

FREEZING POULTRY

for Home Use



TEXAS A&M UNIVERSITY
TEXAS AGRICULTURAL EXTENSION SERVICE
J. E. Hutchison, Director, College Station, Texas



On the Cover . . .

The doughty rooster is known as the "Cock of Barcelos." Barcelos, a small town in northern Portugal on the Cavala River, is about 10 miles west of Braga. Barcelos enjoys a wide reputation in Portugal and abroad for its fine pottery handicraft and earthenware. The supercilious and flamboyant "Cock of Barcelos" is one of its most typical pottery handicrafts.

This rooster's story is an ancient legend transmitted from generation to generation. The story goes that a man from the neighboring Spanish province of Galiza had been condemned to hang for a crime he had not committed. He pleaded his case but it had no effect. Finally he appealed to The Virgin Mary and St. James to release him from the unjust sentence. With tears and supplications, he awaited the miracle which would verify the truth to the judge.

Then, as if struck by some ray of light, the condemned man asked that he be allowed to see the judge. The judge agreed and received him as he was having dinner.

The condemned man trembled with emotion but with a steadfast voice and direct look again declared his innocence. To prove his innocence, he declared that the roasted chicken which had been set before the judge would get up and crow if his statements were really true.

To the judge's astonishment, the rooster on the tray immediately jumped up and started crowing vigorously. The miracle was accomplished and the innocent man's life was saved.

As a memorial of this event, the man from Galiza had a stone monument erected opposite the gallows in Barcelos. Now in the Archaeologic Museum of Barcelos, the monument has served as the model for all future "Cocks of Barcelos."

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Marshall M. Miller and David B. Mellor*

Home freezer units offer today's consumer an excellent opportunity to enjoy poultry products everyday of the year. In addition they make meal planning easier and contribute to food savings by allowing any Texas family to take advantage of specials at the meat counter or to slaughter their own poultry for home storage and later use.

The process of packaging and freezing meats is a good means for preserving wholesomeness and quality for extended periods of time, if done properly. Proper packaging means sealing whole birds or parts in an airtight package from which all the air has been removed. Three important reasons for proper packaging and freezing are:

- Prevents dehydration or freezer burn
- Slows down oxidation or fat rancidity
- Prevents harmful bacteria growth.

Purpose of this bulletin is to show basically sound preparation and freezing methods to make your work easier and help you serve a high quality, good tasting economical food to your family and guests. Materials covered will specifically apply to chickens and turkeys,

but can also be used for duck, guinea hen, quail and pheasant.

It is advisable to think about your family's daily needs and special occasions before preparing any product for the freezer. To help you consider your needs, use the following questions as a guide.

What is the best package size for family needs?

What is the best package size for special occasions?

What is the best shaped package for freezer space utilization?

How many birds should be cut up and how many left whole?

Should some packages contain pieces of only one type such as breast, thighs or drumsticks?

Many families can not utilize a whole turkey at one time. Photographs are included to assist you in cutting a turkey into parts for the preparation of at least four meals. Also there are illustrations of turkeys which have been halved and quartered. Your butcher is the best qualified for the latter.

Having the product ready-to-cook helps insure cleanliness and makes freezing preparation much easier. Cleanliness is of utmost importance. Keep the cutting board, table or bar, knives and all utensils clean throughout the preparation period. Assume that all

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foods are contaminated with bacteria. Assume also that there will be no ill effects from bacteria, if you observe sanitary practices. Work at a relatively fast pace and place the product in the freezer as soon as possible.

Ready-to-cook poultry is defined as poultry from which all feathers, viscera, blood, feet and head have been removed. Also it has been washed, cooled in ice slush for at least 6 hours (chickens) and 10 hours (turkeys) and is wholesome. Only ready-to-cook or previously cooked poultry meat should be frozen. Never freeze an uncooked stuffed turkey or a roasted stuffed turkey.

Preparing for Freezer

Consider the following items in preparing to freeze poultry products:

If to be frozen whole—

- The thermostatically controlled freezing unit set at -20 degrees F., if possible, and definitely not higher than 0 degrees F. Use a thermometer.
- Plenty of free flowing water for thoroughly washing the birds prior to packaging.
- Some type of moisture—vapor proof packaging materials or containers.
- A cutting board.

If to be frozen in other forms, i.e. cut up, halved, quartered or precooked, you will also need—

- A good sharp butcher knife and, if possible, a boning knife.
- A sharpening stone, file or other means for keeping knives sharp.
- Sufficient work space and containers for holding parts.
- Cleaning materials for keeping the area and equipment sanitary.

