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How to Freeze

Meat, Poultry, Fish, & Game



*Cooperative Extension Service
The University of Arizona*

Circular 281

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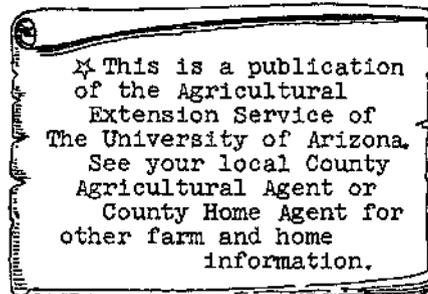
Photo identification: Pages 5 and 6 courtesy National Live Stock and Meat Board; pages 11, 12, from USDA; page 13 courtesy Oregon State College; drawings by Al Hesselberg; cover photo by Joe McClelland.

THE COVER picture shows a home-freezer unit. Note the thermometer at right which indicates inside temperature at all times.

Additional Publications On Freezing Foods for Family Meals

These publications are available from your County Home Agent's office.

- Selection and Care of Your Home FreezerU.S.D.A.
- Home Freezing of Fruits and Vegetables — G-10U.S.D.A.
- Freezing Combination Main Dishes — G-40U.S.D.A.
- Chicken in the Freezer — L-279U.S.D.A.
- Freezing Meat and Poultry for Home Use — G-15U.S.D.A.
- Freezing Fruits and Vegetables for Better Meals — C-280, U of A
- Freezing Cooked Foods C-283, U of A



The University of Arizona
College of Agriculture
Cooperative Extension Service
J. W. Pou, Director

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How to Freeze

Meat, Poultry, Fish, and Game

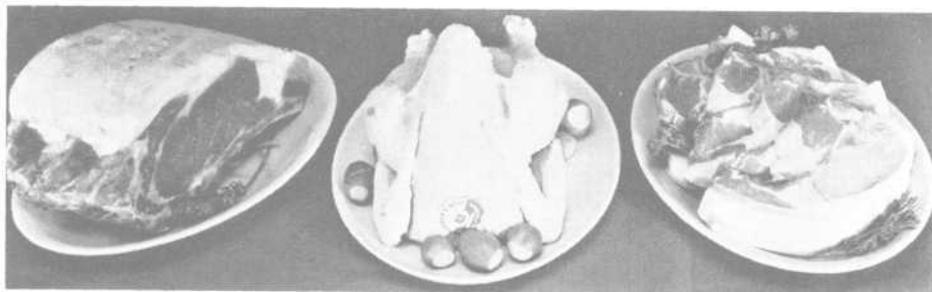
By
June C. Gibbs
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Probably more people buy freezers to store meat than for any other food. Certainly, meat is the mainstay of most meals and the greatest single item in most food budgets.

Both for convenience and economy, it is a good idea to buy meat in fairly large quantities and to have a reason-

able supply on hand at all times. On the other hand, unless you are slaughtering your own animals, there is no special advantage in filling your freezer with enough meat to last a year.

The quality of the meat will be better if it is stored for a shorter period. It is always possible to replenish your supply on short notice.



Beef, poultry, and pork are frozen in larger quantities in the home freezer than is any other food.

Packaging

Give special attention to packaging to maintain high quality of frozen meat, fish, poultry, and game. Always observe these 5 points:

(1) Use high-quality freezer packaging materials.

(2) Do a good job of packaging.

(3) Seal tightly.

(4) Label correctly.

(5) Keep at 0 degrees F. for the recommended storage time.



Be sure to select the correct freezer-wrap to do the best job. Left to right above are plasticized freezer wrapping paper, cellophane-treated paper, clear plastic wraps, pliofilm bags, aluminum foil, treated freezer paper, packaging tape, marking pencil, and paper bags.

Use Proper Materials

Films, foil, laminates, or sheets of tough paper coated with moisture-vapor-resistant materials are among the best packaging materials available. They cost little more than inferior materials.

Films and foil are more likely to scuff, tear, and puncture; therefore they may require added protection. This can be done by wrapping them in another paper or placing them in a container.

Ordinary waxed freezer papers are not desirable for packaging meat, fish, or poultry, because they are not good oxygen-moisture barriers. Also, the wax will affect the flavor of most frozen products.

Films—A number of different kinds of films are available for packaging. Among them are the moisture-proof cellophanes or cellophane-like films such as polyethylene.

Foil—The only foil used for packaging foods is aluminum foil. Use only the freezing weight foil to package frozen foods.

Laminates—These are made of two sheets of paper or other material sealed to form one sheet. The inner sheet protects the product; the outer resists scuffing.

Packaging materials must be odorless, grease-proof and pliable with a high wet strength to hold in meat juices. It is poor economy to use inferior packaging materials for any frozen foods, especially meat. A single wrap of the best packaging materials will provide better protection than a double wrap of inferior quality materials and will take less time and labor.

Use the Right Methods

A good packaging material is of little value unless properly used. Mold the material to the meat to exclude all air pockets; or pull the material tightly against the meat and smooth down to force out the air. The two most popular ways of wrapping meat for the freezer are to use either the drugstore wrap or the butcher wrap.

BUTCHER WRAP



Steps Used in Butcher Wrap

1. Cut paper of the desired width to have enough to envelop completely the cut of meat at least one and a half times.



2. Place meat toward one corner, allowing sufficient area at rear (toward wrapper) to cover meat at least half way over the top. Pull over the meat and make as complete contact with meat as possible.



