

## Canning your meats and vegetables at home — it's not only easy, it's safe and inexpensive

By Jackie Clay

While quite a few people still put up pickles, jams, jellies, and tomatoes, it is estimated that less than 5% of the population in the United States actively cans vegetables, meat, fish, and poultry. Why? I think it's because people fear it is difficult, dangerous, and expensive. They're afraid they will give their families food poisoning, and they think they can buy canned goods cheaper at the store.

Let's look at the arguments realistically. Difficult? I can put up 10 pounds of meat in less than 2 hours, while I work on the word processor or home school our son, and I'm no rocket scientist.

Dangerous? No, the canner won't blow up if you read common sense directions and regularly monitor the pressure, adjusting the heat as needed to keep it at the correct pressure. Nor do you have to worry about tainted food if you follow the precautions given in a canning book.

Expensive? If it was, this frugal home canner sure wouldn't do it. On an average, it costs me 10¢ to can a jar of vegetables and meat (provided I grow the produce and hunt or home raise the meat) and even less if I can on our wood range, which I often do during the cool mornings of autumn.

And that jar can be anywhere from a half-pint to a half-gallon of food. Store-bought canned vegetables and meat cost a lot more than that. Just yesterday I priced eight ounces of canned chicken breast, on sale, at \$2.19. That translates to \$4.38 a pint vs. 10¢ for a pint of my home-canned chicken. And even if I bought the chicken from a butcher, then canned it, I could put up a pint for half the

cost of that store-bought canned meat. And besides the reduced cost, there are no chemical additives in anything I can.

To successfully can, all you need are some basic equipment and instructions and you can enjoy clean, chemical-free, inexpensive, and nutritious vegetables and meat all year long.

process meat and vegetables in other than brand-name canning jars and that if you use pickle, mayonnaise, salad dressing, or other jars, which a canning lid and ring will fit well, they will break in the pressure canner. Not so. I've used these "orphan" jars for over 35 years, along with Mason and Kerr jars. I can see absolutely no dif-



*Canning tools: good canning book, jar lifter, rings, lids, funnel, and jar. A pressure canner is also necessary.*

### Equipment

A good **canning book** is a must for all home canners. I have four, not because canning is difficult or that I am stupid, but because each provides a lot of different recipes and ideas. The processing and safety tips in each book are the same, but I'm always open to new ideas and you should be too. But until you become experienced you should not free-lance, that is, change the recipes, as incomplete processing times can result.

**Jars** are a must, of course. Some folks will swear that you cannot

ference in the instance of breakage. So a note on a bulletin board or in a free shopper, or just plain telling everyone you know, will usually result in a lot of free jars.

Examine each jar as you wash it at home for any minute chips or cracks, especially in the rim of the glass. Chips will usually result in the jar not sealing or a larger crack developing. And cracks, of course, weaken the jar and cause it to break as it processes.

A **pressure canner** is necessary to can all meat, fish, poultry, and meat products such as soups, stews, spaghetti sauces, etc. This is a fairly



*Two days' canning yields beets, elk meat, green beans, potatoes, chili, and corn.*

large expense for many frugal folks, costing about \$125 for the larger, more work-worthy size. But, when you figure it will last for over 20 years, without maintenance, it is one of the best buys of a lifetime. Remember, you can use it to put up nearly anything that you would see on a store shelf or that you may hunt or fish for yourself.

Vegetables and meat products must be processed in a pressure canner to raise the temperature of the product you are processing and hold it at that level for for a considerable time. This ensures that you will kill all the bacteria.

Water not under pressure, as is used in simple water-bath processing, boils at 212° F. This is fine when canning fruits and tomatoes which have high acid content that kills microbes that may survive the boiling. But it is not adequate for low-acid vegetables and meats. Still, it was the method used by our grandmothers, as they did not have pressure canners as young women. And the food they canned did seal and was usually okay to eat.

Usually. But I won't gamble my family's lives on "usually." Food poisoning is nothing to fool with, so I, and all intelligent home canners, process all meat and vegetable products in a pressure canner.

**Jar rings (sometimes called bands) and lids** are a basic, as well. Jar rings are used to hold the lid in place during processing. They *do not* help keep the jar sealed during storage. A properly sealed jar will remain sealed, without its ring, even when handled. In fact, jars should *not* be stored with rings on them as dampness can collect under the rings and promote rusting, making the ring useless for further use, and the jar lid may rust too, which will ultimately cause the seal to fail and the food to spoil.

