5 1/3
Very heavy	50	4	6

Water Bath Canning Charts

			Processing Time (Minutes)	
	Preparation	**Head Space**	**Pints**	**Quarts**
Vegetables				
Tomatoes	Remove skin; raw pack in own juice; add 1 tbsp bottled lemon juice per pint	½ inch	35	45
Tomato Juice	Remove skin; hot-pack	½ inch	35	40
Tomato based Vegetable Juice Blend	Remove skin; hot-pack	½ inch	35	40
Tomatoes, crushed	Remove skin; hot-pack	½ inch	35	45
Tomatoes, paste	Hot-pack in half pines only for 35 minutes		X	X
Tomato sauce (plain)	Hot-pack	½ inch	35	40

			Processing Time (Minutes)	
Fruit	**Preparation**	**Head Space**	**Pints**	**Quarts**
Apples	Acidulate; Simmer 5 minutes in sugar syrup; Hot-pack in syrup	½ inch	15	20
Apricots	Acidulate; Raw-pack in sugar syrup	½ inch	25	20
Blueberries	Simmer in water 30 seconds; cold pack in syrup	½ inch	15	20
Cherries	Raw-pack in sugar syrup	½ inch	20	25
Cranberries	Simmer in water 30 seconds; cold pack in syrup	½ inch	15	20
Currants	Simmer in water 30 seconds; cold pack in syrup	½ inch	15	20
Elderberries	Simmer in water 30 seconds; cold pack in syrup	½ inch	15	20
Gooseberries	Simmer in water 30 seconds; cold pack in syrup	½ inch	15	20
Grapefruit	Raw-pack in sugar syrup	½ inch	10	10
Grapes	Raw-pack in sugar syrup	½ inch	15	20
Nectarines	Acidulate; Raw-pack in sugar syrup	½ inch	25	20
Oranges	Raw-pack in sugar syrup	½ inch	10	10
Peaches	Acidulate; Raw-pack in sugar syrup	½ inch	25	20
Pears	Acidulate; Simmer 20 minutes I sugar syrup; hot-pack in syrup	½ inch	15	20
Pineapple	Simmer 5 minutes in sugar syrup; hot-pack in syrup	½ inch	15	20
Plums	Raw-pack in sugar syrup	½ inch	20	25
Rhubarb	Steep stalks (cut in ½-inch pieces) with sugar for four hours; simmer for one minute in own juice; hot-pack in juice	½ inch	10	10

			Processing Time (Minutes)	
Prepared Foods	**Preparation**	**Head Space**	**Pints**	**Quarts**
Apple nectar	Hot-pack in pints only	½ inch	15	X
Applesauce	Hot-pack in pints only	½ inch	10	X
Apricot nectar	Hot-pack in pints only	½ inch	15	X
Berry juices	Hot-pack	½ inch	30	30
Cherry juice	Hot-pack	½ inch	30	30
Cranberry juice	Hot-pack	½ inch	10	10
Chutneys	Hot-pack	½ inch	10	10
Currant juice	Hot-pack	½ inch	30	30
Fruit butters	Hot-pack in pints only	½ inch	15	X
Fruit cheese	Hot-pack in pints only	½ inch	15	X
Fruit jams, marmalades and conserves	Hot-pack in pints only	½ inch	15	X
Fruit pickles	Hot-pack	½ inch	15	15
Fruit purees	Hot pack in half-pints only for 10 minutes	½ inch	X	X
Ketchups	Hot-pack	½ inch	10	10
Nectarine nectar	Hot-pack in pints only	½ inch	15	X
Pectin stock	Hot-pack in pints only	½ inch	5	X
Peach nectar	Hot-pack in pints only	½ inch	15	X
Relishes	Hot-pack in pints only	½ inch	15	X
Sauerkraut	Hot-pack	½ inch	15	20
Vegetable pickles	Hot-pack	½ inch	15	15

Pressure Canning Details

Pressure canning is the only safe method for preserving low acid vegetables, meat, poultry, and fish. When preserving these foods, the only way to kill the botulism bacteria is by raising the temperature of the foods to 240°F. Make sure your canner is in good working order. Check the condition and placement of the gasket and safety plug (fuse). *Make sure the vent is clean.*

Generally speaking, select vegetables

that are firm and ripe, but not overripe. For the best results, keep the time between harvesting and canning as short as possible. Wash or rinse the vegetables, but do not allow them to soak. Peel vegetables if necessary, remove seeds, etc. Avoid using bruised or damaged produce. *Cut into serving sizes.*

Make sure your jars are in excellent condition, with no nicks or cracks. Wash jars with hot soapy water and rinse thoroughly in hot water. Keep them hot until you use them to prevent breakage when they are placed in the canner.

Use new canning lids for each jar. Even

though they are new, check them for dents, caps, or defects in the gasket. Place them in a shallow pan of simmering water.

Foods may be packed into jars while raw or hot. Raw-packing means adding uncooked food directly to the jar, then pouring boiling water over the product. In most cases raw food is packed tightly because of the shrinkage that occurs after the product cools.

For hot-packing, the product is heated to boiling or the product is cooked for a specified amount of time, packed into the jars while still hot, and filling the jars with boiling hot liquid. Hot-packed food

is packed loosely because the food has already shrunk during the heating/cooking. When pressure canning, hot-packing the food yields better color and flavor compared to raw-packing.

If not hot-packed, most vegetables should be blanched before packing. *This is a simple process.* The prepared vegetable is dropped into briskly boiling water for a certain period of time (see the table below), usually just few minutes, then scooped out of the boiling water and dropped into ice water. The boiling water stops the enzyme changes in the vegetable pieces, and the quick dip in ice water stops the cooking process.

After packing the product and covering with boiling liquid, work out any air bubbles that remain by using a plastic spatula or other utensil that will not scratch the jar. If allowed to remain in the product, these bubbles will rise during processing, affecting the amount of head room. *Too much head room left can result in an insufficient vacuum,* which would then allow the growth of dangerous bacteria. Most vegetables require only a half-inch of head room. Measure your jars to make sure of the correct depth.

Wipe the rim of the jar with a clean, damp cloth; center the lid onto the jar, lightly screw on the metal ring/band.

Make sure the rings are the correct shape, and do not over-tighten them. Air must be allowed to escape during the processing.

Prepare the pressure canner with 2 to 3 inches of clean, hot water. It is handy to have additional boiling water on the side in case it is needed to maintain the water level after the canner is brought to a boil.

Put the jars in the canner on the rack and so that they do not touch each other. Put the lid in place and turn the heat to high. Leave the vent port open until all the air is exhausted. *This can take about 10 minutes*. When the cooker has been

properly vented, place the weight onto the port.

Do not begin the processing timing until the weight jiggles or, if equipped, the gauge reads the correct pressure. If processing above 2,000 in altitude, please use the below. Also, notice the chart below is divided between weighted gauges and dial gauges. Follow the adjustments on the chart for your altitude and type of canner.

Pressure Canning Altitude Adjustments		
Altitude (US Feet)	Weighted Gauge	Dial Gauge
0-1,000	10	11
1,001-2,000	15	11
2,001-4,000	15	12
4,001-6,000	15	13
6,001-8,000	15	14
8,001-10,000	15	15

After the processing time, remove the canner from the heating element and let it cool without interference. This time is essential for both your safety and the food's. When the pressure has dropped to normal, carefully open the vent port and wait another 10 minutes.

Open and remove the lid, being careful to not get scalded by any residual

steam. Remove the jars from the canner and place onto a rack or towel, with at least an inch of space between them. Do not tighten the rings; this could release the seal if the ring is slightly out of shape. After the jars have cooled, test for a good seal by pressing the center of the lid. If the lid flexes, a seal has not been achieved and the jar will need to be reprocessed or refrigerated and eaten within a few days.

If reprocessing is needed, open the jar and check the rim for cracks or chips. Put the food in a new jar if needed. Always *use a new lid.* Reprocess as before. Label the jar as reprocessed and consume it first.

Remove the rings/bands to prevent them from rusting onto the jars. Wipe any residue from the jars. Make sure to label them with the date and contents. If processing multiple batches, lot numbers may be assigned, too. Sealed jars should be stored in a cool, dark place – preferably 40o to 60oF [5o to 15oC]. Most foods kept this way will keep for up to a year. Although still safe after a year, home-canned products' quality and nutritional value may have diminished.

NOTE: Any food whose odor or appearance is questionable when the jar is opened should be discarded at once. Never test it by tasting it. Botulism can be deadly!

Bulging lids, leaking jars, and mold are all signs the food has spoiled. Avoid touching spoiled foodstuffs. Seal jar and all in a heavy garbage bag and dispose of it in a landfill. If you desire to keep the jar and ring/band (if it was left in place), after carefully emptying the jar of the food into the trash and sealing it, the jar and ring can be washed, boiled for thirty minutes in water that is one inch deeper than the jar is tall, *make sure jar is full of water, too.*

Clean all items that came into contact with the spoiled food with a solution of one part unscented bleach to five parts clean water.

The chart below gives the required preparation for each vegetable as well as processing time and pressure.

Remember, processing time does not begin until the correct pressure has been achieved. If at any time during the process the pressure falls below the required amount, the canner must be brought back up to the correct pressure and the processing time started over. Double check the altitude chart above, please remember to make the adjustments noted. Also, remember the difference in pressure for processing with a canner that uses a weight versus one that has a gauge.