3. Fold in one end, pulling paper in snugly and eliminating as much air as possible.



4. Make a second fold in a way that forms a lock.

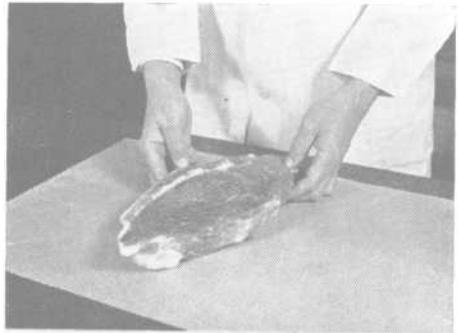


5. Make one-half roll of package and repeat the double fold on the other side. Complete the roll and fasten with tape or string, then label.

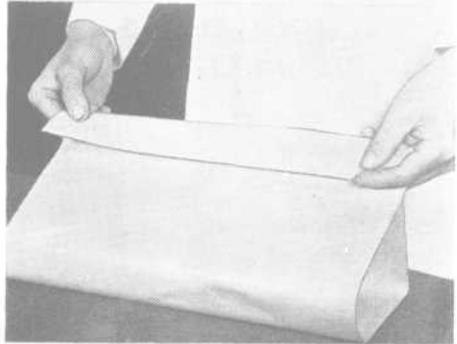
DRUGSTORE WRAP

Steps of Drugstore Wrap

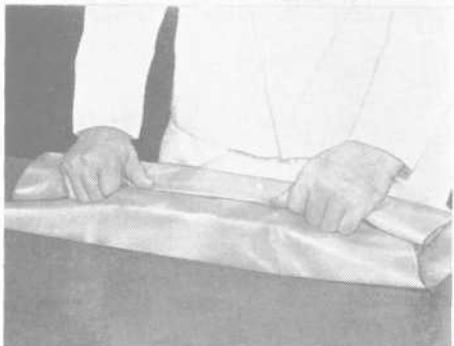
1. Select paper of desired width, 6 to 8 inches longer than the distance around the piece of meat to be wrapped. Steaks or chops should be interleaved with a double thickness of cellophane or other locker paper. Be sure to have proper surface toward the meat. Place meat in center of paper.



2. Bring opposite edges of paper together over meat, even the edges, and fold over (at least one inch) and crease the fold. This creates a seal.



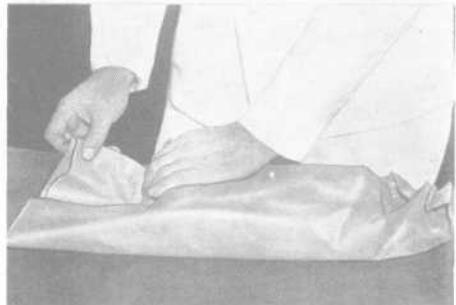
3. Repeat the fold until the paper is snug and tight. Be sure to have paper in contact with surface of meat and exclude all air possible.



4. Fold one end to center, then down sides to make contact with the end of the meat. Tip free triangle down—fold three times, making a firm seal and turn under.



5. Repeat with other end. Tape or tie, holding ends in place, and maintain contact between paper and meat.



Package Tightly And Give Added Protection

Pad sharp ends of bones with layers of wrapping material to protect the package from punctures and tears. If a container is used for ground meat, take care to pack the meat firmly.

Not only is it important to keep the oxygen of the air from entering the package once it is out, but also it is

important to keep the moisture in the food. Oxygen causes the meat to become strong and rancid while the loss of moisture causes "freezer burn" which will make it dry, flavorless and colorless.

The importance of tight packaging cannot be over-emphasized. Freezer burn can develop from air pockets left in the package even when using the best of packaging materials.

Cutting

Skill is needed to properly cut and package meats for freezing. If you are not familiar with handling meat, or lack proper facilities, consider the services of an experienced butcher or locker plant operator.

The size of the meat cuts should be made to suit family size or individual preferences. Steaks and chops from choice and good quality beef should be cut 1 to 1½ inches in thickness. A steak ½ inch thick or less cannot be broiled successfully because it will cook done before browning. Ham slices should be at least 1 inch thick for broiling.

An experienced meat cutter sizes up the quality of each carcass and makes the cuts according to the way they should be cooked. If the beef has a thin covering of fat and the lean shows little marbling, much of the meat should be cut for pot roasts, Swiss steak, stew meat and ground meat.

All cuts of meat, pork, beef and others, should be carefully trimmed of excess fat and any hanging pieces. These trimmings may be used in sausage and ground beef. Lean ground beef contains not more than 12 to 15 percent fat, and regular ground beef contains not more than 30 to 33 percent fat.

As soon as the meat is cut, package

it properly. Place sheets of cellophane or other locker paper which will not stick to the meat between steaks, chops and other pieces, then they can be separated while frozen. Ground meat is better packaged in a roll rather than in balls or patties because more air can be excluded. Put only the amount of meat to be cooked at one time in each package.

The less a piece of meat is cut, the longer it will keep. Ground meat and thin cuts will not keep as long as larger cuts. Adding some seasonings to sausage may speed rancidity, and some spices may change flavor during storage. However, if you like seasonings, it is generally more satisfactory to add them when the sausage is made rather than when cooked.