Jar lids need to be of high quality. Never use el-cheepo lids from Asia that you've never heard of before. The three most dependable brands are Mason, Kerr, and Bernardin. The lids are boxed a dozen to a box, and they consist of a disk of lightweight metal, rimmed with a rubberized compound which, under heat, effectively seals the jar. They are *not* reusable and should be discarded after one use. Boxes of lids will store for years, remaining good. Self-reliant people should stock up on jar lids.

Other handy equipment to have around are a **canning funnel, sharp knives, mixing bowls, a jar lifter, chopping board, and a lid lifter** which neatly picks individual jar lids out of a pan of boiling water.

## **Canning steps for vegetables and meat**

1. Have all the equipment on hand and ready.
2. Inspect the jar rims again for nicks.
3. Fill the jars.
4. Wipe off the jar rim.

5. Put the lid into place.
6. Screw the ring on firmly, but not forcefully.
7. Place the jar into canner.
8. Put the canner lid on, securing it firmly, but leaving the exhaust vent open.
9. When a steady stream of forceful steam comes from the vent, close it off.
10. Wait for the pressure to build to correct readings, then begin counting the processing time.
11. When time is up, shut off the heat, then allow pressure to drop to zero.
12. Remove the canner's lid away from yourself, so steam does not scald you, and remove the jars.
13. Set jars on dry, folded towels away from drafts until they cool.
14. Examine for seal using one finger to press on center of the lid. If it gives, it is not sealed and you must reprocess it using a new lid.
15. Remove the rings, wash the jars, and store them in cool, dark, dry place.

While many foods are most easily canned using the hot pack method (where partially or wholly cooked food is placed in hot jars, then pres-

*Asparagus, ready to can.*

sure canned), most foods I can are placed in the jars cold for ease and speed of processing a batch. Read your canning book, then decide which method is best for you and the food you are processing.

When getting ready to can a batch of food, have all your equipment clean and ready to go. The jars do not need to be sterile but must be freshly washed and clean. It is good to remember that in canning, cold should not be mixed with hot. That is, don't put boiling food into cool jars, cold food into hot jars, or set hot jars on a cool surface. I learned a lesson after many years of canning: every once in a while, a jar bottom would break during processing. Finally, I discovered that if I warmed up the canner before setting warm jars of food into it to process, I drastically reduced this breakage. Just turning the burner on a few seconds before placing the first jars in did the trick. Match the canner's bottom temperature with the jar temperatures.

Place a small pan of water on to boil. Separate the jar lids and drop into the water. Boil the lids, then remove them from the heat, but keep them warm.

Place the jars to be filled on a folded towel, then carefully fill each jar. The folded towel not only moderates the temperature from the table or counter surface, but it also catches spills making cleanup a snap.

Using a canning funnel helps keep foods from dripping onto the jar rim. You want to prevent this, especially with meats and poultry, as grease on the jar rim (or even a tiny bit of green bean) will keep the jar lid from sealing onto the jar rim correctly. An unsealed jar equals spoiled food.

Cut-up or whole green beans, potatoes, corn, other vegetables or meat, poultry, and fish may be placed in



*A variety of foods canned in the pressure canner: left to right: beets, hominy, squash, chili, corn, carrots, elk meat, baked beans, asparagus, potatoes, and wild mushrooms.*

the jar raw. This is the raw pack which I most often use. Canning books have gotten away from raw-packed meats. I believe it's because the writers felt that home canners would become sloppy and possibly cause incomplete processing, resulting in meat which might harbor harmful bacteria. It is possible, but personally I get tired of folks trying so hard to keep me safe from my own responsibilities. And when I have an elk to can—and an elk

is a lot of meat—I need to get it processed fast. So I still raw pack pieces of boneless meat. I am not advising others to do what I do; I am only explaining how I do it. You may well choose to hot pack partially cooked meat.

I place fat-free boneless steaks, roasts, stewing meat, and just plain chunks of meat into a clean jar. (I use everything from half pint jars to half gallon jars, but I always process jars of a like size together—I don't mix sizes.) A teaspoon full of salt may be added but is not necessary. Water is not usually added, so the jar rim is carefully washed with a warm damp cloth, the hot lid is put in place, and the ring screwed down securely but not overly tight. The jar is now ready to put into the canner.

Hot-packed meat, such as partially cooked roast, steak, stew meat, boiled chicken and meat products, such as stew, chili, soup, etc. are put into warm jars. Liquid is



*The author packs cold asparagus into clean jars.*

usually added, i.e., broth or soup, the rim carefully wiped, the hot lid placed on, and the ring tightened.