Meat, and poultry are included in the chart. The process is the same as for pressure canning vegetables, except meat is always cooked before processing and hot-packed. Canning is not recommended for veal, fish, shellfish, or ground meats, unless combined in a sauce, ***see recipes in the last section of this book.***

Pressure Canning Charts

			Processing Time (Minutes)	
	Preparation	**Head Space**	**Pints**	**Quarts**
Vegetables				
Artichoke bottoms	Blanch for five minutes in brine (1 gallon [4 liters] water, ¾ cup [175 ml] vinegar, and 3 tbsp [45 ml] salt); hot-pack in boiling brine	½ inch	X	25
Asparagus	Bundle, blanch 3 minutes (tips above water level) hot-pack in boiling water	½ inch	25	40
Beets	Blanch 15-25 minutes; remove skins, raw-pack in boiling water; 1 tbsp [15 ml] vinegar per quart will help retain bright color	½ inch	40	50
Beans, Broad, Lima	Blanch three minutes; raw-pack loosely in boiling water	1 inch	40	60
Beans, Green, Wax	Do not blanch. Raw-pack loosely in boiling water	½ inch	20	25
Carrots	Blanch three minutes; raw-pack in boiling water	½ inch	25	30
Corn kernels	Blanch on cob for three minutes; cut from cob; raw-pack loosely in boiling water	1 inch	55	85
Corn on cob	Small cobs only: blanch for three minutes; raw-pack loosely in boiling water	1 inch	55	85
Edamame (Green Soy Beans)	Shuck from pods, blanch 3 minutes; loosely hot-pack with boiling water	1 inch	55	65
Mixed Vegetables	Prepare vegetables separately, combine, cover with boiling water, bring back to the boil; loosely hot-pack. *Process as for vegetable with the longest cooking time.	½ inch	*	*
Mushrooms	Slice, blanch three minutes, hot-pack in boiling water	½ inch	30	35
Okra	Remove cap, blanch one minute, hot-pack in boiling water	1 inch	25	40
Parsnips	Pare, blanch 5 minutes; hot-pack in boiling water	½ inch	20	35
Peas, sweet	Blanch small peas for three minutes, medium-sized peas for five minutes; raw-pack loosely in boiling water	1 inch	40	40
Potatoes, Sweet	Do not blanch or puree; raw-pack with boiling water or sugar syrup	1 inch	55	X
Potatoes, New White	Blanch 5 minutes, skin; hot-pack in boiling water	1 inch	40	40
Pumpkin	Cut in pieces; pare, cover with cold water, bring to a boil, hot-pack with boiling water	½ inch	55	95
Rutabaga	Pare, blanch 5 minutes; hot-pack with boiling water	1 inch	35	40
Succotash	Blanch corn and lima beans separately and as instructed above; combine; loosely hot-pack with boiling water	1 inch	55	85
Summer Squash	Cut into 1 inch pieces, cover with water, bring to boil, loosely hot-pack with boiling water	1	25	30

		Processing Time (Minutes)		
Meat & Poultry	**Preparation**	**Head Space**	**Pints**	**Quarts**
Beef, Pork, Lamb, Venison	Cut into 1" pieces; braise in meat stock 15 minutes; loosely hot-pack in degreased stock	1 inch	75	X
Chicken, Duck, Game Bird, Goose, Turkey, and Rabbit; Breasts, Drumsticks, and Thighs	Poach in hot water or stock for 15 minutes; loosely hot-pack in cooking liquid, skinned breasts in center, surrounded by other pieces, skin side out.	1 inch	65	75

Preserves Information

Jellies are made from only the clear juice of the fruit.

Jams contain the juice, fruit pulp and sometimes the skins.

Marmalades are made from the clear juice of the fruit to which has been added finely chopped pieces of the fruit and its skin or fruit mixtures.

Butters are the result of cooking the peeled and seeded fruits slowly over low heat.

Conserves are made by combining fruits with nuts, dried fruits, spices or liqueurs.

Cheeses are made like butters, but the amount of sugar is increased, and the cooking time lengthened until the mixture is stiff.

Alcohol, in the form of liqueurs, brandy or whiskey also provide a defense against spoilage as well as adding flavor.

Jellies

Jellies need the jelling power of sugar, acid and pectin. If the fruit used does not have enough naturally, pectin can be added. A recipe for homemade pectin appears in the recipe section of this book.

However, you may find you prefer the convenience of store-bought pectin. It can be found in both a powder form and a liquid in most grocery stores, and department stores that sell canning equipment. Be aware that using this pectin may require you to use more sugar

than you would like. The chart below shows which fruit has the necessary levels of pectin and acid naturally and which needs help.

Jellies are made of fruit cooked in water until its juice has been rendered. It is then strained carefully and boiled down. Sugar added during the boiling makes the juice set by interacting with the pectin and acid. Care must be taken to ensure that the mixture remains unclouded and that the flavor remains bright.

For the deepest, richest flavors use only the minimum water necessary – enough to cover the bottom of the pan, so

that the fruit doesn't stick to it. When you strain the juice, use only gravity to pull the juice through. Crushing or squeezing the jelly bag will force pulp through, which will result in cloudy jelly.

Another thing that could cloud your jelly is if you cook too large a quantity at a time. Although you can make any amount of fruit juice you may wish, work in small batches when boiling the juice down to jelly. A batch should be made of no more than six cups of fruit juice. Do not try to take a short cut with this. Larger batches take so long to cook down that the juice overcooks, and its sugar crystals can clump together, which will cloud the mixture as well as ruin its

texture.

Use a candy thermometer to ensure that the correct temperature has been reached. It needs to reach 8°F [5°C] above the boiling point at your altitude. For sea level, this would be 220°F [105°C]. It is at this temperature that the juice becomes liquid jelly. To test, remove a spoonful of juice and let it pour over the side of the spoon. If it falls in drops that form a sheet, it is ready.

Do not overcook your jelly. You can also test the jelly by chilling a spoonful to see if it sets. Use a plate that you've kept in the freezer for at least fifteen minutes. Place a spoonful of jelly onto

the plate and return it to the freezer for 1-2 minutes. Push the jelly with your fingers. If the jelly wrinkles as it is pushed, the jelling point has been reached.

Remove any scum that has formed on the top of the jelly as it rises. Pour the hot liquid into hot, sterile jars, leaving ½ inch [1cm] headspace. Cover the jelly with melted paraffin or sterile jar lids fastened with rings/bands. Store it in a dry, cool, dark place. The high sugar content combined with the acid naturally occurring in the fruit prevents bacteria growth.

Fruit	Pectin Level	Acid Level
Apples, Sweet	Medium	Low
Apples, Tart	High	High
Apricots	Low	High
Blackberries	Medium	High
Blueberries	Medium	High
Cherries, Sour	Medium	Medium
Cherries, Sweet	Medium	Low
Citrus Fruits	High	High
Cranberries	High	High
Currants	High	High
Elderberries	Medium	Medium
Figs	Low	Low
Gooseberries	High	High
Grapes	Medium	Medium
Guavas	Medium	High
Melons	Medium	Low
Nectarines	Low	Low
Peaches	Low	Low
Pears	Low	Low
Pineapple	High	High
Plums, Sour	High	Plums:
Plums, Sweet	Medium	Medium
Quinces	Medium	Low
Raspberries	Medium	High
Rhubarb	Low	High
Strawberries	Low	Medium

The pectin level of a fruit can be tested with a simple procedure. To determine when the fruit stock has been reduced enough so that it can serve as a setting agent for jellies made from low-pectin fruit, remove a small sample of the stock into a separate container. Mix into it a little rubbing alcohol. If the pectin level is high enough, a clot is formed. **Do not taste this mixture, and do not return it to the stockpot! Rubbing alcohol is poisonous.**

The acidity of a fruit can be judged by its taste. A sharp or tart flavor is the sign of enough acid. If the level needs to be

boosted, add lemon juice to the fruit before cooking. Two tablespoons [30 ml] is enough for two cups of low-acid prepared fruit or fruit juice.

Marmalade

Marmalade Most marmalade is based on oranges; high in pectin, oranges add a bittersweet taste to the preserve. The oranges can be combined with other citrus fruits, or a non-citrus fruit such as pineapple. It can also be flavored. Spices, liqueurs, whisky, etc. can all be used as flavoring agents.

Textures can be altered by how the fruit pieces are treated. Firm, chunky pieces of fruit in the marmalade can be obtained by first cooking the whole fruit in a little water for about an hour. The fruit is

chopped and tied up in a muslin bag.

The bag of fruit is boiled in sugar syrup made from the liquid the fruit gave up during boiling. This gives the fruit a pleasant, chewy texture, which contrasts nicely with the smooth jelly that surrounds it. Hot-pack the marmalade into pint jars and process with a fifteen minute water bath.

To achieve a more delicate marmalade, the fruits are thinly sliced, soaked overnight, the cooked, seeds and all, in the soaking water for about two hours. After this time, the sugar is added and the cooking completed.

Treated this way, the fruit seems to melt

in your mouth, and the taste is a bit more tart than with the first method. After placing the mixture in clean jars, process the jars in a water bath.

Jam

Jam *is by far the easiest form of preserving fruit.* After washing the fruit is peeled and pitted, if needed, crushed, boiled with sugar until it is a thick, soft mass. Light colored fruit should be acidulated, dropping it into water that has had lemon juice added, before beginning the cooking process.

Pectin level is irrelevant, as the fruit pulp is suspended in the thick liquid. Fruit for jam making needs to be ripe but still firm. If it is too soft, the fruit will disintegrate. As with marmalade, spices,

brandies, or liqueurs may be added to enhance the flavor of the fruit.

Hot-pack the jam into pint jars. Process the jars using a water bath for fifteen minutes.

The lengthy cooking time required for reducing fruit to jam can cause the fruit to lose the intensity of its color and texture. This can be avoided by starting with sugar syrup to cook the fruit in until it becomes tender, but this makes the resulting mixture a preserve rather than a true jam.

One method of avoiding the loss of color and texture is to cook down the juice in stages without the fruit. This is

especially helpful when making jam from berries. To begin, a small batch of fruit is boiled in sugar syrup for about a minute. The fruit is removed and set aside for later use.

The syrup and juice mixture is boiled down to reduce it. When it has reached the approximate concentration for the end product, another small batch of fruit is dropped into it, boiled for a minute, and the fruit is removed. Reduce the liquid again, and repeat as necessary until all the fruit has been cooked.

Add to the pot any juice that has drained from the fruit while it was set aside. Reduce the juice to its original volume.

Only then do you add all the fruit back into the reduction. It is during this second cooking that the fruit reabsorbs the juice, *gaining back its deep color and plumping back up.*

The resulting product has only about half the weight of preserves, but the intensity of flavor is extraordinary. As the only sugar used in this method is at the very beginning, it is not unusually sweet, just very intensely flavored. After hot-packing the mixture in clean jars, process the jars in a water bath for fifteen minutes.

Conserves

Conserves used as jams or dessert toppings. *Many conserves are spicy enough that they can even accompany roasted meats*. To know how to proceed in preparing the conserve, you must know how you wish to use it.

For a thick spread, use fruit that has a lot of natural pectin so that it sets well. If you plan to use it as a sauce, either for dessert or meat courses, use lower pectin fruits. So that the most flavor possible can be rendered from the fruit, it is washed, peeled, seeded or pitted as

necessary, and then ground or finely chopped.

If using a medley of fruits, combine them now. Cover them and allow them to stand overnight so that they release their juices. Cook the fruit in the extracted juice until the mixture is thick, rich, and dark.