Cured Meat — Cured meat should be frozen if you do not have a cool, well ventilated place for storage. However, the meat should be completely cured before freezing. It does not develop the cured flavor in frozen storage that it would in a smokehouse.

Cured or smoked hams and shoulders may be frozen whole or cut into roasts or thick slices. Bacon keeps longer if frozen without slicing, but it may be difficult to slice when ready to use. Cured frozen meats have a limited storage period of 2 to 3 months.

Glandular Meat — Glandular meat, such as liver, heart and kidney, should be chilled, packaged, and frozen immediately. Use such meat within a 3 month period to have high quality.

Meat and Poultry Yields

Approximate amounts of trimmed meat cuts
with surplus fat and bone removed

A. Beef:

		Pounds
Live weight		750
Whole carcass		421
1. Forequarters		21
	<u>Pct. of forequarters</u>	
a. Steaks and oven roasts ..	25	55
b. Pot roast	32	70
c. Stew and ground meat ..	27	59
d. Total	<u>84</u>	<u>184</u>
2. Hindquarters		202
	<u>Pct. of hindquarters</u>	
a. Steaks and oven roasts	58	117
b. Stew, ground meat and pot roasts	18	37
c. Total	<u>76</u>	<u>154</u>

B. Pork:

Live weight			225
Whole carcass			176
Trimmed cuts:			
	<u>Pct. of live wt.</u>	<u>Pct. of carcass wt.</u>	<u>Pounds</u>
1. Fresh hams, shoulders, bacon, jowls	40	50	90
2. Loins, ribs, sausage	15	20	34
3. Total	<u>55</u>	<u>70</u>	<u>124</u>
4. Lard, rendered	12	15	27

C. Lamb:

Live weight			85
Whole carcass			41
Trimmed cuts:			
	<u>Pct. of live wt.</u>	<u>Pct. of carcass wt.</u>	<u>Pounds</u>
1. Legs, chops, shoulders	37	75	31
2. Breast and stew	8	15	7
3. Total	<u>45</u>	<u>90</u>	<u>38</u>

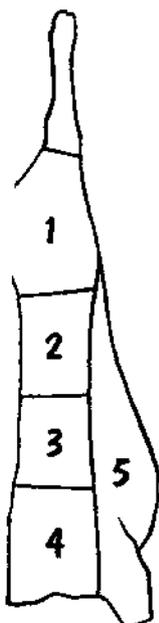
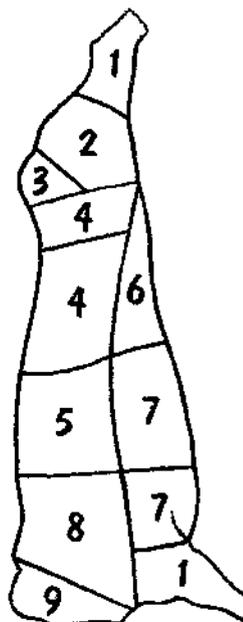
D. Poultry:

	<u>Live wt. Pounds</u>	<u>Dressed & Drawn Pounds</u>	<u>Pct. of live wt.</u>
a. Chickens	2-4	1½-2½	62
b. Hens	4-8	2½-5½	65
c. Turkeys	10-20	7½-15	75

Beef and Veal

Cutting Methods:

The thick, more tender loin (4) and rib (5) are suitable for frying and roasting; the chuck (8), rump (3), and round (2) for Swiss steaks and pot roasts; the thinner shanks (1), flank (6), plate (7), and neck (9) for stew and ground meat.



Lamb

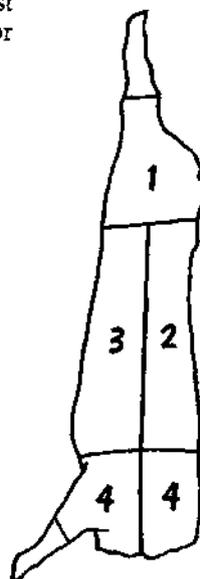
Cutting Methods:

Trim the legs (1) and shoulders (4) into smooth roasts; cut rib (3) and loin (2) into chops; bone breast (5), shanks, and neck, for stew or ground lamb.

Pork

Cutting Methods:

Cut or slice the thick ham (1), loin (2), and shoulder (4) into roasts, steaks or chops. Trim the bacon strip (3) for curing, or cut into boiling pieces. Trim all meat closely, using lean for sausage and fat for lard.



Plan Your Cuts of Meat

Many Arizona families buy their meat from a meat retailer. There are standard cuts that can be purchased to fit the family's needs. However, no

two families want their meat cut and packaged in the same manner. Therefore, the chart listed below gives a family a basic plan to present to the family meat market retailer.

