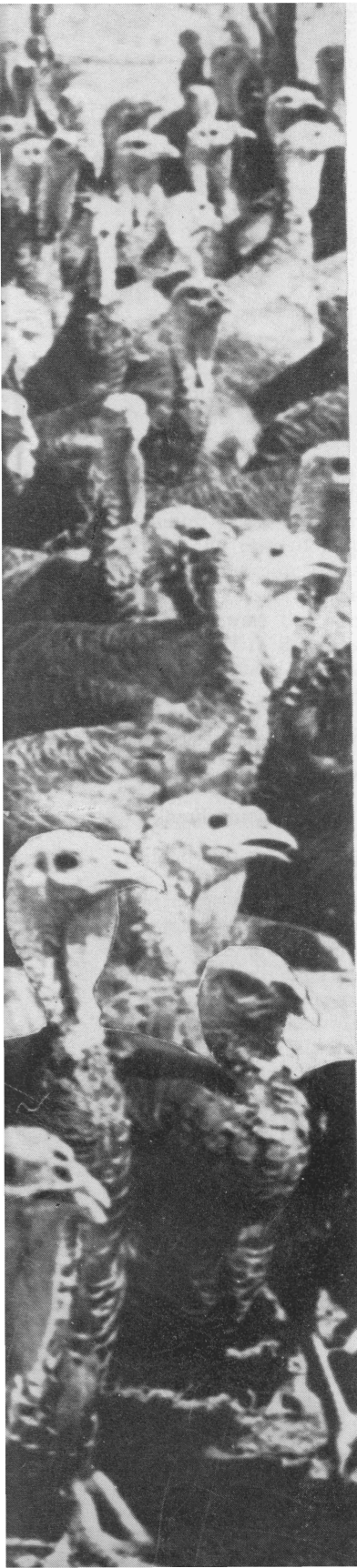


Merchandising Turkeys



TEXAS AGRICULTURAL EXTENSION SERVICE
G. G. Gibson, Director, College Station, Texas

ACKNOWLEDGMENTS

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Merchandising Turkeys

INTRODUCTION

It is a recognized fact that a high percent of the total yearly turkey consumption takes place during the holiday seasons of Thanksgiving and Christmas. There is a need to lengthen the period of time turkeys are available. It is not enough to be available, but it must be in quantities which the average family can use in its daily menus.

Turkey offered to the consumer should be processed in such a way as to meet basic fundamental requirements for sales of any food commodity. These are: Uniformity, economy, nutritious, eye appeal, easy to serve and easy to prepare. Quality of the product is not included here because there are demands for different levels of quality. Producers will bring turkeys of varying qualities to market and they must be sold. The different ways they are offered and the number of days of the year they are offered to the consumer are essential to increased consumption. *This is not intended to mean that the highest quality possible should not be attained.*

If turkey is to meet these requirements equal to or better than competitive meats 365 days a year, it seems necessary to process the turkey further than the old procedure of selling them whole as New York dressed or drawn.

There has been some work done on merchandising turkey in many different forms during the past three or four years. Some are offering disjointed turkey in one package, about the same as disjointed fryer chickens, others are offering canned turkey and then there are those offering turkey in individual pieces such as legs, drumsticks, necks, giblets, breasts and backs. In some places the consumer can obtain smoked and barbecued turkey. When in this form it offers another sale possibility throughout the year. Half and quarter turkey have also been offered the consumer in some places. In addition to all of these there is the boneless turkey steak, which has been well received by many commercial firms and also consumers who have had an opportunity to eat turkey in this form. Possibly the reason they have been so well accepted is because they score exceptionally high on the fundamentals of food sales requirements mentioned previously.

Many requests have been received for information on the subject of year-round merchandising of turkeys as a food commodity. The information given in this bulletin can be used to assist those who are interested. The procedures recommended have been used and good results obtained.

INTRODUCTION

It is a recognized fact that a high percent of the total turkey supply is consumed in the home during the holiday season of Thanksgiving and Christmas. There is a need to lengthen the period of time turkey is available. It is not enough to be available, but it must be in quantities which the average family can use in its daily meals.