Any dried fruits to be added go in at the half-way point; *nuts require no cooking, so add them at the last minute.*

Since the dried fruits and nuts are heavier than the mixture, allow the mixture to cool until it is slightly thickened. Stir the mixture to redistribute the ingredients evenly. Hot-pack the

mixture into clean jars and process the jars in a water bath for fifteen minutes.

Butters

Butters *do not use citrus fruit to make fruit butter*. Citrus fruits have too high of a water content, and their membranes do not allow them to be pureed well.

To proceed, puree the fruit, mix it with sugar enough to sweeten to taste, and boil this mixture down. This process results in a thick, creamy butter. Butters are spread on toast or bread.

Unlike other preservation methods, butters can use overripe and bruised fruit, *although the bruises themselves*

must be removed before pureeing. You can add into the puree any of the fruit pulp leftover from jelly making, although this pulp won't have a lot of flavor left in it.

Hot-packed into pint jars, butter can be kept in the refrigerator for up to six months, or it can be processed in a water bath for fifteen minutes.

Cheeses

Cheeses - *fruit cheeses start out the same way as fruit butter, with pureed fruits*. More sugar is added to the fruit than for fruit butter, and the mixture is cooked until stiff.

Cheeses are usually unmolded from the canning jar, sliced, and served with cold meats or poultry, or with desserts. Aspic or fondant cutters can be used for a decorative finish. So that it can be more easily unmolded, canning jars are first oiled inside with a tasteless vegetable oil.

Fruit chees will last in the refrigerator for up to a year. If longer preservation is wanted, hot-pack the cheese in pint jars using the water bath method for fifteen minutes.

Pickling Information

Vinegar is used with both vegetables and fruits to make a variety of pickles. The English word vinegar comes from the French *vin aigre*, which means "sour wine."

Wine vinegar has the best flavor, but less expensive cider, malt, or distilled vinegars can also be used as long as it has at least 5 per cent acid. The vinegar's label should note the acid content.

The acid in vinegar reacts to metal tools

and equipment; nonreactive materials must be used to avoid discolored food and off-putting flavors. Ceramic and stainless steel are both nonreactive. Avoid aluminum, copper, iron and steel, *not stainless steel.*

Do not adjust the amount of vinegar or alcohol called for in a recipe. It is part of the preservation process. Also, to prevent the loss of the preserving liquid due to evaporation, the food should remain tightly covered and refrigerated until it is processed. Water bath processing is the usual method used to preserve pickled foods.

Foodstuffs preserved as “pickled”

include two-stage vegetable pickles, ketchups, relishes, chutneys, preserves, and mincemeats. See the recipe section for complete instructions, however, the chart below gives the required processing time for water bath canning of these items.

Pickling Chart			Processing Time (Minutes)	
	Preparation	Head Space	Pints	Quarts
Chutney	Hot-pack	½ inch	10	10
Fruit pickles	Hot-pack, cover with boiling liquid	½ inch	15	15
Ketchup	Hot-pack into half-pints only	½ inch	X	X
Relish	Hot-pack in pints only	½ inch	15	X
Sauerkraut	Hot-pack	½ inch	15	20
Vegetable pickles	Hot-pack	½ inch	15	15

Please note that mincemeats require pressure canning, as they contain meat

products. Hot-pack into pint jars only, and process for 20 minutes.

Recipes

Fruits

Many fruits are available locally or regionally, but aren't widely available. In this book we have used the most common fruits, but don't let this limit your pantry. Local harvests can be used in place of the suggestions in the recipes below.

Fruit can be canned without sugar, but the fruit's color may be faded. Use boiling water in place of the syrup during the packing procedure. Some artificial sweeteners may be used. Check the manufacturer's recommendations for

use and quantity recommendations.

Sugar Syrup

Very light syrup: 1/2 cup sugar per quart of water

Light syrup: 1 cup sugar per quart of water

Medium syrup: 1 3/4 cups sugar per quart of water

Heavy syrup: 2 3/4 cups of sugar per quart of water

Very heavy syrup: 4 cups sugar per cup of water

Bring water to a boil, add sugar, return to a boil, stir frequently until sugar is dissolved. Keep syrup hot, but do not allow it to boil down during processing. Fruit juice may be substituted for all or part of the water.

1. Apple Sauce

Mix different varieties together for better flavor.

- 20 large apples
- 4 cups water
- 2 1/2 cups sugar

Method

1. Wash apples; quarter, core; remove any bruises or other blemishes.
2. If working in bigger batches, drop apples into lemon water, see section on acidifying fruit.
3. When all apples have been prepared, drain if needed and place in large cooking pot.
4. Add the four cups of water and cook over medium high heat until apples are soft.
5. Press through a colander to remove peels.
6. Return to the pan and add the two and a half cups of sugar.
7. Bring mixture to a boil until sugar has thoroughly dissolved.
8. Pack into hot jars while boiling hot,

leaving 1/2 inch of head space.
9. Wipe jar rim.
10. Screw on lids and rings.
11. Process in a boiling water bath: both pints and quarts for 25 minutes.

2. Berries

Want the best homemade berry pie in the middle of winter? Can your berries this summer!

All berries except cranberries and strawberries may be processed this way.

1. Wash berries, picking out any green or blemished ones.

2. Pack into jars leaving 1/2 inch head space.
3. Pour boiling syrup into the jars to within 1 1/2 inch of the top.
4. Wipe jar rim.
5. Screw on lids and rings.
6. Process in a boiling water bath:
7. Pints – 15 minutes; quarts – 20 minutes.

3. Cherries

Both sweet and sour cherries may be processed this way.

1. Wash, stem, and pit, if desired, cherries, picking through the fruit and discarding stems and damaged

fruits.

2. Pack into jars, leaving 1/2 inch of head room.
3. Pour in boiling syrup to within 1 1/2 inch of the top.
4. Wipe jar rim.
5. Screw on lids and rings.
6. Process in a boiling water bath: pints and quarts – 20 minutes.

4. Home Made Cranberry Sauce

Be ready for the holidays! Serve your own cranberries preserved in this delicious sauce.

- 4 cups cranberries
- Water

- 2 cups sugar
- 4 Tbsp baking soda
- 2 Tbsp lemon juice

Method

1. Pick through berries, removing stems and under-ripe berries; rinse, drain and place in a large cooking pot.
2. Cover with water, cook over medium high heat until they start to boil.
3. Watch the berries for when they start to pop.
4. Remove from heat and set in sink.
5. Pour in baking soda; skim off nasty foam as it rises.

6. After all the foam has been removed, dump into strainer and rinse well. *This step may be repeated if necessary.*
7. Wash the pot.
8. Return berries to clean pot, add enough water to cover the berries; add sugar and lemon juice.
9. Cook until the berries are as mushy as is your preference.
10. Pack into hot jars while boiling hot, leaving 1/2 inch of head space.
11. Screw on lids and rings.
12. Process in boiling water bath: both pints and quarts for 10 minutes.

5. Peaches

Select ripe but still firm fruits for the best results.

To easily slip peaches' peels, drop a few at a time into a pot of boiling water for one minute.Remove with a slotted spoon, peel. Halve the peaches & remove the pit. Drop into cool water that has been acidulated. Continue until your whole batch has been completed.

Raw pack: you may raw pack the halves as is into jars, or slice them before packing them into jars, leaving 1/2 inch of head space.

1. Pour boiling syrup into the jar to within 1 1/2 inch of the top.

2. Work out any bubbles with a spatula or handle of a wooden spoon.
3. Wipe jar rim.
4. Screw on lids and rings.
5. Process in boiling water bath: pints – 20 minutes; quarts – 25 minutes.

Hot pack: boil halves or slices in medium syrup.

1. Pack in jars leaving 1/2 inch of head space.
2. Fill to within 1/2 inch of the top with additional boiling syrup.
3. Work out any bubbles as above
4. Wipe jar rim,
5. Screw on lids and rings.

6. Process in boiling water bath: pints – 20 minutes; quarts – 25 minutes.

6. Pears

Avoid bruised fruits if you will only halve them, for the best visual appeal.

Peel, halve or quarter, and core pears. If it will take a while to prepare batch, drop into an acidulated water bath. Slice if desired.

Raw pack: if pears are ripe enough to be quite soft, they may be packed raw into jars, leaving 1/2 inch of head space.

1. Fill the jars to within 1 1/2 inch of

the top with sugar syrup.
2. Work out any bubbles with a spatula or handle of a wooden spoon.
3. Wipe jar rim.
4. Screw on lids and rings.
5. Process in boiling water bath: pints – 25 minutes; quarts – 30 minutes.

Hot pack:

1. Boil 3-5 minutes in a light to medium syrup.
2. Pack in to the jars leaving 1/2 inch head space.
3. Add 1 teaspoon lemon juice to each quart, 1/2 teaspoon to each pint.
4. Fill with syrup, leaving 1/2 inch of

head space.

5. Work out any bubbles with a spatula or handle of a wooden spoon.
6. Wipe jar rim.
7. Screw on lids and rings
8. Process in a boiling water bath: pints 25 minutes; quarts – 30 minutes.

7. Home Made Fruit Cocktail

The one-time staple of packed lunches and gelatin salads has fallen a bit out of favor.

By making it yourself you can control the amount of sugar, and cherries! Canned in pints, this amount is perfect for two

servings. Or check your favorite gelatin salad recipe and can in appropriate size jars specific to that purpose.

Cherries, cranberries, peaches, pears, nectarines, and pineapple in the ratios you desire for the end product. *Any fruit except oranges and bananas may be used.*

1. Wash fruit, peel, core, seed or pit as needed, *if using pineapple, remove eyes*.
2. Dice larger fruits; cherries and berries may be left whole, or halved if desired.
3. Acidulate any fruit that might discolor while these preparations

are made.

Raw pack: into jars, leaving 1/2 inch of head space.

1. Pour desired strength of boiling syrup over fruit to within 1 1/2 inch of jar top.
2. Wipe jar rims.
3. Screw on lids and rings.
4. Process in boiling water bath: pints – 25 minutes; quarts – 30 minutes.

8. Plums

How about a good old-fashioned plum pudding for next year's winter holidays?

Select plums that are ripe, but not yet soft. Wash fruit; pick out any bruised or damaged fruits. Prick skin with a large needle or skewer, this prevents bursting during processing.

Raw pack: into jars, leaving 1/2 inch of head space.

1. Pour boiling syrup over fruit to within 1 1/2 inch of jar top.
2. Wipe jar rims.
3. Screw on lids and rings.
4. Process in boiling water bath: pints – 20 minutes; quarts – 25 minutes.

9. Rhubarb

This tart fruit is the perfect counterbalance to strawberries in early summer pies, or makes a fantastic topping for toast, biscuits, or ice cream on its own.