Sample Order Form for Standard Cuts of Beef

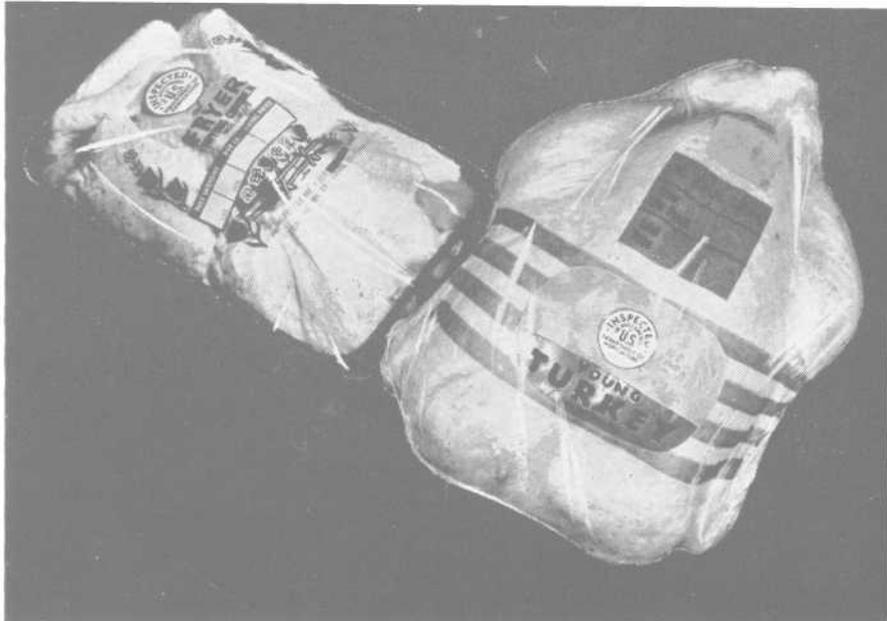
This chart is filled out for a half carcass of beef weighing 280 pounds and packaged for a family of four.

No. Pkgs	Size	Cut	No. in ea. pkg.	No. Pkgs	Size	Cut	No. in ea. pkg.
0		Round Steak	0	5		Round Bone Roast	1
8		Top Round	2	0		Round Bone Steak	0
7		Swiss Steak	2	0		Chuck Roast	0
2	4-5#	Rump Roast	1	17	¾"	Chuck Steak	3
0		Pike's Roast	0	0		Rib Roast	0
0		Sirloin Tip Roast	0	9		Rib Steak	2
4	¾"	Sirloin Tip Steak	2	3	2#	Short Ribs (best)	6
8	1"	Sirloin Steak	1	25	2#	Ground Beef (med.)	0
0		Top Sirloin Steak	0	1	5#	Brisket (ground)	0
6	1"	T-Bone Steak	2	0		Corned Beef	0
0		New York Cut	0	5	2#	Stew Meat	0
0		Fillet	0	6	0	Soup Bones	3
1		Avg. Flank Steak	1	2	0	Suet	0

Extra Cuts:

Comments:

High quality poultry can be stored in the freezer up to 9 months.



Poultry

Select healthy, well-fleshed birds of the age and weight suited to the way they are to be served.

Use a sub-scald (water temperature around 138° to 140° F.) to remove feathers. Hard scalding (150° F. and up) cooks the inner layer of skin and may cause off-flavors. Singe, wash thoroughly, remove entrails and lungs. Remove any excess fat as it may become rancid with storage. Chill immediately in finely chipped ice in a small amount of water. It takes from one to two hours to thoroughly remove body heat. If necessary, birds may be chilled in the refrigerator for 2 to 3 hours.

Remove liver from the body cavity promptly and separate from other giblets. Liver should be chilled separately in chipped ice and water. It has a short storage life and should be packaged separately.

If many birds are dressed at one time, package the livers and freeze for that special occasion when a special chicken liver recipe is used. Thoroughly clean gizzards and hearts.

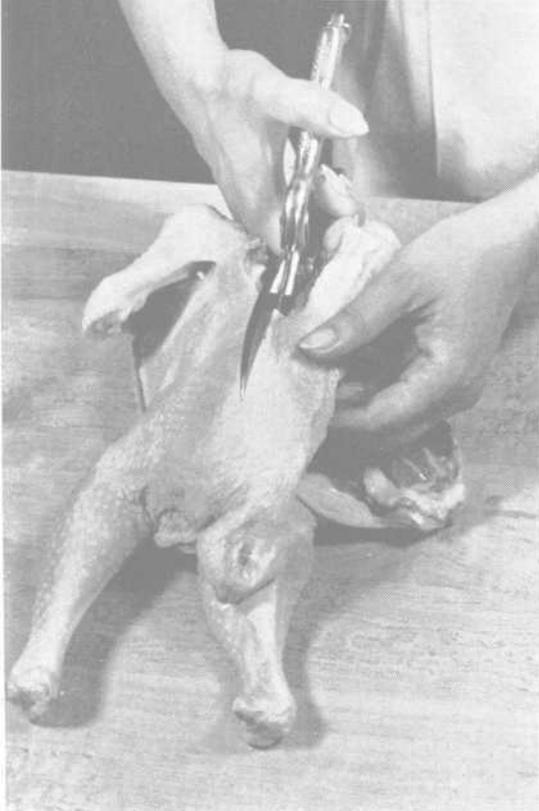
They, too, can be frozen separately or together for use in a special recipe.

Kidneys and other internal organs should be removed and discarded. They may have undesirable bacteria and cause sourness, odd-flavor and off-odors.

Fryers and Broilers — Fryers and broilers weighing 2½ to 4 pounds (live weight) and 10 to 12 weeks of age are most desirable for freezing.

Cutting — There are several ways to cut chicken for freezing. They may be cut into the conventional pieces, quarters or halves. To cut chickens in half, split the back with a sharp knife or kitchen scissors. Cut down center front, removing keel bone. Cut down both sides of the backbone and remove if desired.

Packaging — Often chicken is packed in rectangular cartons coated with freezer grade moisture-proof treatment. A quart container will hold an average sized fryer. Just before sealing the package, some people prefer to add about ½ cup water—enough to encase the pieces in ice. The water forces the air out.