Turkey offered to the consumer should be processed in such a way as to meet basic fundamental requirements for safety of any food product. These are: (1) uniformity of processing, (2) uniformity of packaging, (3) uniformity of labeling, (4) uniformity of quality, (5) uniformity of quantity, (6) uniformity of variety, (7) uniformity of price, and (8) uniformity of service.

CONTENTS

	Page
Introduction.....	3
Ready-to-Cook Turkey.....	5
Halved Turkey.....	6
Quartered Turkey.....	6
Turkey Pieces and Boneless Steaks.....	7
Processing Into Pieces and Steaks.....	9
Fryer Turkey.....	16
Smoked Turkey.....	17
Barbecue Turkey.....	18
Barbecue Sauce Mixture.....	19
Canned Turkey.....	20
Turkey Patties.....	20

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Merchandising Turkeys

FLOYD Z. BEANBLOSSOM

Extension Poultry Marketing Specialist

Texas A. & M. College System

READY-TO-COOK TURKEY

Dressed and drawn turkey has been offered the consumer for many years. Not until recent years has the housewife been able to buy turkey in any other form. This practice of selling only the whole bird plus the tradition of holiday festivities have been a big influence in keeping the per capita consumption of turkey meat low as compared to other meat products.

Drawn turkey for baking and roasting should be made available at all times to the consumers where there is demand for the product. Commercial firms have used turkeys in this form throughout the year for some time but the housewife generally has not had an opportunity to buy turkey except at holiday seasons from the retail market. There has been little demand by the housewife at times other than Thanksgiving and Christmas and that is one reason why the retail market has not offered this product throughout the year. This indicates a need for processing the turkey in such a way as to have it available in smaller quantities for cooking other than the usual method of roasting.

Improvement of quality in the live turkeys offered for market in the past few years is helping to increase consumption but too many

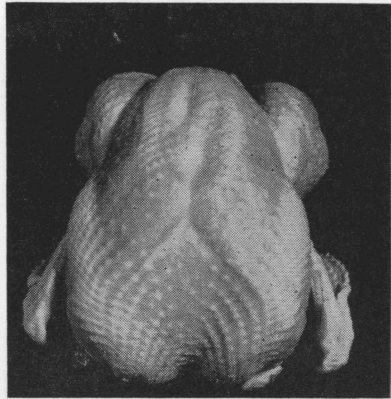


Fig. 1.—Turkey that possessed high quality when alive. It was fully fleshed and finished and was free of pin feathers. This turkey was dressed and drawn by a commercial firm using proper procedures in processing to maintain live bird quality.

turkeys are still coming to the market poorly fleshed and finished. Many high-quality live turkeys are reduced in quality before reaching the consumer. This is done by rough handling when moving them to market, in the processing plant before killing and improper methods of processing.

Increased consumption of dressed and drawn turkeys may take place if quality is improved and then maintained through proper handling and processing. This will make available to the consumer a product with eye appeal equal to other

competitive foods. Turkeys may be processed to meet these requirements if recommendations given in Texas A. & M. College Extension Service Bulletin, B-149, "Processing Poultry," are followed. This bulletin may be obtained through the county extension agents' office or by writing Texas A. & M. College Extension Service, College Station, Texas.

HALVED TURKEY

Turkeys cut in halves make it possible for the consumer to buy and serve turkey more often than

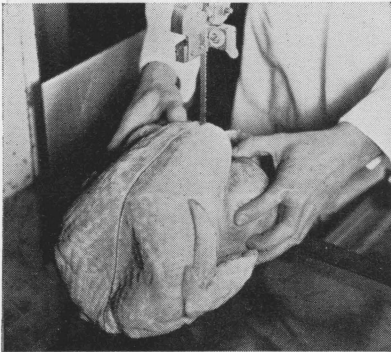


Fig. 2.—Turkey being cut in halves. This can be done before turkey is frozen, but it is easier after freezing.

if it was necessary to buy a whole turkey. Half turkeys may be cooked and served with eye appeal much the same as whole turkeys.