If leaves are still attached, cut off and dispose of them. Rhubarb leaves are inedible. Wash stems; cut away any damaged areas. Cut into 1 inch lengths.

Raw pack: tightly to within 1/2 inch of top.

1. Fill with boiling syrup to within 1 1/2 inch of top of jar.
2. Screw on lid and rings tightly.
3. Process in boiling water bath: pints

and quarts both 15 minutes.

10. Strawberries

- 1 cup sugar
- Approximately two pounds strawberries
- 1/2 cup strawberry juice

Method

1. Wash berries.
2. Sort through berries, removing bruised, damaged and ones that are too soft, setting them aside.
3. Remove stems, bruises, and damage from poor quality berries.

4. Crush and heat these berries through to obtain juice.
5. Drain juice from berries using a sieve.
6. Return to pan.
7. Add sugar to juice and bring to boiling for three minutes.
8. Set aside to cool.
9. Stem berries to be canned; placing them in a large, non-reactive bowl or pot.
10. Set aside until juice has cooled to about room temperature.
11. When juice has cooled sufficiently, pour juice over berries, cover, and set aside for 3-5 hours.
12. After this time, pack into jars to within 1/2 inch of top.

13. Make sure to divide juice evenly among the jars.
14. Screw on lid and rings.
15. Process in boiling water bath: pints and quarts both 15 minutes.

Fruit Juices

1. Apricot Nectar

Calling this fruit's juice "nectar" is a bit of a misnomer. True nectars are produced only by the flowering plant itself. Hummingbirds and insects consume this sweet fluid. What we get from the fruit is juice.

1. Use only blemish and bruise free, ripe fruit.
2. Wash, pit,and slice fruit.
3. For every pound, approximately

three cups of sliced fruit, add two cups of water.

4. For a slightly more tart flavor, crack a few pits, remove the inside kernels and add the kernels to the pot. Bring to a simmer until fruit is soft. Remove from heat and press through a fine sieve.
5. Return to clean pot.
6. Add sugar to taste, if desired.
7. Heat slowly and stir until sugar is dissolved.
8. If no sugar is being used, heat just to a simmer.
9. Pour into hot jars, leaving 1/2 inch of head space.
10. Screw on lids and rings.
11. Process pints and quarts in boiling

water bath for 10 minutes.

2. Berry Juice

All berries, cherries, and currents may be juiced and canned. The flavor becomes brighter if the fruit is crushed, cooked, strained, and sugar is added, about one cup of sugar to each gallon of juice.

Use ripe fruit that is not bruised or damaged.

1. Crush fruit.
2. Put a small amount of water in a pot, *enough to cover the bottom of the pan to a depth of not more*

than a half-inch.

3. Add crushed fruit and over medium-low heat bring to a simmer, stirring frequently.
4. Continue simmering until fruit is soft.
5. Strain fruit through a double thickness of cheesecloth set into a colander or sieve.
6. For a clear juice, do not press on the fruit; let gravity do all the work.
7. Return juice to pan, add sugar, and return to a simmer, stirring frequently.
8. Pour into jars, leaving 1/2 inch of head room.
9. Screw on lids and rings.
10. Process pints and quarts in boiling

water bath for 10 minutes.

3. Cranberry Juice

Cranberry juice has long been thought to have curative properties and health benefits. Use by itself, or mix with other fruit juices.

1. Pick over berries; wash well.
2. For each cup of berries, add one cup of water.
3. Bring to boil; maintain boil for 15 minutes.
4. Strain juice through cheesecloth bag. ***Do not squeeze bag!***
5. When all the juice has dripped through, return the pulp to the kettle.

6. Using the original measurement of berries, add 1/2 cup of water for every four cups of berries.
7. Bring to a boil; maintain boil for two minutes.
8. Strain juice through cheesecloth bag.
9. Squeeze fruit to extract all the juice.
10. Combine the two extractions in a clean pot or kettle, measuring juice.
11. For each quart of juice, add one cup of sugar. Stir well. Bring to a boil. Pour into hot jars leaving 1/2 inch of head space.
12. Wipe jar rims, screw on lids and rings.
13. Process both pints and quarts in

boiling water bath for 10 minutes.

4. Grape Juice

1. Stem and wash ripe grapes.
2. Place in pot or kettle and cover with water.
3. Heat slowly to a simmer; ***do not boil the grapes***.
4. Simmer until grapes are very soft.
5. Strain through a cheesecloth bag.
6. * Measure juice, and add ½ cup of sugar to each quart of juice.
7. Pour into hot jars, leaving 1/2 inch of head space.
8. Wipe rims, screw on lids and rings.
9. Process both pints and quarts in

boiling water bath for 10 minutes.

**Stop here to make grape jelly. See recipe under Jellies, Jams, and Marmalades section.*

5. Grapefruit Juice

If you are fortunate to live where you can get fresh picked, tree-ripened grapefruit, you can retain that flavor for year-round use by canning grapefruit juice.

You must work quickly so the fruit is not exposed to air any more than absolutely necessary.

1. Wash fruit, cut in half and ream the juice from the fruit.
2. Pour juice into sterilized jars, leaving 1/2 inch of head space.
3. To prevent discoloring while stored, add 1/2 teaspoon of ascorbic acid to each quart (1/4 teaspoon per pint). Wipe rims, screw on lids and rings.
4. Process both pints and quarts in boiling water bath for 20 minutes.

6. Tomato Juice

1. Using firm, ripe tomatoes, wash, scald, remove peels and any bruises or damage.
2. Cut into small pieces and place in

pot or kettle.

3. Simmer until soft, stirring occasionally.
4. Put through sieve, being careful to not press seeds through.
5. Put juice in clean pot or kettle and bring to a boil.
6. Pour into hot jars leaving 1/2 inch of head space
7. Wipe rims, screw on lids and rings.
8. Process both pints and quarts in boiling water bath for 15 minutes.

7. Vegetable Juice Combination

Use this savory juice as a base for soups or as a refreshing beverage.

1. Using firm, ripe tomatoes, wash, scald, remove peels and any bruises or damage.
2. Cut into quarters, measure and set aside.
3. For each quart of tomatoes, place one chopped, medium-sized onion (white or yellow); 1/2 green bell pepper (seeded & deribbed), chopped; two stalks of celery, leaves set aside and stalks chopped; 1 clove garlic, thinly sliced; 1/4 teaspoon mustard seed, and 1 1/2 teaspoons of salt in a non-reactive container.
4. Mix, cover and set aside for at least four hours, and up to 12 hours.
5. To the tomatoes, add the leaves

from the celery stalks, one small bay leaf, and two whole cloves. Mix, cover, and set aside in a non-reactive container.

6. When resting time has been completed, combine the two mixtures and add 1 teaspoon lemon juice.
7. Heat until tomatoes release their juice.
8. Remove from heat and strain juice from vegetables using a food mill to press out about half of the pulp.
9. Discard remaining pulp.
10. Heat reserved juice and pulp in a clean pot or kettle until boiling.
11. Pour into hot jars leaving 1/2 inch of head space

12. Wipe rims, screw on lids and rings.
13. Process both pints and quarts in boiling water bath for 15 minutes.

Fruit Jam

The following fruits make excellent jam: Apples, Apricots, Blackberries, Blueberries, Cherries

Citrus Fruits, Cranberries, Currants, Elderberries, Figs, Gooseberries, Grapes, Guavas, Melons, Nectarines, Peaches, Pears, Pineapple, Plums, Quinces, Raspberries, Rhubarb, and Straberries.

Most follow similar recipes: cooked fruit and sugar, which is then put in jars and water bath processed. Jam is one of the easiest ways to preserve a harvest at home.

1. Apricot Jam

Use firm fruit that may be just slightly under ripe.

1. Scald and remove peels.
2. Cut in half and remove pits, reserving a few pits.
3. Slice halves thinly. Measure.
4. For every quart of apricot slices, add 1 3/4 cups of sugar, and one chopped pit kernel. To get the pit kernel, crack the pit open and remove the soft kernel held within.
5. Put this mixture in a non-reactive pot or kettle and cook over medium heat for an hour, stirring frequently. Mash any fruit pieces that did not break up during the cooking.

6. Jam is ready for processing when it is thick and sticky.
7. Place jam in hot jars leaving 1/2 inch of head space
8. Wipe rims, screw on lids and rings.
9. Process pints for 15 minutes in a water bath.

2. Berry Jam

Use either raspberries or blackberries or a combination of the two.

1. Pick through, removing stems and unripe berries.
2. Wash and measure the berries. For each quart of berries, use 3 ½ cups of sugar and two

tablespoons of lemon juice *(lemon juice is set aside for now)*.

3. In a non-reactive bowl, pot, or kettle, alternate layers of berries and sugar. Cover container and let this mixture stand undisturbed overnight.
4. The next day, stir in lemon juice and bring the whole mixture to a boil.
5. Skim off any scum that rises and continue cooking until thick but not stiff. *Jam will continue to thicken as it cools.*
6. Pack hot jam into hot pint jars leaving 1/2 inch of head space
7. Wipe rims, screw on lids and rings.
8. Process pints for 15 minutes in a

water bath.

3. Grape Jam

While Concord grapes are the deepest in flavor, other varieties may be used. You may have to adjust the ratio of sugar to fruit for other varieties. Try using wild grapes, if they are available in your area. Each 1 1/2 pounds of grapes will make approximately one pint of jam.

1. Wash and stem grapes; include a few that are still green for added tartness.
2. Measure the grapes.*This recipe is based on ten cups of grapes.*
3. Scald half the grapes and slip the

skins off, reserving these skins.

4. Place all the grapes in a pot or kettle and cook over low heat and cook about ten minutes, or until grapes are very soft.
5. Run grapes through a food mill, removing seeds and remaining skins; discard seeds and skins.
6. Measure three cups of strained grapes and put in clean pot or kettle.
7. Stir in two cups of water and the reserved skins.
8. Cover and cook mixture for ten minutes.
9. Uncover and stir in 4 1/2 cups sugar.
10. Raise heat and bring to a boil.

11. Continue boiling, removing scum that rises, until mixture is thickened.
12. Pour jam into hot pint or half-pint jars leaving 1/2 inch of head space.
13. Wipe rims, screw on lids and rings.
14. Process in water bath for 15 minutes.

4. Grazberry Jam

You won't find the name of this jam in any other cookbook. This jam is made of a combination of tart gooseberries and sweet red raspberries!

1. Measure and place washed and picked over gooseberries in a non-

reactive pot or kettle.