Hot packing is great and convenient for canning large batches of spaghetti sauce, chili, stew, baked beans, canned dry pinto beans, etc. Just cook and dump into jars, then process. Okay, I'm simplifying, but once you get the hang of it you'll see it becomes that easy.

All raw meat should be heated or "exhausted" in the jars, which are placed in a pan of water deep enough to heat the jars thoroughly, while the water boils, but not so deep that the water boils into the open jars. Bring this pan to a slow boil and check with a meat thermometer inserted into the center of a jar. You need to heat the meat to 170° F, then quickly remove the jars from the bath with a jar lifter, place them on a folded towel, wipe the rims clean, and put the lids and rings firmly into place. Then place the jars in the canner and exhaust the canner. This means you should ensure there is a steady stream of forceful steam escaping the vent, not just spurts now and then.

After the canner is hot, i.e., exhausted, close the vent and begin raising the pressure until it reaches the desired processing pressure. Remember that most canning books give an average processing pressure of say 10 pounds. But if you live at an elevation higher than 1000 feet, you must bring the pressure up higher. Check your canning book for your exact pressure needs. Begin to count the processing time.

Keep the pressure at the correct reading by adjusting the heat under the canner or moving the canner gently on a wood range's surface or adding wood to the fire, as needed. If you let the pressure fluctuate, it will suck the fluid out of the jars. The resulting food will still be edible, but may be dry-tasting, or food bits may get under the jar lid making a proper seal impossible.

After the food has processed long enough, turn off the heat or remove the canner from heat. Allow the pressure to return to zero, then carefully remove the canner's lid—away from you, so escaping steam does not scald your arms or face. (Don't get in a hurry, thinking to just leave the jars in the canner with the lids on to cool. The jars will not seal correctly.)

Carefully set the hot jars, still boiling and bubbling, on a dry (never damp or the jars may crack) folded towel in a draft-free area to cool. Soon the telltale musical "pings" will let you know they are sealing. Never fool around with the hot jars or you may disturb the seal.

When the jars are perfectly cool to the touch, remove the rings, and wash them for next time. Then wash the jars with warm soapy water, rinse and dry them, and then store them in a cool, dry, and dark place.

## Canning green beans

Pick the beans, wash them in cool water, and prepare to can them immediately. The beans may be canned whole, Frenched, or however your family likes them. I usually can a variety, from whole to Frenched, with the bulk cut into convenient chunks an inch or so long. Cut the beans, removing any tough strings, as well as the stem and pointy end, if desired. Using a canning funnel, dump the raw, cut beans into clean jars placed on a folded towel.

Pour two inches of water into the canner and place the basket or inner kettle into place. The canner must never boil dry or it will warp.

In the meantime, have enough lids separated and boiled. Also, have boiling a large pan of water with which you will cover the beans.

Fill all jars to within one inch of the rim. This is called "head space" and is necessary for proper processing and storage. In canning, you do not want to cram as much food into a jar as it will hold. Some foods expand as they

process, and all need a certain amount of head room to process and keep well. Always follow your canning book's directions exactly.

You may add a teaspoon full of salt to each jar if you want to enhance the flavor, but it is not necessary.

Pour boiling water into each jar, just covering the beans. Then carefully clean off the rim of each jar with a warm, damp cloth to remove any food bits which might prevent the jar from sealing, and check for nicks in the rim with a clean finger. Place the lids and rings into position. Do not over-tighten the rings. The ring only holds the lid securely into place for processing, and does not have anything to do with how well the jar seals.

Bring the canner up to the same approximate temperature as the jars, then carefully place the hot jars into the canner, taking care not to thunk them together. Leave space between jars to allow for steam to circulate during processing.

Tighten the canner lid, raise the heat to high, and allow the canner to exhaust. When a steady, forceful stream of steam blows from the vent, close it and let the pressure build up. When it reaches the correct pressure



*Bob cutting elk with a chain saw, I'm getting ready to can!*

(10 pounds for altitudes less than 1,000 feet above sea level, but see your canning book for higher elevations), begin timing. Pints of green beans will be processed for 20 minutes, and quarts for 25 minutes.

At the end of this time, turn off the heat or remove the canner from the heat and allow the pressure to return to zero. When it does, unfasten the lid and carefully lift it away from you, allowing hot steam to escape away from your arms and face. Then remove the jars carefully with jar lifter, again not thumping them together, which could result in cracks. Place the hot jars on a dry folded towel in a draft-free area until they cool.