This method of marketing turkey has only been offered the consumer during the last three or four years. Retail stores that offer this service report many additional sales. It offers the housewife a quantity of meat she can use without waste and also permits variation of food in the weekly food budget.

One of the reasons for cutting

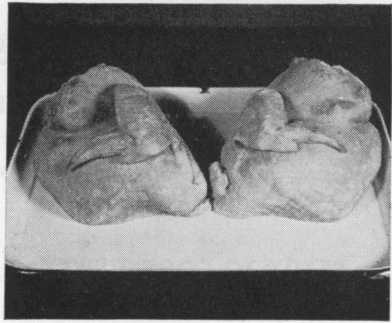


Fig. 3.—The turkey halves will look like these after being sawed.

turkeys in halves is the large size of the toms offered for retail sale.

The markets have been selling toms several cents a pound lower than hen turkeys. When this is true and half toms can be bought there is a big saving in food cost to the consumers, but from a producer's viewpoint the greater demand may increase the price on heavy turkeys.

QUARTERED TURKEY

Turkeys when quartered offer the consumer either dark or light meat in smaller quantities than half or

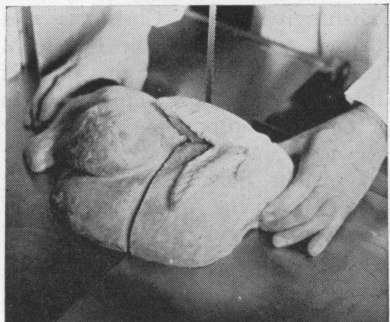


Fig. 4.—Turkey being sawed in quarters after being halved.

whole turkey. This procedure makes excellent roasting size cuts. The quarters of turkey toms will usually weigh 4 to 7 pounds each, depending upon the size of the live turkey. The breast and wing quarter will weigh $1\frac{1}{2}$ to 2 pounds more than the quarter with leg. Turkey cuts such as these lend themselves to deep freezing and are easy to keep in lockers or in home storage units.

Marketing turkey in this form is relatively new and therefore many consumers do not know its merits. Recipes and cooking procedures for turkeys in this form are being offered the consumer by commercial firms and organizations inter-

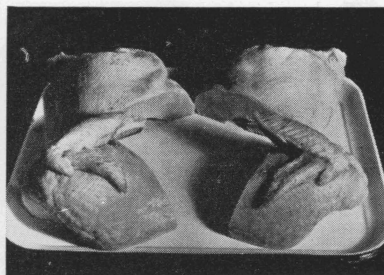


Fig. 5.—Turkey quarters will be two dark and two light meat.

ested in the use of turkey meat throughout the year.

This product, like boneless turkey steaks, half turkey, canned turkey and disjointed turkey, lends itself to use in weekly food budgets and variations in foods used daily.

TURKEY PIECES AND BONELESS STEAKS

Some commercial firms are now offering turkey that has been disjointed and frozen in package form, and also piece turkey ice packed. Packaged turkey is boxed

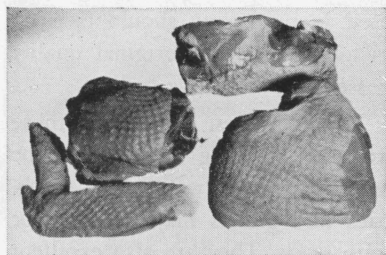


Fig. 6.—Piece turkey as cut for packaging by a commercial firm.

and frozen about the same as broiler and fryer chicken, except all pieces of the turkey are not in one package. This makes it convenient for the consumer to buy

any quantity and to prepare and cook turkey in different ways.

Piece turkey lends itself to amount needed by consumer for any meal or occasion. Some business firms are making turkey available through their meat counters and some commercial locker plants are cutting turkey into pieces, wrapping and freezing for their patrons, to put in their lockers for use as needed. Many who have home storage units are cutting turkey into pieces, and either wrapping or having wrapped to be frozen and put into their storage units.

Turkeys used for disjointing should be well fleshed and finished. In addition, the processing needs to be properly done to insure a high quality product which possesses flavor and eye appeal.