Whole Chicken

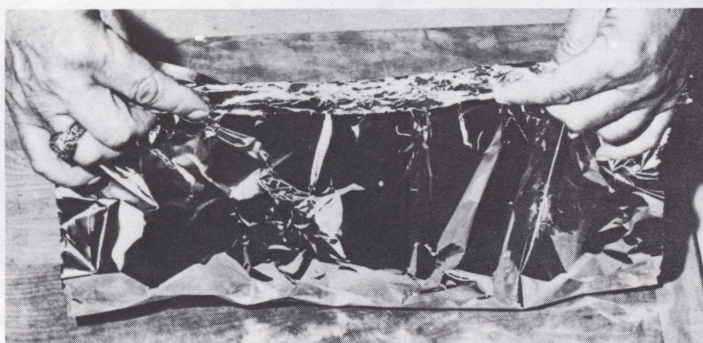
Broilers, fryers or mature hens purchased in plastic bags may be placed in the freezer if the bags are sound and the product is held no longer than 6 weeks to 2 months. If for a longer period, remove the bird from the bag and wash the carcass thoroughly under cool running water. Allow it to drain for about 15 minutes, then wrap in moisture—vapor proof material and place in the freezer. Bags used for wrapping fresh poultry are usually not vapor proof, nor has the air been removed. Therefore, if you want to maintain the quality for a longer period of time rewrap the poultry.

Packaging Materials

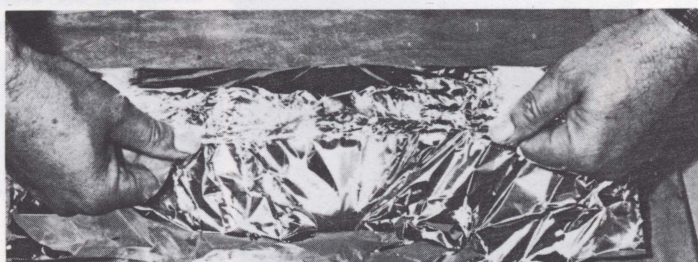
Use only moisture—vapor proof materials. There are many excellent packaging materials available for packaging poultry, but not all are readily available to the homemaker. The shrink-type bags in which frozen turkeys are packaged are occasionally available in sizes to fit broilers and chicken hens. These bags which fit like a second skin can sometimes be obtained from a locker plant or local meat packer. If obtainable, they are excellent for packing poultry. Plastic bags as found on fruits or vegetables should not be used. Such bags are not vapor proof. Aluminum foil makes an excellent packaging material for frozen poultry provided it is closed tightly and formed to the bird or parts. The lighter weight aluminum foil may need over-wrapping with paper to protect it from rips or tears that occur easily after the meat is frozen. Ordinary butcher paper is a good wrapping material as long as it is moisture and vapor proof.

Another good packaging product is the plastic container. These are usually square or rectangular in shape allowing better use of available freezer space. Glass freezer jars may also be used. Pack the parts directly into containers, leaving about ¼-inch space immediately under the lid for expansion. Some prefer to cover the parts with water and the authors have found this practice gives excellent results. Again, be sure to leave expansion space.

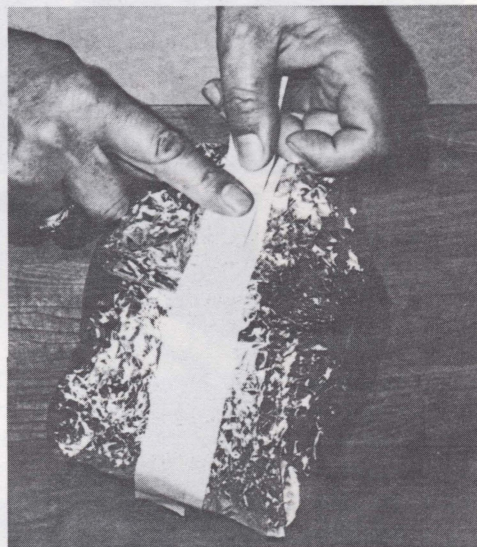
Chicken placed on sheet of aluminum foil in proper position for the drugstore wrap.



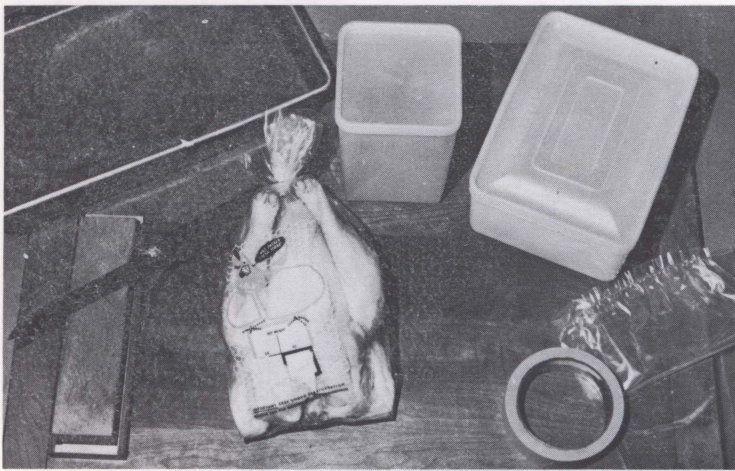
Draw paper together so that edges are equal. Fold edges together in 1-inch folds until tight over the breast of the bird.