2. Cover with cold water and place pot over low heat.
3. Bring the pot to a boil slowly; simmer gently for one hour.
4. Berries should have turned into a soft, mushy consistency.
5. Pour mush into a jelly bag and let the juices drip through. ***Do not squeeze the bag.*** Allow gravity to do all the work.
6. Measure resulting juice and place into a clean pot or kettle.
7. Add four cups of sugar for every five cups of gooseberry juice in the pot.
8. In a separate container place two cups of washed, picked over

raspberries for each cup of gooseberries you measured out at the beginning of the cooking time.

9. To the pot place an additional 3/4 cup of sugar for every two cups of raspberries you just measured out *(put only the sugar in the pot, keep the raspberries reserved for now)*.
10. Stir sugar and gooseberries together and cook over low heat until sugar is dissolved.
11. Bring to a boil, stirring frequently.
12. Once a boil has been reached, gently stir in the raspberries and return to boiling.
13. Reduce heat slightly, but maintain a boil for fifteen minutes.
14. Jam should be thickened, but not

stiff. Pack into hot pint jars, wipe rims, screw on lids and rings.

15. Process pints for 15 minutes in a water bath.

5. Peach Jam

This jam may be made with only the fruit, sugar, and water, or it may be spiced.

To spice the jam, place the following into a small bag made of cheesecloth: one cinnamon stick, one teaspoon of whole cloves, and 1/2 teaspoon of whole allspice. Tie the bag shut with kitchen string and add to the peaches at the same time as you add the water. Remove the bag before pouring the jam

into jars. Make one spice bag for every 6 cups of peaches used.

1. Wash, scald, peel, pit, and measure ripe peaches.
2. Place in pot or kettle and crush with a potato masher.
3. Add 1/2 cup of water for every six cups of peaches *(and spice bag, if used*).
4. Cook gently for ten minutes, then add sugar equal to the amount of peaches first measured.
5. Continue cooking over low heat, stirring until sugar dissolves, and bring to a boil.
6. Raise heat and cook rapidly for

fifteen minutes, stirring frequently.
7. Mixture should be thick.
8. Pour jam into hot pint jars leaving 1/4 inch of head space
9. Wipe rims, screw on lids and rings.
10. Process pints for 15 minutes in a water bath.

6. Strawberry Jam

Pectin must be added to strawberries to obtain the correct thickness. Pectin adds no flavor, so you still get the wonderful, fresh bouquet of this summer delight.

- 8 cups clean strawberries, stems removed

- 1 package pectin (Sure Jell Pectin, 1.75-Ounce, 4-Count)
- 2 Tbsp lemon juice
- 7 cups sugar

Method

1. Crush berries in a large bowl.
2. You should end up with about 4 1/2 cups of berries.
3. In a pot or kettle, combine berries, pectin, and lemon juice.
4. Bring to a full boil and stir in sugar.
5. Return to a full boil for one minute, stirring constantly.
6. Turn off heat and skim foam.
7. Pour into hot pint or half-pint jars, leaving 1/4 inch of head space.

8. Wipe rims, screw on lids and rings.
9. Process pints for 15 minutes in water bath.

Fruit Jellies

Because of their high acid content, jellies that are sealed in sterile jars with melted paraffin do not need further processing. Be very careful when handling the boiling jelly and the melted paraffin. Both can cause severe burns if they get on skin. Melt paraffin in a double boiler.

To sterilize the jars, wash them in sudsy water, rinse well, and place in a deep kettle of water. Bring water to a boil and continue boiling for ten minutes. Turn off the heat and let the jars remain in the water until they are ready to fill with jelly.

To seal with paraffin, spoon a thin

layer of paraffin over hot jelly, carefully turning the jar so that the paraffin adheres to jar sides. Prick any bubbles that form. When the paraffin cools, spoon another thin layer of melted paraffin over top the first; repeat the turning and pricking so that a solid seal is established. Total thickness of the paraffin should be at least 1/8".

If you wish to process in a boiling water bath rather than sealing with melted paraffin, wipe rims, screw lids and rings into place, and process for five minutes.

- Some jellies can be made without added pectin, but doing so requires

more precise temperature control. A candy thermometer is helpful for this, but not required.

- The jelling stage is reached when the jelly hits 8°F above boiling for your altitude.
- Without a thermometer, test for jelling by dipping a metal spoon into the jelly and hold it above the kettle, tipped on its side.
- Watch for two drops to run together and sheet off the spoon. When this happens, the jelly is done. Not all fruits have enough naturally occurring pectin in them to jell.
- Powdered pectin may be used or you make your own using the recipe below. If using homemade pectin,

allow one cup of apple pectin per cup of fruit juice.

- Usually 3/4 of a cup of sugar is added for each cup of combined juice.
- Juice used in jelly making should be as clear as possible. Allow the pulp to drip through the jelly bag (or substitute several layers of cheesecloth draped over a colander or sieve) overnight by tying it to a cupboard door handle or knob with the kettle or bowl underneath.

Jellies, especially those sealed with paraffin, must be stored in a cool, dry place.

1. Home Made Apple Pectin

- 7 large apples, any tart variety
- 4 cups water
- 2 Tbsp lemon juice

Method

1. Wash apples, cut into chunks.
2. Place in heavy pot or kettle with water and lemon juice.
3. Boil for 40 minutes.
4. Strain through jelly bag overnight.
5. Carefully pour juice off any sediment in bottom of bowl into a heavy pot or kettle.
6. Bring juice to a boil.

7. Pour into sterile half-pint jars leaving 1/4 inch of head space.
8. Screw on lids and rings.
9. Process jars for five minutes in a boiling water bath.

2. Apple Jelly

Use three pounds of tart apples. Try Granny Smith, Pink Lady, or Braeburn varieties. McIntosh and Rome may also be used. Combinations may also be used.

To spice the jelly, add one or two cinnamon sticks with the sugar; remove the sticks before pouring into jars.

To make mint jelly, bundle one cup of

packed fresh mint leaves in a cheesecloth bag. Pound the bag lightly with a rolling pin or pestle to bruise the leaves. Add the bag *(and six drops of green food coloring, if desired*) with the sugar. Remove the bag before pouring into jars.

1. Wash apples and cut into chunks.
2. Place in a heavy pot or kettle with five cups of water.
3. Bring to a boile, reduce heat, and cover.
4. Simmer gently for thirty minutes or until apples are very soft, stirring occasionally.
5. Strain apple mush through a jelly

bag, or through several layers of cheesecloth that has been draped over a colander. ***Do not squeeze pulp.*** Allow gravity to do all the work.

6. Measure resulting juice and if necessary, add enough water to measure four cups of liquid.
7. Put liquid in a clean pot or kettle, add three cups of sugar, and heat, stirring constantly, until sugar is dissolved.
8. Bring to a full boil and continue boiling for twelve minutes, or until jelling stage has been reached.
9. Remove from heat, skim off foam, and pour into hot, sterile jars, leaving 1/4 inch of head space.

10. Seal with paraffin, or process in boiling water bath.
11. Makes four half-pints.

3. Blackberry Jelly

1. Wash and pick through one quart of fresh, slightly under ripe blackberries.
2. Place in a heavy pan and cook over low heat until soft.
3. Press through a jelly bag or several layers of cheesecloth over a colander.
4. Measure juice, put into a clean pan and bring to a boil.
5. Add 1 1/2 cups of sugar for each cup of juice.

6. Take off heat immediately and stir until sugar is dissolved.
7. Pour into sterile half-pint jars, leaving 1/4 inch of head space.
8. Seal with paraffin, or process in boiling water bath. Makes four half-pints.

4. Grape Jelly

1. Wash, stem and crush grapes in a pot or kettle that has about 1/4 inch of water in the bottom.
2. Bring to a boil, and continue boiling 15 minutes.
3. Strain fruit through jelly bag or several layers of cheesecloth that has been draped over a colander.

4. Do not squeeze.
5. Allow juice to stand overnight.
6. Carefully pour juice off the sediment in the bottom of the bowl.
7. Measure juice and add 3/4 cup of sugar for each cup of juice.
8. Boil rapidly, stirring frequently, until jelly stage is reached.
9. Pour into sterilized half-pint jars leaving 1/4 inch of head space and seal with paraffin or process in boiling water bath.

5. Strawberry Jelly

1. Wash and stem berries.
2. Cover the bottom of a heavy pot or kettle with water.

3. Add berries and crush with a potato masher.
4. Cook over medium-low heat until a simmer is reached, stirring frequently.
5. Continue cooking until berries are soft and mushy.
6. Strain through a jelly bag overnight. ***Do not squeeze.***
7. Measure juice, place in a clean pan, add an equal amount of apple pectin *(or commercial pectin as directed by package)* pan, and add 1 cup of sugar per cup of strawberry juice.
8. Bring to a rapid boil, stirring frequently, and boil until the jelly stage is reached.

9. Pour into sterilized half-pint jars leaving 1/4 inch of head space and seal with paraffin or process in boiling water bath.

Fruit Butters

1. Apple Butter

- 12-15 pounds tart cooking apples
- 1 cup of apple cider vinegar
- 8 cups of sugar
- 4 teaspoons of ground cinnamon
- Water

Method

1. Wash, core and slice apples.
2. Put in pot or kettle and add just a

little water.

3. Cook until apples are soft, adding water as needed to keep from scorching.
4. Press pulp through a fine sieve; discard seeds and skins.
5. Measure 16 cups of pulp and place in clean pot.
6. Add the apple cider vinegar, 8 sugar and ground cinnamon.
7. Cook uncovered on low heat until it boils.
8. Continue cooking for about 1 and a half hour, stirring frequently.
9. Pour into sterile pint jars leaving 1/2 inch of head space.
10. Wipe rims, screw on lids and rings
11. Process in boiling water bath for

10 minutes.

2. Peach Butter

- 12 pounds peaches
- 6 cups sugar
- 2 tsp nutmeg
- 2 tsp ground cinnamon

Method

1. Scald, peel, and pit peaches.
2. Cook to a pulp using as little water as possible.
3. Press through a sieve.
4. Measure pulp, and put it in a clean pot.

5. Add 1/2 cup sugar for each cup of pulp.
6. Cook until thick and clear.
7. For every three cups of pulp measured above, add 1/2 teaspoon each of ground nutmeg and ground cinnamon.
8. Pour into sterile pint or quart jars, leaving 1/2 inch of head space.
9. Wipe rims, screw on lids and rings
10. Process in boiling water bath for 10 minutes.