Cut a broiler in half for easier storage and preparation.

If several chickens are to be cut up, cook the back, necks, and wing tips until the meat will separate easily from the bone. Freeze this meat and stock for soup, pot pies, etc.

If chickens are cut in half, dip the halves in water and place skin down on packaging material. Place two pieces of packaging material between the halves so they can be separated when frozen. Package in films, foil, or laminated packaging materials.

Roasters — Roasters are left whole for freezing. For a smoother and more compact package tie the legs and wings to the body. Wrap the neck, wing tips, heart, and gizzard separately and place in the body cavity. The liver should be wrapped separately from other giblets and frozen.



For a smoother and more compact package, tie the legs and wings to the body.

Stewing Hens — Stewing hens may be frozen in the same manner as roasting chickens.

Pieces of Chicken — Often pieces of chicken are frozen in small packages to suit family needs. Divide and package the bird into kinds and number of pieces needed for one meal. With large birds, often the white and dark meats are packaged separately. Chicken pieces are usually divided into four groups — the livers; the meaty pieces; the bony pieces; gizzards, and hearts. Place each meaty piece in a fold of locker paper to prevent freezing together. Package wet or add about $\frac{1}{2}$ cup water just before sealing. Allow no space for air pockets. Tie or tape to keep the package air and vapor-tight.

Turkey — Turkey may be frozen whole or by the piece using the same methods as for roasting chicken.

Polyethylene Bag Wraps

It is easy to have an air tight freezer wrap on poultry using the polyethylene bags. The following steps show how to get all the air out of the bag with little effort. It is wise to protect the packaged bird with another covering. This protects the wrapping from tears during handling while in storage in the freezer.

1. Select a polyethylene bag large enough for bird. Make label with type of product, weight, number of pieces, date packed and locker number. Open bag with hand to insert bird. Be sure to cover all sharp ends of bone with several thicknesses of locker paper to avoid tearing bag.



2. Lay the label on the bird before inserting it into the bag. Push bird into close contact with the bottom of the bag.



3. Dip the bag into a container of water deep enough to submerge the bird, and press the air out of the bag.



4. When the bag is in close contact with the bird, showing that there are no air pockets, twist the top of the bag tightly.



5. Bend the twisted top of the bag over as closely to the bird as possible and secure firmly with a rubber band or string around both parts of the folded twist.



Cooked Chicken or Turkey—Cooked chicken or turkey may be frozen alone or with the broth or gravy for salad, stews, pies, or fricassee. Like other precooked meats, their storage life is short.

Fish

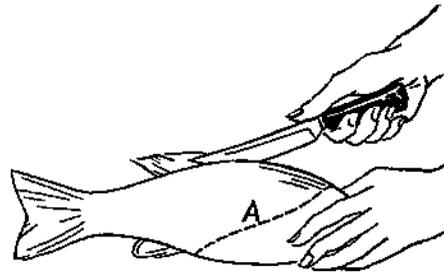
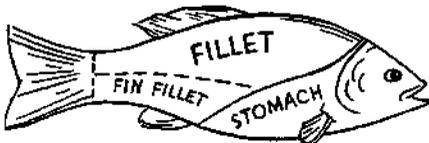
Chill fish soon after they are caught for freshness is absolutely necessary. Scale, dress, wash and cut fish as for cooking. Small fish are usually frozen whole, while large fish are cut into round steaks for fillets (boneless strips). Dip the fish or pieces in cold water and package. Place pieces of packaging material between the fish or pieces to keep them from freezing together. Freeze fish promptly since stale odors and flavors develop rapidly if held at warm temperatures. Frozen fish dry out easily and special care is necessary in packaging.



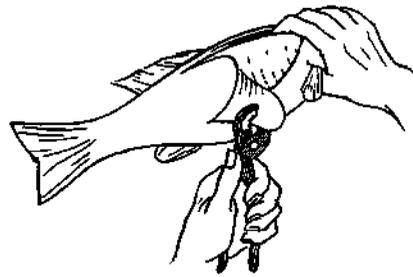
Fish can be frozen whole or cut up.

How to Fillet a Fish

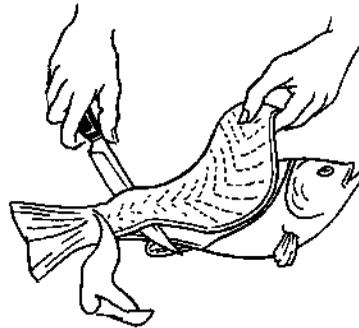
1. From a camp cook's point of view, here's an analysis of a fish's essential parts.



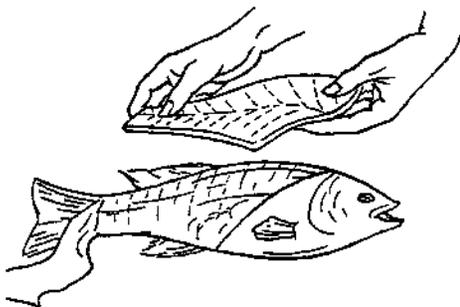
2. With a sharp knife, slit skin along back from the tail to head and along line (A).



3. Grasp skin with pliers as shown. Peel back. Use knife as "helper" if necessary.



4. Insert knife carefully under flesh next to backbone. Remove fillets on both sides.



5. Here is the fillet. From most fresh-water fish it will be boneless, ready to fry.

Freezing Shellfish

Clams — Choose only fresh, live clams. Shuck clams and rinse thoroughly in salt water ($\frac{1}{2}$ cup salt to 1 gallon of cold water). Pack, seal and freeze immediately.