Crimp and fold ends, then mold the aluminum wrap to the body of the bird forcing out all the air possible. Now fold ends upward and press down tightly.

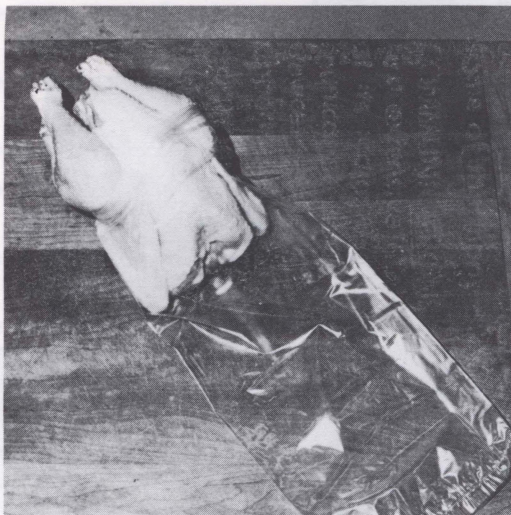
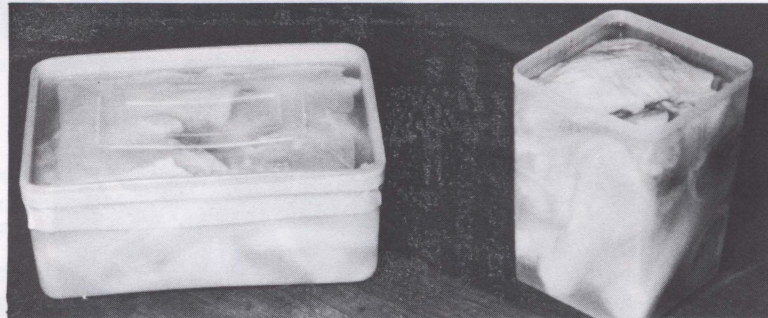


Complete sealing job by sticking two rows of freezer tape over folds and flaps. Package is now ready for freezing. Provide air space between packages in freezer to promote faster freezing.

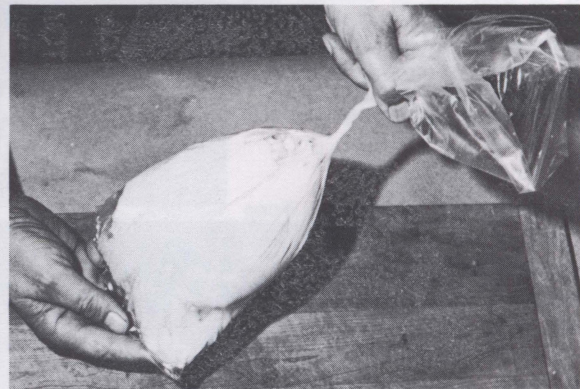


Some materials and equipment that may be used in preparing poultry for freezing are rigid plastic containers, moisture-vapor proof bags, freezer tape, heavy-duty aluminum foil, sharp knife and stone and containers for holding parts.

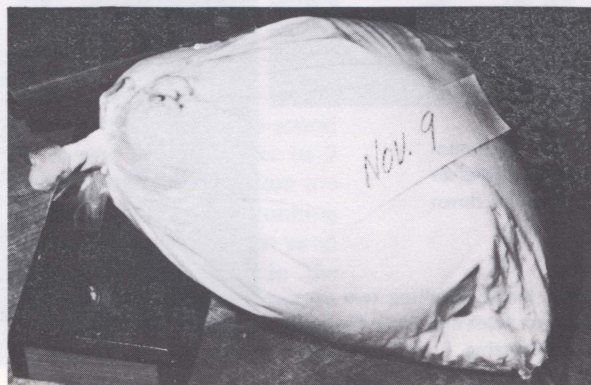
Here are plastic containers filled with chicken parts. Note water level in container on right. It has been filled to about $\frac{3}{4}$ inch from the top to allow for expansion during freezing. Container on left has had water added and the lid has been sealed with freezer tape.



Start bird into moisture-vapor proof bag as shown. Moistening the skin will help. The bag may be stretched considerably if necessary.



After bird is in the bag, exhaust as much air as possible by pressing toward the open end with both hands. When all air is out, twist the bag as shown and close with freezer tape or metal closures.



Bird is completely sealed, dated and ready for the freezer. To shrink the plastic, dip the packaged bird into water heated to 200 degrees F for 2 seconds. Remove from hot water and the bag will shrink to glove tightness. This is possible only with thicker high quality bags.

Disjointing

Many prefer to cut the poultry into parts before freezing. This is especially true for broilers and fryers. This can be done easily and saves time and effort by doing all cut up at one time.

There are many ways to disjoint a bird. Photos on pages 8 and 9 illustrate an easily followed method.