Fruit Marmalades

1. Apricot Marmalade

- 2 cups dried apricots
- 4 cups water
- 1 3/4 – 2 cups sugar

Method

1. Put dried apricots in pan; add the four cups of water and soak for 8 hours.
2. When soaking time has been

completed, place pan on heat and simmer until very soft.

3. Rub through a sieve and return pulp to the heat.
4. When pulp boils, add sugar and simmer gently for about 45 minutes. Stir nearly constantly.
5. Try adding 1/2 teaspoon ground cinnamon, or 1 tablespoon chopped raisins, or one grated orange peel to the pulp during cooking.
6. Pour into sterile half-pint jars, leaving 1/2 inch of of head space.
7. Wipe rims, screw on lids and rings
8. Process in boiling water bath for ten minutes.

2. Apricot-Prune Marmalade

Make the same as the Apricot Marmalade recipe above, but substitute prunes for half of the apricots.

3. Grapefruit Marmalade

- 3 grapefruit
- Water
- Sugar
- ¼ cup lemon juice

Method

1. Wash and remove peel from fruit.
2. Cut peel into very thin slices.
3. Put in a pot with two quarts of water.

4. Bring to a boil, and continue boiling for five minutes.
5. Drain peel slices in a fine sieve.
6. Return peel slices to pot and add another two quarts of water.
7. Again, bring to a boil and continue boiling for five minutes.
8. Drain and repeat the process one more time. Set aside.
9. Roughly chop fruit, removing seeds and membranes.
10. Combine fruit pulp and cooked peel slices and measure.
11. Place in a heavy pot or kettle with twice the amount of water as there is of the pulp and peel mixture.
12. Boil rapidly for 40 minutes.
13. Measure again, and put in a clean

pot, adding one cup of sugar for each cup of fruit.

14. Add lemon juice and boil rapidly until jelly stage is reached, stirring frequently.
15. Pour into sterile half-pint jars, leaving 1/2 of head space.
16. Wipe rims, screw on lids and rings, and process in boiling water bath for ten minutes.

4. Orange Marmalade

- 4 Seville oranges
- 3 lemons
- Water
- Sugar

Method

1. Slice oranges and lemons as thickly

as desired.

2. Place in a pot or kettle with six cups of water.
3. Cover and boil for one hour.
4. Strain mixture, reserving water.
5. Remove seeds from fruit and place into a cheesecloth bag.
6. Place this bag into the cooking water.
7. Add 2-3 cups of sugar and place over low heat, stirring constantly, until sugar is dissolved.
8. Turn up heat and boil for five minutes. Remove seed bag and add fruit slices to pan.
9. Immediately turn off heat.
10. Remove seeds from bag and place in sieve.

11. Press to extract as much pectin as possible.
12. Return pectin to pan, turn on heat and bring to a boil for up to an hour, or until jelling point is reached.
13. Skim off any foam as needed.
14. Pour into sterile half-pint jars, leaving 1/2 inch of head space.
15. Wipe rims, screw on lids and rings
16. Process in boiling water bath for ten minutes.

Fruit Chutneys

Chutneys are usually combinations of fruits with vinegar, seasoned with sugar and spices. A couple centuries ago chutneys were looked down upon, viewed only as a poor man's food. Today chutneys are revered by epicureans exploring new flavor combinations. Here are a few examples.

1. Cantaloupe Chutney

Melons are notoriously hard to preserve as they contain such a high level of water and sugar. Here is one way to

enjoy the flavor of one of summer's finest treats.

- 3 medium cantaloupes
- 1 pound dried apricots
- 1 fresh hot chili
- 2 cups raisins
- 1 tsp ground cloves
- 1 tsp ground nutmeg
- 2 Tbsp salt
- 2 Tbsp mustard seed
- 1/4 cup fresh ginger, chopped
- 3 cloves garlic
- 4 1/2 cups apple cider vinegar
- 2 1/4 cups brown sugar
- 4 onions (medium)
- 1/2 cup orange juice

- 2 Tbsp orange zest

Method

1. Slice apricots thinly and place in a large bowl.
2. Finely chop ginger and garlic and add to bowl.
3. Stem, seed and dice chili, and add to bowl.
4. Also add raisins, cloves, nutmeg, salt, and mustard seeds.
5. Mix and set aside.
6. In a non-reactive pot or kettle, combine vinegar and sugar; bring to boiling over medium heat.
7. Add mixture in bowl to the pot and return to a gentle simmer.

8. Maintain simmer for 45 minutes. ***Do not cover pot.***
9. Meanwhile, chop onions and place in a bowl.
10. Quarter cantaloupes, peel and seed them.
11. Cut fruit into 1/2inch cubes.
12. Add to onions.
13. Add orange juice and zest to the bowl; combine well.
14. When vinegar mixture has completed 45 minutes of simmering time, add cantaloupe mixture to pot, bring back to a simmer, and continue cooking at the simmer for another 45 minutes or until thickened.
15. Pour into hot jars, wipe rims,

screw on lids and rings.

16. Process in boiling water bath: pints and quarts both 10 minutes.

2. Mango Chutney

- 6 cups sliced green mangos
- 1/2 pound fresh ginger
- 3 1/2 cups currants (de-stemmed)
- 8 cups sugar
- 2 cups vinegar
- 3 tbsp ground cayenne pepper
- 1 tbsp salt

Method

1. Peel the ginger and divide in half.

2. Thinly slice one half of the ginger; coarsely chop the other half of the ginger.
3. Using a blender or food processer, grind the chopped ginger with half of the currants until well combined. Place everything except the mangoes into a saucepan.
4. Cook for 15 minutes over medium heat.
5. Meanwhile, peel, halve, pit and slice green mangos to make 6 cups.
6. After mixture has simmered for 15 minutes, add the mangos and simmer another 30 minutes or until mangos are tender and mixture has thickened.
7. Pour into hot jars, wipe rims,

screw on lids and rings.

8. Process in boiling water bath: pints and quarts both 10 minutes.

3. Spicy Green Tomato Chutney

- 2 1/2 cups spiced cider vinegar (recipe included)
- 3 cups shallots, finely chopped
- 2 quarts small green tomatoes, peeled and thinly sliced
- 1 teaspoon celery salt
- 4 cups finely chopped apples *(Granny Smith or other tart variety)*
- 2 sweet red or green peppers
- Dried hot chilies (*four to six depending on heat strength)*

- 2 1/4 cups brown sugar
- 2 cups ripe tomatoes, peeled and chopped
- Salt

Method

To make spiced vinegar:

1. Combine 2 1/2 cups apple cider vinegar, one cinnamon stick, 1 teaspoon each of whole allspice, whole cloves, black peppercorns, and ½ teaspoon ground nutmeg in a medium sized cooking pot.
2. Place on heat and bring almost to the boiling point.

3. Remove from heat immediately and let cool to room temperature.
4. Strain before adding to chutney.

To peel green tomatoes:

1. Place in heat proof bowl, pot, or kettle.
2. Pour boiling water over to cover and allow them to rest for three minutes.
3. Pierce peel with the tip of a sharp knife and pull skin away.
4. Slice these tomatoes very thinly.
5. In a colander set over a bowl or in a sink layer green tomato slices with salt.
6. Allow them to drain for two hours.

Meanwhile:

1. Peel, core and finely chop tart apples to make 4 cups.
2. Place in acidulated water until ready to use.
3. Clean shallots and chop them finely to make 3 cups.
4. Prepare sweet peppers by washing, halve, seed and de rib.
5. Place under broiler or over open flame until skin is charred and coming away from the flesh. Remove skin; thinly slice peppers.
6. Place chilies in a cheesecloth bag.
7. At the end of two hours, rinse green tomatoes.

8. In a large pot, combine green tomato slices,strained spiced vinegar, shallots, apples, hot chili bag, brown sugar, and celery salt.
9. Bring to a boil, then simmer for 15 minutes, or until most of the excess liquid has evaporated.
10. Add broiled sweet peppers and ripe tomatoes.
11. Simmer until thick *(about an hour)*.
12. Remove chili bag.
13. Pour into hot jars, wipe rims, screw on lids and rings.
14. Process in boiling water bath: pints and quarts both 10 minutes.

Vegetables

Vegetables, except pickled varieties, generally require less preparation than fruits, but they always require processing by pressure canner due to the lack of acidity.

Follow the chart in the Pressure Canning chapter to can vegetables plain. If combining vegetables, use the cooking time of the vegetable that takes the longest to process.

1. Sweet Corn Salad

- 10 cups corn kernels
- 2 green bell peppers
- 1 red bell pepper
- 4 onions *(yellow or white)*

- 1 tsp celery seed
- 1 Tbsp dry mustard
- 2 2/3 cups white wine vinegar
- 2 2/3 cups sugar
- 1/2 tsp ground turmeric

Method

1. Halve, seed, and de-rib peppers.
2. Chop coarsely, to the size of a corn kernel.
3. Chop onions to the same size.
4. Toss all ingredients into a heavy pot or kettle.
5. Heat to a slow boil and continue cooking at this temperature for ten minutes or until vegetables are tender.

6. Pour into hot jars, making sure all jars get equal amounts of liquid.
7. Wipe rims, screw on lids and rings.
8. Process in a pressure canner: pints – 55 minutes; quarts – 85 minutes

2. Garden Vegetable Medley

- 2 cups diced carrots
- 2 cups green beans (1 inch cuts)
- 2 cups sliced celery
- 2 cups cauliflower florets
- 2 cups fennel
- chopped 2 cups small boiling onions
- 2 green bell peppers
- 4 cups white wine vinegar
- 1/3 cup olive oil

- 1/2 cup salt (kosher)
- 1/2 cup sugar

Method

1. Prepare all the vegetables in similar sized pieces.
2. Set aside in separate containers.
3. Combine vinegar, oil, salt, and sugar in a non-reactive pot or kettle.
4. Bring to a boil.
5. Add vegetables in this order, allowing liquid to return to a boil between each: carrots, beans, celery, cauliflower, fennel, and lastly the peeled, whole onions.
6. Cook only until carrots are tender-

crisp.

7. Add the peppers and cook one more minute or less, just to heat the peppers through.
8. Pour into hot jars, making sure all jars get equal amounts of liquid.
9. Wipe rims, screw on lids and rings.
10. Process in a pressure canner: pints – 25 minutes; quarts – 30 minutes.