Crabs — Clean hard-shelled crabs. Place in boiling salted water, using $\frac{1}{2}$ teaspoon of salt to 1 quart of water, for 15 to 20 minutes. Cool thoroughly. Remove edible meat, keeping body and claw meat separate, if desired, for packaging. Pack in vapor-proof cartons to within $\frac{1}{2}$ inch of the top. Seal and freeze immediately. Store only 4 to 6 months.

Lobsters — Place live lobsters in boiling salted water for 20 minutes. Cool thoroughly. Remove the edible meat from the shells, pack, seal and freeze immediately.

Oysters—Choose only strictly fresh, live oysters. Shuck oysters as for immediate use. Wash oyster meats in fresh salted water ($\frac{1}{2}$ cup salt to 1 gallon of cold water). Drain, pack, seal, and freeze immediately.

Scallops — Prepare ready for cooking and rinse thoroughly in salt water ($\frac{1}{2}$ cup salt to 1 gallon of cold water). Pack, seal and freeze immediately.

Shrimp — Fresh shrimp may be frozen shelled or unshelled, cooked or uncooked. Shelled shrimp reduces preparation when you serve and conserves freezer space.

Freezing Raw in the Shell: Wash (remove heads and sand vein if not done before). Wash again in salt water (2 tablespoons salt per 1 quart of cold water). Drain thoroughly. Pack, seal and freeze immediately.

Freezing Shelled, Cooked Shrimp: Wash in salted water (heads removed); drain. Cook in boiling water for 10 minutes; cool thoroughly. Shell and remove black vein. Rinse under cold running water; drain. Pack in vapor-proof containers to within $\frac{1}{2}$ inch of the top. Freeze immediately.

Game

Big Game: Deer, moose, antelope and other big game should be bled immediately after killing and then drawn. Wipe the body cavity with a clean cloth to remove any remaining blood. Do not wash with snow or water, since this speeds spoilage. If it should be snowing or raining, protect the carcass with canvas or burlap. If the weather is warm, protect the meat against flies by covering with cheesecloth or sacks.

Package and freeze in vapor-proof paper exactly like the meat of domestic animals.

Small Game Animals: Rabbits, squirrels and other small game animals should be dressed as soon as possible after shooting. Bleed immediately. Skin and wash well in clean cold water. Chill thoroughly. Prepare and freeze only the thick back and hind quarters to conserve freezer space. Use the ribs, neck, and forelegs, while fresh, for stews. Because small game meat has little protective fat, careful wrapping to prevent dehydration is important.

Game Birds

Draw birds as soon as possible after they have been shot. If there isn't time to do a thorough job, at least remove the craw and intestines. If birds are not drawn properly, the flavor of the meat is sometimes spoiled by the partly digested food, or the meat may be tainted by the wounds.

Chilling so that the body heat be

may be lost quickly is important.

Plucking the birds is preferable. Skinning causes a loss of flavor and the meat will be drier. Wash thoroughly before packaging. Birds that are to be roasted and birds which do not lend themselves to disjointing should be packaged whole for freezing. Tie legs and wings tightly to the breast to save storage space. Wrap giblets separately.

What Is the Importance of Quick Freezing?

Quick freezing means just what the name implies — the quick removal of heat by refrigeration equipment. Slow freezing allows ice crystals to form within the foods, breaking down delicate cell structures and causing loss of flavor and freshness.

The quick freezers in all modern locker plants are capable of freezing hundreds of thousands of pounds of food overnight. The ordinary home freezer is not large enough, nor are temperatures low enough to freeze

large quantities of foods at a time.

When using a home freezer, remember that overloading it will raise temperatures and the freezer will not be able to do a proper job. Freeze only small quantities at a time in your home freezer. Place package against the side walls of the freezer where temperatures are lowest, or on coil shelves of upright freezer. Allow plenty of space between the packages so air can circulate freely. Once packages are properly frozen, they may be stacked more tightly in the freezer.

Care of Meat Purchased at the Local Meat Market to Be Stored in Home Freezer

Today many families take advantage of some of the "special prices" on certain meats available at the local grocery store as a method of acquiring meat for the home freezer. This is good food economy, providing the meat is properly cared for from the time it leaves the market to the time it enters the freezer. The following steps are suggested:

1. Select only high quality meat.
2. Take meat home as soon as it is

purchased. Our high temperatures here in Arizona can cause meat to "heat" and cause off flavors.

3. As soon as possible, the grocery wrap on the meat should be removed. This includes the regular butcher paper, pasteboard containers, film bags, and the clear wrapping materials used in our modern markets.

4. All the red meats should be wiped clean with a damp cloth (exception is ground meat).



Store meat purchased in local markets for short periods.