Before wrapping the disjointed parts, thoroughly wash each piece under cool running water. This is the most opportune time to separate the parts as you would like to serve them. For the family of four, for example, one might wish to place four drumsticks and four thighs together in 1 package. All bony parts may be placed together in convenient-sized packages for future use in preparing chicken and dumplings or soups. Remember again to keep things sanitary while working. Keep all working surfaces wiped clean of blood and water as well as the utensils and tools used in the packaging operation.

Whole Turkey

When whole frozen turkeys are purchased, they may be placed directly in a freezer with no further preparation. As stated earlier, some families can not utilize a whole turkey at one time and may, therefore, find it better to purchase halves or quarters. In the event these are not available, one can usually get a butcher to saw the turkey carcass into halves and then into quarters, if preferred. After sawing, the bird must be rewrapped for proper storage in a home-freezer unit. Wrapping materials should be of high quality and moisture-vapor proof.

Cutting Up the Turkey

Fresh turkey, slaughtered at home or purchased at the store, may be cut into parts. Frozen turkey may be thawed and cut into parts for refreezing, if carefully done. Do not let the temperature of the meat rise above 35 degrees F. Use sanitary equipment and materials and work rapidly, placing the rewrapped parts back in the freezer immediately. Do not refreeze the giblets and neck. The usual recommendation is not to refreeze thawed meat, but if the need arises and the above precautions are followed, it can be done successfully. The following illustrations show how to cut a turkey into parts for serving at four different meals.

Freezing the Poultry

It is impossible to improve the quality of a product by freezing it. The goal in freezing is to

maintain the high quality that the poultry should have at this stage and to preserve it for several months. The faster the poultry freezes the better. Most home units do not have a fast freezing or sharp freezing compartment, therefore, in the home one is usually dealing with a relatively slow frozen product. To improve this situation turn the thermostat in the freezer down as low as possible. The product will freeze at 0 degrees F., but some quality loss will result. Points to consider are:

- Have freezer temperature as low as possible.
- Space packages so that they do not touch thereby allowing air to circulate completely around each package.
- Avoid overloading the freezer.
- Be sure all packages are sealed. Use a recommended freezer tape on all packages. Check all container lids.
- Remember that air in the package contributes to freezer burn and rancidity. Make every effort to exclude as much air as possible from each package.

Holding Frozen Poultry

When properly packaged, poultry meat may be held in a freezer with a maintained temperature of 0 to -20 degrees F. for 6 to 12 months with little quality loss. Date each package and maintain an inventory for maximum satisfaction in utilization.

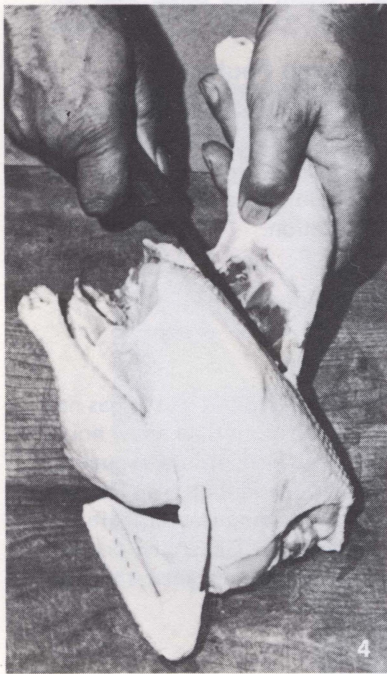
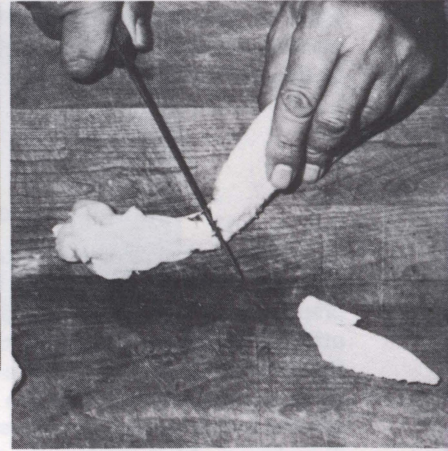
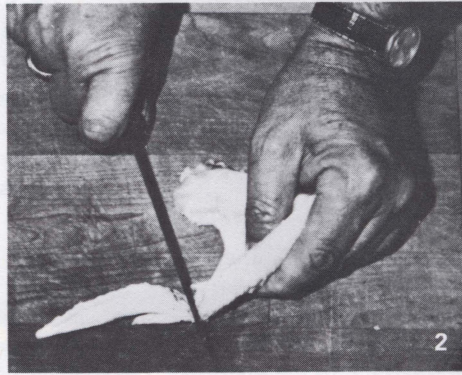
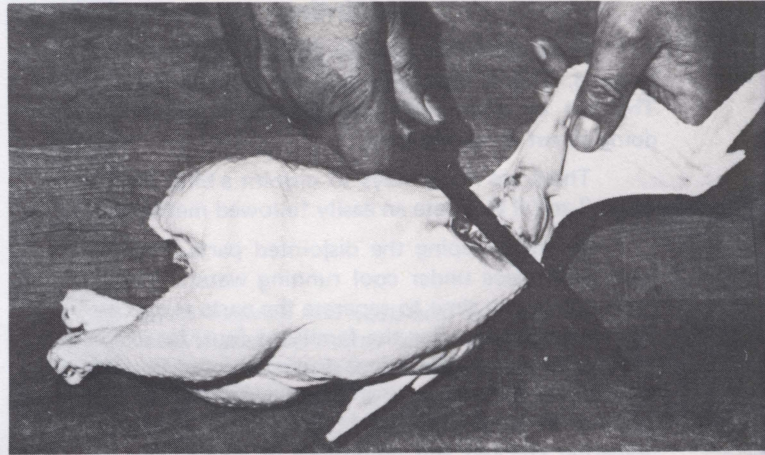
Refreezing