3. Mixed Vegetables, Italian Style

- 4 cups tomatoes, chopped
- 1 cup carrots, chopped
- 1 cup celery , chopped
- 1 cup green beans, cut into 1 inch pieces
- 1 large bell pepper

- 3 cups zucchini, chopped
- 1 cup small boiling onions
- 1/2 cup olive oil
- 1 1/2 tsp salt (kosher)
- 1 Tbsp sugar
- 2 cups white vinegar
- 6-8 fresh sage leaves
- 1 cup fresh basil leaves
- ¼ tsp grated nutmeg
- 2 Tbsp capers (if desired)
- 3 cups pickling cucumbers, sliced

Method

1. Cook tomatoes over low heat until they become a thick puree.
2. Press through food mill to remove skin and seeds and put in clean pan.

3. Stir in oil, salt, sugar and 1 1/4 cup of the vinegar.
4. Bring to a boil.
5. Add carrots, celery, beans and onions (peeled) and cook for five more minutes.
6. Add the peppers, zucchini, sage, basil and nutmeg; cook until vegetables are tender-crisp (3-5 minutes).
7. Remove pan from heat.
8. In another pot, heat remaining vinegar to a boil and cook the cucumber slices in it until soft, about ten minutes.
9. Drain cucumbers and add them to the first pot.
10. Add capers, if used.

11. Pour into hot jars, making sure all jars get equal amounts of liquid.
12. Wipe rims, screw on lids and rings.
13. Process in a pressure canner: pints – 25 minutes; quarts – 30 minutes.

Relishes

1. Beet-Cabbage Relish

- 2 cups chopped boiled beets
- 2 cups chopped cabbage
- 1/4 tsp ground white pepper
- 1/8 tsp red pepper flakes
- 1/2tsp salt
- 1 cup sliced celery
- 3/4 cup sugar
- 1 cup white vinegar
- 1/2 cup water

Method

1. Scald beets in boiling water, remove peels.
2. Chop beets into 1/2 inch cubes, put in non-reactive kettle or pot add water to cover, boil until tender.
3. Remove beets to a clean pot or kettle; reserve cooking water.
4. Mix all ingredients in kettle, measuring 1/2 cup cooking water.
5. Heat until boiling.
6. Place in hot pint jars, making sure all jars get equal amounts of liquid.
7. Wipe rims, screw on lids and rings.
8. Process in boiling water bath for 5 minutes.

2. Sassy Southern Relish

- 2 cups sweet red peppers, seeded and chopped
- 4 cups cabbage, chopped
- 2 cups sweet green peppers, seeded and chopped
- 2 Tbsp celery seed
- 2 cups white or yellow onions, chopped
- 1/4 cup mustard seed
- 4 cups white vinegar
- 1/4 cup salt
- 1/2 cup sugar
- 2 hot peppers, seeded and chopped (to taste)

Method

1. Wash, seed, de-rib, and chop all the peppers.
2. Wash and chop cabbage.
3. Peel and chop onions.
4. Combine vegetables in a non-reactive bowl, pot, or kettle.
5. Cover with salt and let stand at room temperature overnight.
6. Drain, add spices, sugar and vinegar to veggies without heating.
7. Pack into sterile pint jars, leaving inch inch of head space.
8. Wipe rims, screw on lids and rings.
9. Process in boiling water bath for 5 minutes.

3. Sweet and Sour Hot Dog Relish

- 24 red bell peppers
- 7 medium white or yellow onions
- 2 Tbsp mustard seed
- 2 Tbsp salt
- 3 cups white vinegar
- 3 cups sugar

Method

1. In a food processer, combine the peppers and onions until they look ground.
2. Place peppers and onions and their juices in a heavy kettle or pot and add remaining ingredients.
3. Boil for 30 minutes.
4. Pack into sterile pint jars, leaving 1/2 inch of head space.

5. Wipe rims, screw on lids and rings.
6. Process in boiling water bath 5 minutes.

4. Chow-Chow & Piccalilli

These two relishes are so similar that their names are sometimes used interchangeably. Chow-Chow seems to have originated with the French Canadians, and brought south to the US during a time of heavy immigration.

The French *chou* is the word for cabbage. Chow-Chow is used primarily as a condiment for mashed potatoes, meats, fish cakes, and biscuits. There is an unsubstantiated opinion that the term comes from Chinese cuisine.

In Great Britain, Piccalilli that is made of coarsely chopped vegetables is served on a plate as an accompaniment to a dish. When it is made of finely chopped vegetables, it is used as a spread on breads or in meat sandwiches.

Chow-Chow appears to be somewhat hotter in spice, with the vegetables finely chopped. Piccalilli is usually sweeter and chunkier. Both use many combinations of regionally available vegetables and spices. In other words, like chutneys, there is no right or wrong when it comes to either Chow-Chow or Piccalilli!

Chow-Chow

- 1 head green cabbage
- 1 head cauliflower
- 1/2 pound small boiling onions
- 6 small pickling cucumbers
- 6 small firm red tomatoes
- 3 bunches celery
- 1 gallon vinegar
- 1/2 cup dry mustard
- 1/2 cup mustard seeds
- 1/4 cup prepared Dijon mustard
- 1/4 cup ground turmeric
- 2 Tbsp ground cloves

Method

1. Wash, quarter, core, and chop

cabbage into small pieces.

2. Wash, quarter, core, and separate cauliflower into florets.
3. Peel onions.
4. Wash cucumbers and tomatoes.
5. Wash celery, remove leaves, and chop.
6. Cook vegetables separately until tender.
7. Drain immediately and toss together in a large bowl.
8. In a non-reactive pot or kettle, combine vinegar, dry mustards, mustard seeds, Dijon mustard, turmeric, and cloves.
9. Heat until mixture boils.
10. Turn down heat to maintain a simmer while packing vegetables

into canning jars.

11. Pack mixed vegetables into hot pint jars, leaving 1/2 inch head space.
12. Pour boiling vinegar mixture over vegetables, making sure some mustard seed gets into each jar.
13. Wipe rims, screw on lids and rings.
14. Process in a boiling water bath for fifteen minutes.

Piccalilli

- 4 cups chopped cabbage
- 4 cups chopped green tomatoes
- 2 large onions (white or yellow)
- 2 sweet red peppers, chopped
- 4 Tbsp salt
- 1 1/2 cups vinegar

- 1 1/2 cups water 2
- cups packed brown sugar
- 1 tsp dry mustard
- 1 tsp turmeric
- 1 tsp celery seed

Method

1. Place chopped vegetables in a non-reactive bowl, pot, or kettle.
2. Mix with the salt and let stand overnight.
3. Drain the next day, pressing with a plate to remove as much liquid as possible.
4. In a non-reactive pot or kettle, boil vinegar, water, sugar, and spices for five minutes.

5. Reduce heat to a simmer until vegetables are packed.
6. Pack vegetables into hot pint jars leaving 1/2 inch head space.
7. Pour vinegar mixture over vegetables.
8. Wipe rims, screw on lids and rings.
9. Process in a boiling water bath for fifteen minutes.

Pickles

Whether sweet or tangy, pickles can light up a simple lunch or dinner with their rich, dense flavors. Problems sometimes occur during pickling. While these do not make the pickles inedible, they are not as good as they should be. The following are three of the issues that might come up, plus their cause. Corrective measures should be taken so mistakes aren't repeated.

Shriveled pickles: Salt, sugar, or vinegar solution is too strong

Hollow pickles: Cucumbers are not as fresh as they should be, or were poorly developed

Soft or slippery pickles: Too little salt or acid, an imperfect seal, or insufficient heat was maintained

1. Bread and Butter Pickles

- 4 quarts medium cucumbers sliced
- 3 cloves garlic
- 8 medium white onions, sliced
- 1/3 cup pickling (kosher) salt
- 5 cups sugar
- 3 cups cider vinegar
- 2 Tbsp mustard seed
- 1 1/2 tsp turmeric

- 1 1/2 tsp celery seed

Method

1. In a large bowl toss together cucumber and onion slices, garlic, and salt with a large amount of cracked ice.
2. Let stand for three hours; drain well.
3. Remove the garlic.
4. In a large non-reactive kettle combine the remaining ingredients.
5. Add the cucumber mixture and bring to a boil.
6. Immediately pack into hot pint or half-pint jars, leaving 1/2 inch head space.

7. Wipe rims; screw on lids and rings. Process in a boiling water bath: 5 minutes for pints or half-pints.

2. Sweet and Sassy Pickle Slices

- 5 pounds pickling cucumbers
- 1 1/4 cups pickling (kosher)salt
- 6 cups sugar
- 4 cups vinegar
- 1/2 cup prepared horseradish
- 2-3 cinnamon sticks
- 3/4 teaspoon celery seed

Method

1. Wash cucumbers, remove stems and

blemishes. *Do not use heavily damaged cucumbers.*

2. Place into a large, glass, ceramic, or plastic crock.
3. Stir salt into 10 cups boiling water.
4. When salt has dissolved, pour mixture over cucumbers.
5. Allow to cool to room temperature.
6. When cool, place a large plate in crock that covers the entire surface of the pickles.
7. Weight the plate down with a water-filled jar to keep cucumbers in the brine.
8. ***Let stand undisturbed for seven days.***
9. Drain, cover cucumbers with hot water, and let stand for 24 hours.

10. Drain, again cover cucumbers with hot water, and allow to stand for 24 hours.
11. ***Drain. Slice cucumbers as desired and return to container.***
12. Combine and heat remaining ingredients in a non-reactive pot or kettle.
13. Bring to a full boil.
14. Pour this mixture over cucumber slices.
15. Allow to cool completely, then cover and allow to stand overnight.
16. The next morning, strain mixture, reserving liquid into the kettle previously used.
17. Heat to boiling, and again pour over the cucumbers slices.

18. Again, allow to cool completely, then cover and allow to stand overnight.
19. **Repeat for a total of four nights in the brine.**
20. On the fifth day, remove the cinnamon sticks, drain the pickles, reserving the liquid in the pot.
21. Bring to a boil.
22. Pack the pickle chips into hot pint jars, leaving 1" head space.
23. Pour boiling liquid over pickles, leaving 1/2 inch" head space.
24. Wipe rims; screw on lids and rings.
25. Process in a boiling water bath for ten minutes.

3. Whole Dill Pickles

- 2 pounds pickling cucumbers (about 20-25)
- 1/2 cup dill seed
- 4 tsp mustard seed
- 7 cups water
- 3 cups apple cider vinegar
- 1/4 cup pickling (kosher) salt

Method

1. Wash cucumbers, remove stems and blossom ends.
2. Pack cucumbers loosely into hot quart jars, leaving 1/2 inch head space.
3. Split dill and mustard seeds evenly

among jars.