5. Poultry should be thoroughly washed, cleaned and cut up for freezing.

6. The cleaned meat should then be wrapped in high quality freezer paper or put in a recommended freezer container.

7. The packages then must be carefully labeled and placed in the coldest part of the freezer.

8. Allow for plenty of air to circulate around each package.

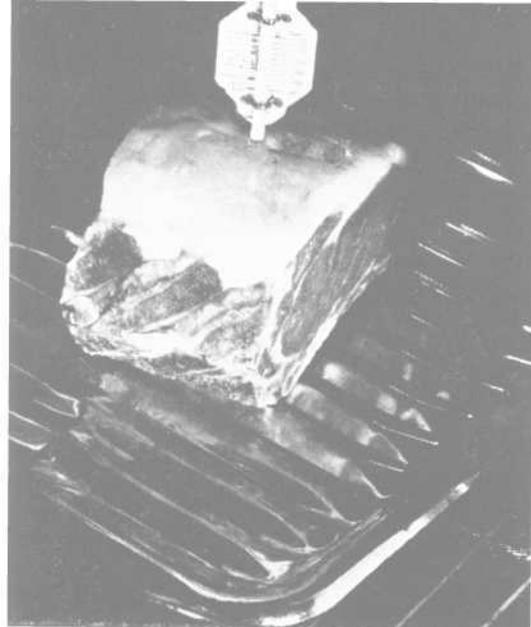
9. It is wise to use this meat before the recommended storage life because as a rule it does not keep as well as meat prepared and quick-frozen immediately.

10. Never crowd your freezer with this type of "special purchase."

Thawing and Cooking Frozen Meat

Frozen meat may be cooked with or without thawing. Usually it is preferable to start cooking thin pieces of meat while still frozen. However, thick pieces of meat should be thawed before cooking. There seems to be less drip (mostly red fluid which oozes

from the meat) if the meat is thawed slowly as in a refrigerator rather than at room temperature. The smaller the piece of meat and the higher the temperature, the shorter the time required for thawing. The time required for a cut of frozen meat to reach 28° F.



After frozen meat is thawed, cook it the same as unfrozen meat.

(when ice crystals in muscles start to melt) is two or three times longer in a refrigerator than at room temperature.

Frozen meat should be used as soon as thawed, or it should be stored loose-

ly covered, in the coldest part of the refrigerator (30 to 34° F.) and used within a day or two. Ground meat and variety meats are especially perishable and should not be held longer than a 24 hour period.

Cook frozen meat as you would a similar piece of fresh meat. See circular No. 259, "Beef in the Family Menu" and Circular No. 278, "Lamb Dishes For Variety."

A well-cooked piece of meat is juicy — when cut on the plate, juice should run out. If the meat is cooked at high temperature, it will lose more juice, shrink more, have less flavor, food value, and tenderness than if a low to moderate heat is used. The longer meat is cooked, the less juicy and the fewer servings there will be. Also, to cook meat well-done rather than rare or medium-done will require more time and fuel. A meat thermometer is an aid in determining the internal temperature of roasting meat so it may be cooked rare, medium, or well-done.

How Long to Keep Meat in Frozen Storage



The longer frozen meat is stored the less palatability it has. It will have the best flavor and texture when frozen the recommended time only. Long storage lowers the aroma and flavor of both the fat and lean meat. Pork deteriorates faster than other types of meat with less fat. The more meat is cut, the less time it will keep — so use ground meat first, then steaks or chops

Carefully mark each wrapped piece of meat as to cut, amount, and date frozen.



and then the roasts. See page 24 for length of storage recommended for frozen foods.

Hints for Packaging

1. Chill and age meat before packaging. Freezing tenderizes meat, but not enough for good quality.

2. Package food in serving sizes suitable for your family needs.

3. Cover sharp bones with extra patches of wrapping material to pad them before wrapping. Package each food in family quantities for a meal. Freeze separately; then place all packages in a plastic bag with the menu. These bags are handy to have when Mother is away at meal time.

4. Always package pieces of chicken or meat with sheets of moisture-proof material between the pieces so the frozen foods can be removed for quick thawing. You can then use just what you need for that one time.

5. Seasoning must be used with care when freezing. Experiments show that red pepper, sage and black pepper keep pork sausage from becoming rancid. Cloves, onions, synthetic vanilla become bitter; pure flavors do not. Salt loses flavor.

6. Don't stuff uncooked turkey before freezing. Freeze stuffing separately.

7. Smoked meats have a short freezer life.

8. Monosodium glutamate is added to foods before freezing to improve flavor and to retard rancidity (meats and fish).

9. For a small family, chicken can be cut in serving pieces, thoroughly dried, placed on a tray and frozen. Leave in freezer for one hour; remove, loosen pieces, drop into plastic bag and wrap tightly. Remove only the pieces you want to use. You do not have to use the entire bag of chicken.

Can You Save Money on a Frozen Food Plan?

If you want a home freezer and plan to buy frozen food for storage, the question boils down to this: Is buying frozen food on a plan less expensive than buying the food from a retail store? While the Plan offers you discounts on frozen food, discounts may also be available at retail stores through buying "specials" or buying large amounts of food at one time.

Home freezer food plans offer a variety of freezers as a portion of the contract with the consumer.



The situation differs in each community, and you can estimate whether you save more with the Plan or by careful shopping. These are the kinds of questions to consider in making a cost comparison:

1. Am I comparing similar amounts of edible food?
2. Am I comparing the same quality of food?
3. Are the quoted prices final or will there be a processing and delivery charge?

How Can You Get The Plan Best for You?

If you find the advantages of convenience plus a possible saving in food cost make a Freezer Frozen Food Plan attractive, then find the best plan for you. You will spend from \$500 to \$800 at the start. It is only sensible to see what you will get.

When you choose a Freezer Food Plan in your community, here are some of the questions to ask yourself.