## Canning ground meat

Any ground meat or ground meat products such as chili, spaghetti sauce, taco meat, etc., should be cooked before it is canned or it will not have a good texture. The meat will clump together in lumps. So, in a large frying pan fry the meat in as little grease as possible. (Grease is the #1 enemy of jars sealing). Add the spices you desire, then the tomato sauce, beans, chopped onions, or whatever.

Have clean canning jars on hand, kept hot in water. Also have a sufficient number of boiled lids on hand so that the process proceeds as quickly as possible.

Using a canning funnel, carefully fill each jar to within an inch of the rim (one inch head space), wipe the jar's rim with a warm, damp cloth and

## Tips for canning meat and vegetables (Low acid foods)

1. Always use a pressure canner for all meats, fish, poultry, wild game, vegetables, and products containing these products such as soups, stews, sauces, etc.

2. If unsure of processing time, process the jars for the ingredient which requires the longest time. For instance, spaghetti sauce needs to be processed for the time given for meat, not tomatoes.

3. Can only fresh food. Never use questionable food for canning.

4. Remember, hot + cold = broken jars.

5. Never take shortcuts in processing time.

6. Following canning book directions results in wholesome, long-keeping canned food.

7. Get into the habit of checking and rechecking for nicks and cracks in jars. You'll save frustration, food, and money.

8. Don't try to pressure-can with arty jars that use zinc lids, or glass tops with wire bails, etc. You can't tell if they are sealed or not. A dangerous practice.

9. Don't experiment with recipes for canning until you are experienced and understand canning fundamentals completely. There are hundreds of tried and true recipes out there for you to gain experience with. (Spices may be varied to one's taste without endangering processing.)

10. Don't can meat with bones or fat intact, excepting fish or poultry. The bones and fat impart an unpleasant flavor at times, especially in game meat or mutton, and the bones take up unnecessary room in the jars. Also remember that fat is the #1 enemy of jars sealing.

11. Before eating or tasting a newly opened jar of food, visually check it for normal appearance and odor first. If there is any frothing, cloudy juices, unusual odor, or if a jar gushes or is not sealed when opening, then discard the contents where animals cannot get at it. This food is a definite risk. When it passes inspection, boil it for 15 minutes, just to be sure. This will kill bacteria that might make you sick.

inspect the jar again for any minute nicks.

Then screw the band snugly on over the hot lids and place each hot jar into the warm canner. Again, be careful not to thump the jars together as it could crack them.

Turn up the heat with the canner vent open, and wait until a steady stream of forceful steam exits the vent. When this happens, close the vent and wait until the pressure arrives at 10 pounds. (Again, if you are canning at altitudes over 1,000 feet above sea level, check your canning book, as the pressure must be increased with the increased altitude.) When the correct pressure is attained, begin to count the processing time. Be careful not to let the pressure fluctuate as it can blow liquid out of the jar.

Pints will be finished in one hour and fifteen minutes and quarts in an hour and a half. I process half pints, which are very handy for casseroles, etc., for one hour and fifteen minutes.

## Some reliable food processing books

The Ball Blue Book (the Guide to Home Canning and Freezing), Alltrista Corporation Direct Marketing Department PK31, P.O. Box 2005, Muncie, IN 47307-0005, \$5.95, including shipping. IN residents add 5% tax

Putting Food By, by Hertzberg, Vaughan & Green, Stephen Green Press

Stocking Up, by Carot Hopping, Rodale Press

Other great books are available, of course. Check out your local book store (or their catalog) and the library. Your county extension officer, usually located in the courthouse, can usually provide free (or very low cost) canning publications and leaflets.

When the jars have processed for the correct amount of time, turn off the heat or carefully remove the canner from the heat, and allow the pressure to return to zero. (Do not try to hurry this by fooling with the exhaust valve or you may end up with broken jars or jars that do not seal.)

Carefully remove the cover away from you to avoid steam burns, then take the jars out carefully and place them on a folded, dry towel in a draft-free place to cool.

When completely cool—overnight is best—remove the rings. Then carefully wash each jar in warm soapy water, dry them, and store them in a cool, dark, dry place. This meat will last indefinitely, regardless of what you have been led to believe.

Home canning meats and vegetables should be a part of your family's lifestyle as you strive for more self-reliance and control over what you eat. It is so simple to learn, with easy-to-follow instructions readily available for almost any sort of food from green beans to shrimp. This allows your family more freedom to not only eat well, economically, but to save hundreds of dollars a year. And it provides the convenience of having a sumptuous meal ready in minutes whenever company comes or when you are in a hurry. After all, how else can we have a complete roast elk dinner ready in half an hour—meat, potatoes, onions, carrots and green beans?

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