4. In a heavy pot, combine water, vinegar, and salt; bring to a boil.
5. Pour brine over cucumbers, dividing equally but leaving 1/2 inch head space.
6. Wipe rims; screw on lids and rings.
7. Process jars in a boiling water bath for fifteen minutes.
8. Let pickles stand at least one week before using.

4. Mustard Pickled Vegetables

- 1 head cauliflower
- 20 small green tomatoes
- 3 green bell peppers
- 4 cups pickling onions

- 24 2” pickling cucumbers
- 1 cup sugar
- 3/4 cup flour
- 1/2 cup dry mustard 1 Tbsp turmeric
- 7 cups apple cider vinegar
- 7 cups water
- 1 cup pickling (kosher) salt

Method

1. Wash cauliflower and break into florets.
2. Wash tomatoes and quarter.
3. Wash peppers, cut in quarters, remove stem, seeds, and ribs.
4. Cut into 1/2 inch strips.
5. Peel onions.

6. Wash cucumbers, removing stem and blossom ends.
7. Toss vegetables in large non-reactive bowl or pot with salt.
8. Pour a quart of water over all, and let stand overnight.
9. Drain, cover with boiling water, and let stand ten minutes. Drain.
10. Combine sugar, flour, spices, vinegar, and 3 cups of water.
11. Cook until thick.
12. Add vegetables and continue cooking until vegetables are tender-crisp.
13. Pack into pint jars, dividing liquid evenly, leaving 1/2 inch head space.
14. Wipe rims; screw on lids and rings.

15. Process jars in a boiling water bath for fifteen minutes.

5. Dilled Green Tomatoes

1. Pack clean, small, green tomatoes (stems left on) into hot, sterile quart jars.
2. Place one garlic clove, 1 stalk celery, 1 hot green pepper, and one head of dill into each jar.
3. Combine 2 quarts water, 1 quart apple cider vinegar, and 1 cup pickling (kosher) salt.
4. Bring to a boil.
5. Fill jars with liquid, leaving ½" head space.
6. Wipe rims; screw on lids and rings.

7. Process jars in a boiling water bath for fifteen minutes.

6. Watermelon Pickles

- 2 pounds watermelon rind
- 4 cups sugar
- 2 cups white vinegar
- 2 cups water
- 1 lemon, washed and sliced thinly
- 1 cinnamon stick
- 1 Tbsp whole cloves

Method

1. Trim dark green and pink flesh from rind; cut into 1” cubes.

2. Combine 1/4 pickling salt and 1 quart of water.
3. Heat and stir until salt is dissolved.
4. Pour saltwater over rind cubes. Leave overnight.
5. Drain and rinse cubes.
6. Place in heavy pot or kettle.
7. Cover with cold water and cook until tender; drain.
8. Combine sugar, vinegar, water, lemon slices in a heavy pot.
9. Place cinnamon and cloves in a cheesecloth bag and put bag in vinegar mixture.
10. Simmer mixture 10 minutes and remove spice bag.
11. Add rind cubes to vinegar mixture and continue cooking until cubes

are translucent.

12. Pour into hot, sterile, pint jars, dividing syrup evenly, leaving 1/2 inch head space.
13. Wipe rims; screw on lids and rings.
14. Process jars in a boiling water bath for fifteen minutes.

Meat, Fish and Poultry

Most plain meat, fish, and poultry are best preserved by wrapping and freezing. However, by combining these proteins with sauces or soups, nutritious meals can be quickly served without sacrificing quality ingredients.

1. Marinara Sauce with Beef

This recipe makes about one quart of sauce. Make in multiple batches as desire, up to seven quarts at a time. Most

pressure canners only hold seven quart jars at a time

- 3 Tbsp olive oil, divided
- 1/4 cup onion, finely chopped
- 1/2 tsp sea salt
- 1/8 tsp freshly ground black pepper
- 1/8 cup finely grated carrot
- 2 pounds fresh, ripe Roma tomatoes
- 1 tsp dried oregano
- 1 tsp dried thyme
- 1 tsp dried basil
- 1 tbsp finely chopped fresh garlic
- 1 pound freshly chopped or ground beef

Method

1. Drop tomatoes a few at a time into boiling water for 30 – 60 seconds. Slip peels from tomatoes and remove stem ends.
2. In a heavy pan over low heat, add 2 Tbsp oil, onions, salt, and pepper.
3. Saute until the onions are soft, but not brown, about ten minutes.
4. Add carrot shreds and continue to cook for five more minutes.
5. Crush the tomatoes by squeezing them through your fingers or using a potato masher.
6. Add tomatoes to mixture in pot. Add the herbs and garlic. Bring to a simmer and after five minutes, taste the sauce.
7. If it is not sweet enough, add up to

a tablespoon of sugar.

8. Continue to simmer until sauce has reduced to a thick consistency.
9. Puree the sauce with an immersion blender, or transfer it to a blender or food processor.
10. Process sauce until smooth.
11. Return sauce to pan and keep hot.
12. Brown meat in remaining olive oil; drain off fat and add meat to sauce.
13. Simmer five more minutes, then pour into hot, sterile quart jars.
14. Wipe rims, screw on lids and rings
15. Process for 60 minutes in a pressure canner.

2. Potted beef

- 5 pounds boneless beef roast
- 1/2 cup fresh sage
- 1/4 cup fresh thyme
- 2 tsp ground mace or allspice
- 1 grated nutmegs
- 2 Tbsp salt
- 1 Tbsp pepper
- 1 1/2 pounds butter, softened

Method

1. Roast beef in a 400°F oven for one and a half hours, or until well done.
2. Remove beef from pan and refrigerate.
3. When the beef is thoroughly chilled, remove crust and fat from

the outside of the roast.

4. Cut the meat into small bits and pound with a meat mallet or the bottom of a heavy pan or skillet.
5. Sprinkle seasonings over meat and continue pounding until they are incorporated into the meat.
6. Alternate meat and butter layers in a ceramic or stoneware jar.
7. Press the mixture down well, cover, and bake in a 350°F oven for one hour.
8. Let the beef cool. When it is cold, pour melted butter over all to seal.
9. Refrigerate.

Beef can be kept this way for up to two weeks.

3. Gefilte Fish

- 1 whitefish
- 1 carp
- 1 pike
- 1-3 eggs
- 1/4 tsp each sugar, salt, ground white pepper
- 3 carrots, sliced
- 2 medium onions, sliced

Method

1. Fillet all three fish *(any freshwater fish will do, but you should use three different varieties)*,reserving heads and bones.

2. Grind raw fish, alternating pieces, until fine.
3. Weigh fish and add one egg for each pound of fish.
4. Add salt, pepper, and sugar.
5. Shape this mixture into 1 inch diameter balls.
6. Place fish heads, bones, carrots and onions into a deep pot; cover with cold water and bring to a boil.
7. Cook at the boil for 20 minutes, replenishing with hot water as needed to keep bones covered.
8. After 20 minutes, add fish balls, return to the boil, reduce heat, and simmer for 30-40 minutes.
9. Discard heads and bones.
10. Pack fish balls, carrots, and onions

into hot jars, fill with broth leaving 1” head space.
11. Wipe rims; screw on lids and rings.
12. Process in a pressure canner for 90 minutes.

4. Salted Anchovies

- 3 pounds fresh anchovies
- 5 cups pickling (kosher) salt

Method

1. Remove heads and connecting entrails from fish.
2. In a shallow, flat pan, alternate layers of salt and fish, beginning

and ending with a layer of salt.

3. ***Set aside for 24 hours.***
4. Drain the fish on paper towels.
5. Cover the bottom of a wide-mouth jar with a layer of salt.
6. Pack a layer of anchovies together tightly, head to tail, on top of the salt.
7. Cover fish with salt, then add a layer of anchovies crosswise to the first layer.
8. Repeat layers until the jar is full, finishing with a layer of salt.
9. Place a saucer or other small disk on top of the salt.
10. Weigh disk with a water-filled jar until oil rises onto the saucer (about a week).

11. Remove the weight, spoon off the oily substance and remove the saucer.
12. Cover the jar and put it in the refrigerator.
13. Rinse anchovies with running water before using, or soak them in a cold water bath.
14. If kept refrigerated, the anchovies will keep well for 1-2 years.

5. Pickled Pig's Feet

- 8 pig's feet
- 1/2 cup pickling (kosher) salt
- 2 quarts vinegar
- 1 small hot red chili
- 2 Tbsp fresh horseradish, grated

- 1 tsp black peppercorns
- 1 tsp allspice

Method

1. Place feet in a shallow pan or tray.
2. Sprinkle with salt; let stand for four hours.
3. Wash the feet well in water, place them in a large pan of hot water, and cook for two to three hours, or until tender, but before meat falls off bones.
4. Pack the feet in hot, sterile quart jars.
5. Boil the vinegar with the chili, horseradish, peppercorns, and allspice for five minutes.

6. Pour vinegar mixture over feet, leaving 1/2 inch head space.
7. Wipe rims, screw on lids and rings.
8. Process in a boiling water bath for 90 minutes.

6. Chicken Stew

By leaving vegetables in large pieces, they will be less likely to be overdone because of the longer processing time poultry requires. Any bird can be used.

- 1 stewing chicken
- About 5 pounds 3 carrots 1 small onion
- 3 stalks celery
- 1 tsp sage or poultry seasoning

- 1 tsp dried tarragon
- 1 small red or green bell pepper
- 1/2 tsp paprika
- 1 tsp dried parsley

Method

1. Rinse chicken inside and out; pat dry.
2. Put chicken in a large Dutch oven or heavy pot.
3. Add enough water to cover.
4. Put lid in place and bring to boiling.
5. Reduce heat, and simmer for 1 1/2 hours.
6. Turn off heat, remove chicken and set aside to cool enough to handle.

7. Strain broth, return to pan, and keep hot.
8. Clean and cut carrots and celery (with leaves if possible) into 1 inch lengths.
9. Clean and cut onion and bell pepper into 1/2 inch chunks.
10. Remove skin and bones from chicken and cut up in 1 inch pieces.
11. Thoroughly mix light and dark pieces, dividing into two hot quart jars.
12. Add halve the vegetables to each jar, and half of each spice into each jar.
13. Pour boiling broth over all, leaving 1 inch head space. If there is not enough broth, use boiling water.

14. Wipe rims, screw on lids and rings.
15. Process in pressure canner at 10 pounds pressure for 90 minutes.
16. To serve, empty jar into large saucepan, bring to a boil, thicken as desired and serve over rice, noodles or fresh biscuits.

Conclusion

Thank you for taking the time to read A Beginners Guide to Home Canning! We value you honest feedback so we would be grateful if you could take the time to leave a review on Amazon.com

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