A. Dealers

1. Are the dealers so well established that I can expect them to be in business when I need service?
2. How do the local Chamber of Commerce or Better Business Bureau rate the distributors?
3. Is the salesman attempting to oversell me?
4. Will the dealers be responsible for the quality of the food and provide

service for any repairs needed on the freezer in the next 5 to 10 years?

B. Freezer

1. Does the freezer fit my family situation — floor space, electrical system, and amount of food to be stored?
2. How does the price of the freezer compare with the price of freezers not sold on the Plan?
3. If I buy the freezer on the installment plan, what rate of interest will I pay?
4. Does the freezer have a five-year warranty?

C. Frozen Food

1. How suitable is the amount and type of food to my family's needs and likes?
2. Can I get insurance on the food stored in the freezer?

Chances are the cost of the frozen food alone may be a little lower when bought on a Plan rather than as you need it at a retail store. More often than not, discounts received either through a Plan or through other quantity purchases will not be great enough to cover the costs of owning and operating a home freezer.

After you have compared food costs, you may want to consider whether the kind and amount of meats, vegetables, and fruits will be suited to your family. You may find it difficult to decide on the frozen food your family will eat in 4 to 6 months. You may have more freedom to choose food for your family at a retail store than you do on some Plans.

Managing Freezer Storage Space

Your success with the food from your home freezer depends on freezer management. It is also sound economy of the money spent on the freezer as well as the food that goes into the freezer.

Each family will develop a "freezer program" to meet their needs. No two families freeze the same foods in given amounts. Therefore a freezer is as individualized as the family pantry.

One of the greatest losses of sound food economy in the freezer is — not knowing what is in the freezer. This problem can be eliminated by using some form of record or inventory for the most efficient use of the freezer. This record will let you know at a glance the items that are in short supply, overstocked, and the recommended time to use each item. By knowing this the homemaker can plan meals easily and make sure that there is a constant turnover of the food stored in the freezer.

Rotate food on a first in first out basis. Foods kept too long in the freezer lose quality and do not give

full nutritive value or enjoyment for the dollars they represent

Systems of Using Records

Many homemakers prefer a large chart that is hung by the freezer with all the foods listed, along with the date they were frozen and a space for recording the foods taken out.

However, through the years most homemakers have decided that a simple record in a spiral notebook is the easiest way of keeping their frozen food record. A sample of this type of record is given on pages 23-24. Just as a trial basis, use this sheet for your record for a period of 6 months and see if it isn't easier and more pleasant to use the food from the freezer.

However, no matter what kind of a method you use — keep records of the frozen foods in your freezer. This record assures you better meals at lower cost, using less energy as you plan those 1095 meals and 700 snacks yearly.

(See suggested record form on next page.)

Inventory of Frozen Food and Use Record

As food is frozen enter the number of packages in Amount Frozen Column. When the season for freezing that particular product is over, enter the total amount frozen. Now estimate in what months and how often the food is to be used. Enter a mark for each package in the planned months as the food is used, cross it off.

Example	Jan.	Feb.	March	April	May	June	July
PEAS	xxxx	xxxx	xxxx	xxxx	/		
BEEF - VEAL							
Loin Steak							
Steak							
Round Steak							
Chuck Roast							
Rump Roast							
Stewing Beef							
Ground Beef							
Cutlets							
LAMB							
Leg							
Chops							
Roasts							
Stewing Lamb							
PORK							
Ham							
Steaks							
Roasts							
Sausage							
Bacon							
POULTRY							
Roasters							
Fryers							
Broilers							
Misc							
VEGETABLES							
Beans - Lima							
Beans - Snap							
Broccoli							
Brussel Sprouts							
Cauliflower							
Corn							
Greens							
Peas							
FRUITS							
Strawberries							
Other Berries							
Cherries							
Peaches							
Pineapple							

How Long Can Frozen Foods Be Stored?

As long as the temperature of a home freezer is held at zero or below, properly packaged foods will keep in excellent condition for months. However, each food is not poisonous, just not as palatable. Experience in handling foods in your freezer can add additional storage time for most foods.

Safe Storage Periods at 0°F.

<hr/>	
9 to 12 months	
All vegetables	All fruits (except citrus)
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About 9 months	
Lamb	Beef (except ground beef)
Veal	Poultry (except broilers)
Game bird	Fresh creamery butter
Game animals	Cheddar cheese
Eggs (processed)	Cookies
	Fruit cake (baked)
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About 6 months	
Broilers	Poultry (when cut up)
Turkeys	Oysters and shrimp (unpeeled)
Ducks (domestic)	Baked bread and rolls
Most fish	Mushrooms
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About 4 months	
Ground beef	Beef liver, heart, tongue
Geese (domestic)	Thick cream (40% fat or more) whipped
Most shellfish	Pork (except ground pork)
Some fatty fish	Baked cakes and cupcakes
Baked pies	
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2 to 3 months	
Citrus fruits	Cooked shrimp (peeled)
Ham (not sliced)	Baked egg yolk sponge cake
Bacon (not sliced)	Packaged cut poultry
Ground pork	Most cooked foods
Other pork	
Unbaked pies	
Baked quick breads	
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Less than 1 month	
Ice cream	Unbaked rolls
Sandwiches	Unbaked yeast dough
Chiffon pies	Unbaked quick breads
Homogenized milk	Brown'n Serve rolls
Frosted cakes	Cake batters
Leftover foods	