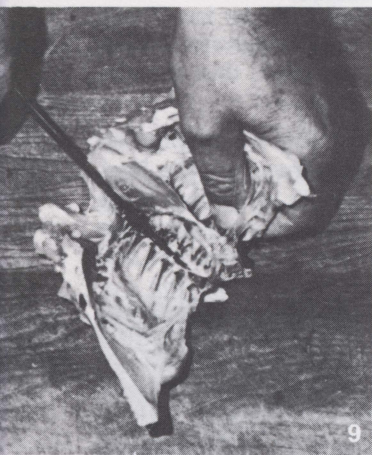
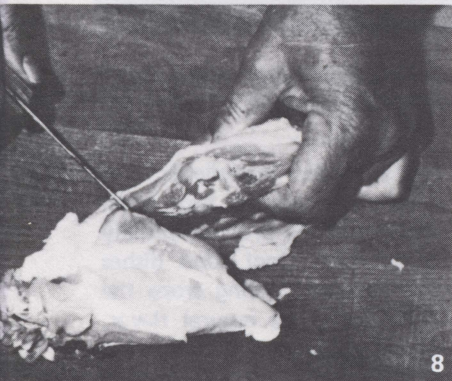
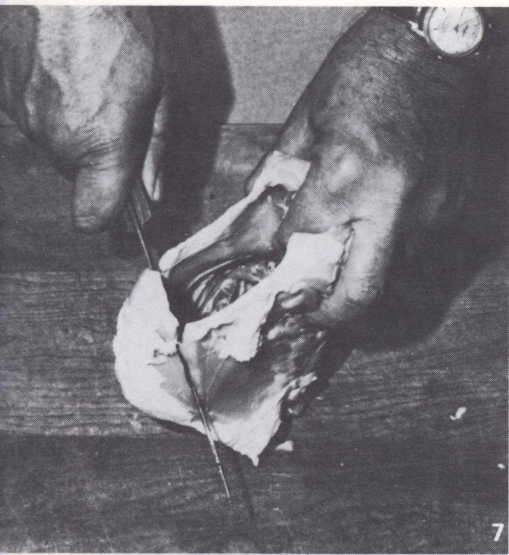
Poultry meat which has thawed but which has not been held above 35 degrees F. for more than a few hours can usually be refrozen with only a slight loss in quality. This practice, while not a recommendation, can be used in the salvage of poultry meat following freezer malfunction or other unexpected thawing. Generally poultry meats react better under such circumstance than do most other frozen foods.

Thawing Frozen Poultry

Thawing time depends on the size of package or bird and the thawing method used. One method is to place the package or bird on a plate or pan in the home refrigerator. Time required will vary from 1 to 3 days. With a little experience, one can predict very closely the necessary thawing time. One may also place the package on a kitchen counter at room temperature. This requires less time and necessitates checking the product more

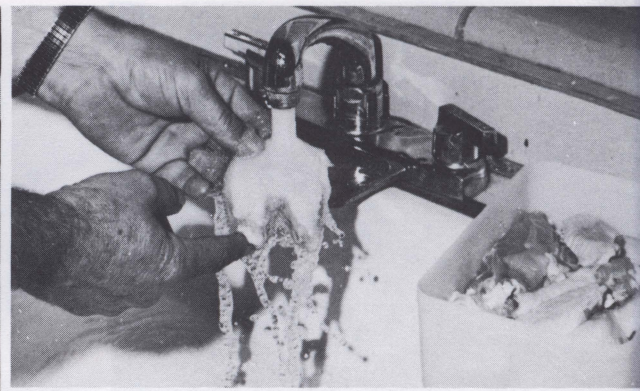
CHICKEN CUT UP





1. To begin the cut up operation, place bird on its side. Pull wing upward and using a very sharp knife cut directly into wing joint. Cut through joint, remaining tissue and skin, completely removing wing.
2. Place wing flat on board and cut through last joint of wing, removing wing tip. Wing tip may be discarded or used for soup stock if preferred.
3. Separate wing into two parts by cutting through second joint. The two resulting parts are sometimes called baby drumsticks and will fry to a beautiful golden brown. Youngsters especially enjoy them.
4. Pull leg away from body. Open the skin straight down into the thigh joint. Leave as much skin as possible on the breast. Only the skin needs to be cut. There is no need to cut meat or bone. The leg is removed by forcing it back until hip joint is forced out of socket and cutting meat and skin away at the hip.
5. After leg is removed, place whole leg flat on board. There is a yellow line of fatty connective tissue over the joint between the thigh and drumstick. Place your knife blade just on the drumstick side of tissue and cut into joint. It is possible also to find the joint by feeling with your finger. Cut through joint and tissue separating thigh and drumstick.
6. After removing legs and wings, cut the pulley bone. Cut straight in at the forward point of the breast bone. When knife reaches bone turn blade at slight angle toward forward end of breast and cut out to the end.
7. Hold remaining parts of bird straight up on point of breast. Make cut straight down and just to the breast bone side of the two long thin bones which are seen easily. Cut through to the board and remove the breast piece.
8. Place remaining breast and back bone on its side, flat on board. Make a short cut into the back joint. Turn carcass over and make the same cut on other side. Now break the back at cuts and cut through connective tissue to remove back section from the rib cage.
9. Lay rib cage section piece flat on board. Cut through ribs close to backbone as shown. This is the only place in disjointing a bird that is necessary to actually cut through bone.
10. Cutting by this method gives thirteen pieces of chicken. It is a method that gives near maximum utilization, especially for the large family.





Two chickens have been cut into parts for packaging and freezing. At this point, it is possible to separate the parts into three types. The pan contains the bonier parts which some prefer to utilize in chicken and dumplings or soups. On the left are parts that are all light meat and pieces of all dark meat are on the right.

Wash each piece of chicken under running cool water before packing for freezing.

often than when defrosting in the refrigerator. The package may also be placed in a pan of cold water, or when properly sealed, may be placed under the cold water tap.

In any event, check the package often to determine progress. Leave the product in the package in which it was frozen during the thawing period. Rules to remember: *The larger the package the more time needed for thawing. The faster the thaw the more drip loss encountered. Cook poultry as soon as possible after thawing.*

Approximate Timetable for Various Methods of Thawing Turkeys

Pounds	Refrigerator (days)	Cool Water (hours)	Room Temperature (hours)
4 - 6	1 - 1½	3 - 4	6 - 8
8 - 12	1½ - 2	4 - 6	8 - 12
12 - 16	2 - 2½	6 - 7	12 - 14
16 - 20	2½ - 3	7 - 8	14 - 16
20 - 24	3 - 3½	8 - 10	16 - 18

Precooked Meals

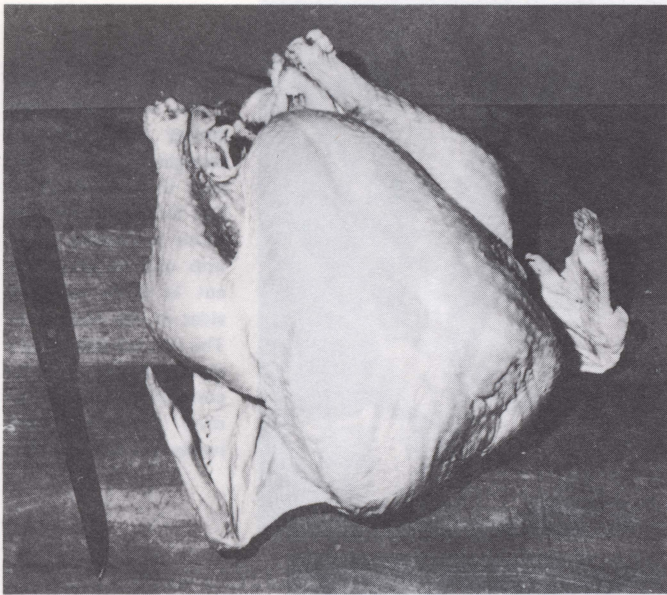
Poultry meats and the home-freezer unit can combine to greatly assist the homemaker in advance meal planning. Many family or company-style meals can be prepared ahead of time and placed in the freezer for future use. Almost any dish may be prepared as long as it is cooked thoroughly and is frozen properly. However, never freeze a stuffed turkey or chicken, either cooked or raw.

To prevent vegetables and other ingredients from becoming too soft or having a warmed-over taste when reheated, a little under cooking of the product initially results in a better final product. Cool food dishes immediately after cooking. Because cooling stops the cooking process, it helps preserve the natural flavor, color and texture. To cool, set uncovered pan of food in iced or very cold water. Change the water to keep it cold. The pan may also be put directly on ice. If you place a very hot dish directly in the refrigerator it may warm up other foods in the refrigerator, thus contributing to spoilage.

Foods that are to be baked after freezing can be frozen conveniently in oven-proof containers. The food may also be frozen in the casserole in which it is to be baked and then removed for freezer storage. Line the casserole before freezing with heavy aluminum foil, and remove the food after freezing. Remove the foil and replace food in casserole when ready for reheating or cooking.

Keep the product and any surfaces clean. Be particularly careful with cooked poultry and all cooked meats. Bacteria, which cause spoilage, are spread by handling. Mixtures containing sauces and gravies are especially suited for bacteria growth.

Remember, bacteria are not killed by freezing. Their growth, however, is stopped by freezing. They are killed by heat. Most bacteria are killed at temperatures above 160 degrees F. Most of the bacteria found in foods grow best between 60 and 115 degrees F. It is important, therefore, to keep food cold (below 40 degrees F.) or hot (above 140 degrees F.). Do not allow food to remain between these temperatures any longer than absolutely necessary.

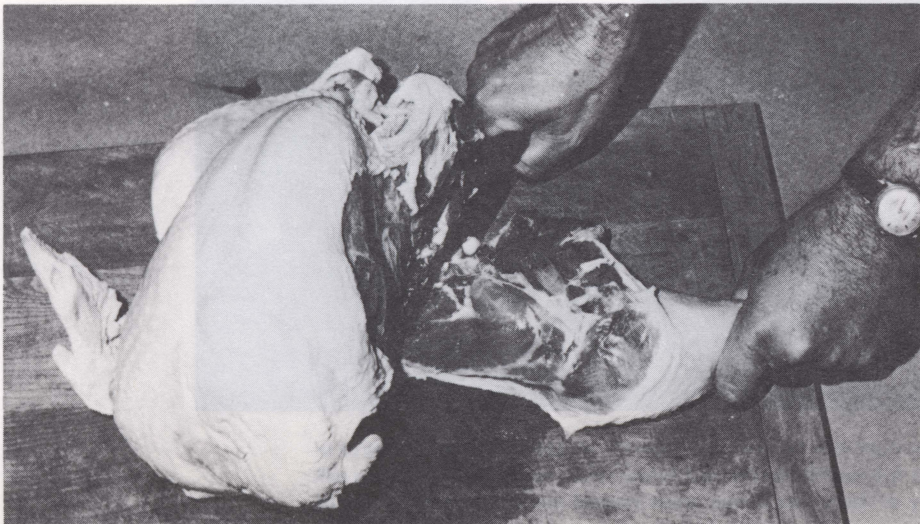


Freshly processed turkey on cutting board ready to be cut into parts with sharp knife for serving as many as four good meals.

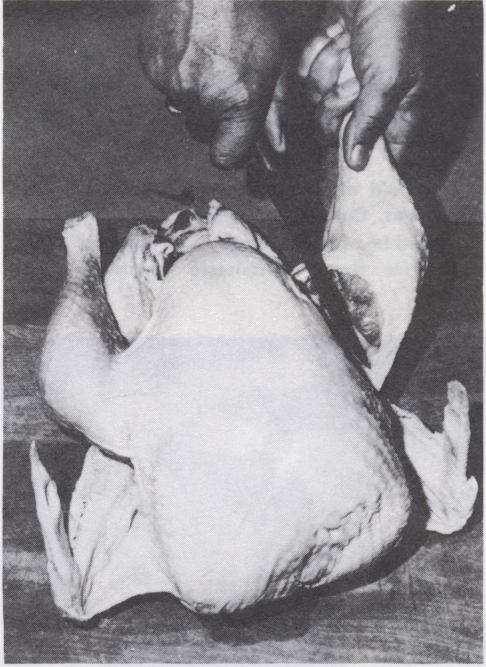
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Grasp drumstick firmly at the hock joint. Pulling the leg outward from the body, cut through the exposed skin, leaving as much skin as possible on the breast.

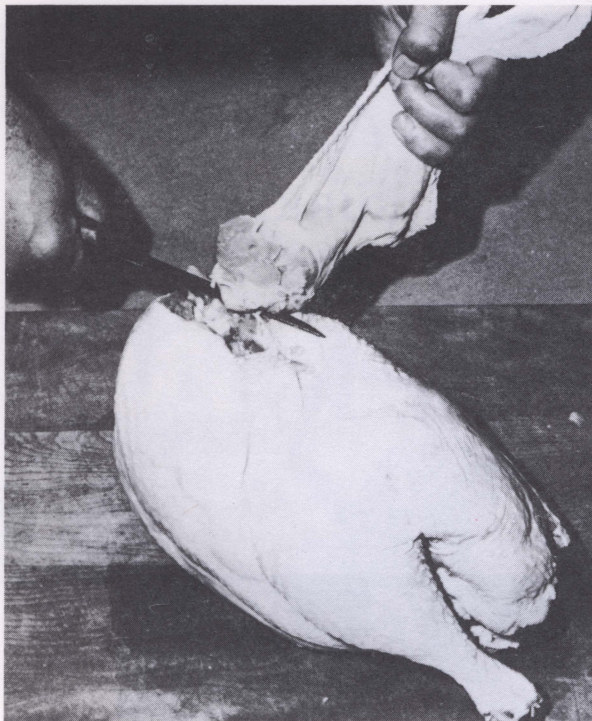
Cut the skin down to the thigh joint and dislocate leg from hip by pressing down onto the cutting board. Cut through thigh joint and connective tissue separating leg from rest of bird.



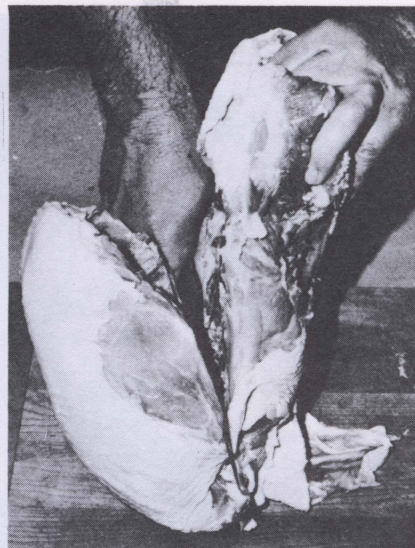
TURKEY CUT UP



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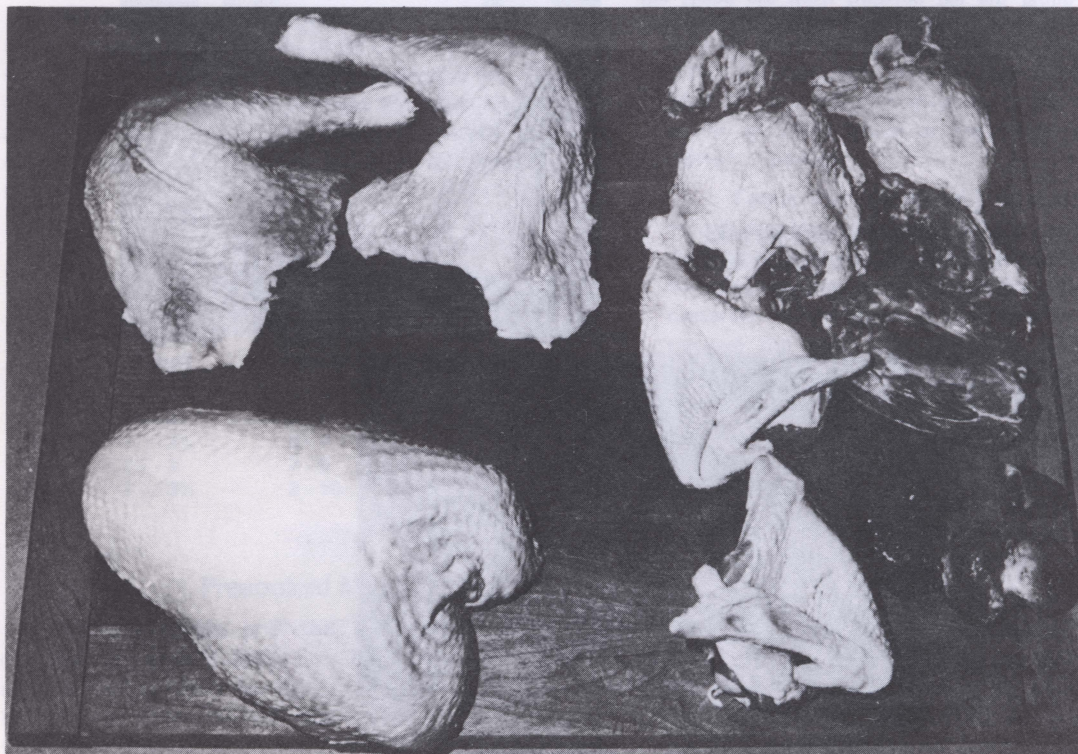
Turn bird on side, hold wing firmly and pull upwards. Stretch to full extent. Cut into wing joint leaving as much meat as possible with the breast. Cut through joint and connective tissue, completely separating wing.



Set front end of breast down on board. Hold turkey firmly and cut straight through rib cage to front of breast. Cut through connective tissue separating breast into one portion. This cut is made on both sides at the same time. The ribs are joined by a small amount of white connective tissue that may be seen from inside the body cavity.



Firmly hold back parts flat on board and make cut as shown directly behind ribs. Turn piece and make same cut on other side. The back may then be broken easily into two parts.



Wings, back parts, neck and giblets on right may be used in a casserole, as turkey and dumplings or in the preparation of stew or soup. Each full leg (drumstick and thigh) when roasted with dressing will make a full main course for a family of four. The breast when roasted makes a wonderful special dinner for up to eight people.

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Information on the "Cock of Barcelos" supplied by Casa de Portugal, N. Y. and Dr. Ford M. Milam, U. S. Agricultural Attaché, Lisbon, Portugal.