Turkey in these forms is not yet available to the consumer in a high percent of retail meat departments, but it does show a trend in merchandising turkey. Surveys indicate the consumer likes the opportunity of buying turkey in pieces. Use of piece turkey from home storage units and commercial locker plant storage is also increasing.

Disjointing the turkey is easy to do and the procedure is the same as when making boneless turkey steaks. When making steaks the meat must be removed from the bones on the parts of the turkey from which steaks are to be made. Breast meat is used most for steaks; however, some like the dark meat from the thighs made into steaks. The thighs and breast of the turkey are the only pieces recommended for making boneless turkey steaks.

After the turkey has been cut into pieces the processing of breast and thighs into steak form can be done quickly and easily. The steaks are uniform in size, shape, thickness, and color. They, like all turkey meat are palatable and nutritious, and the steaks also have eye appeal. There is no waste; therefore, the consumer is getting a product one-hundred percent edible. The steaks are easy and quickly cooked. They are easy to serve and also lend themselves to serving with many other foods. Because of the size of each steak (3 to 4 oz.) the consumer may buy at any time only enough turkey meat to supply the family needs for one

meal. This is also an advantage when buying pieces of turkey that have been disjointed. This advantage makes the product fit well into the weekly food budget, especially for the small family and the medium to low income group. When this method of processing is used, large turkeys are not a problem. In fact the large toms are most economical to use.

Locker plant patrons and those with home storage units can save space in their boxes and also make the large turkeys fit into their daily menus to better advantage by having them processed into pieces and steaks.

Quality of piece turkey and boneless steaks will depend upon the quality of the live birds and the methods used in processing. It is therefore important to use turkeys under one year of age that are well fleshed and finished. The methods used in processing should be such as to maintain the original quality possessed by the live turkey.

Turkey pieces, other than those used for making steaks, may be used in many ways. The neck, back and giblets may be used for soup stock. They are also excellent for making turkey gumbo, a la king, creole and may be cooked with noodles, as well as many other ways. The wings may be fricasseed and the drumsticks may be used for such dishes as turkey salads, cream turkey, pot roasts and others.

Processing Into Pieces and Steaks

The following procedures have been used successfully in cutting turkey into pieces and making boneless turkey steaks. Starting with Fig. No. 7 and continuing through No. 24, each step is illustrated and will be helpful to anyone wishing to disjoint turkey and make steaks.

Cut neck from body of turkey as shown here. The pruning shears being used for this purpose make the task easier and save the cutting edge of knife.

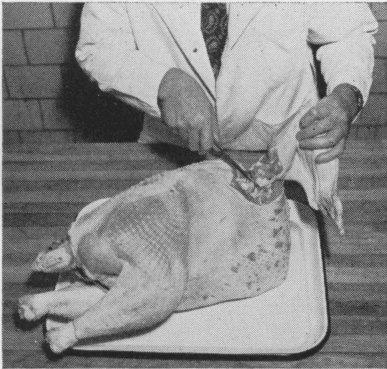


Fig. 8

After wing has been removed, cut off tip by disjointing at last joint. This part of the wing may be put with soup stock, such as back pieces and neck. The wing may be further disjointed at middle joint for convenience in wrapping and cooking.



Fig. 7

Place turkey on side and remove wing by cutting into joint as indicated in Fig. 8. Leave as much of tender breast meat on breast as possible. Note: To save labor cut leg off on this side of the turkey before turning the turkey to remove other wing.



Fig. 9

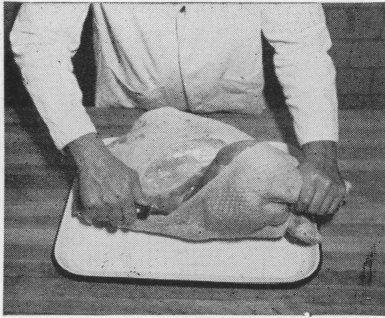


Fig. 10

First step in disjuncting leg at hip joint is to place turkey on back and cut as indicated in Fig. 10. Cut skin as close to leg as possible.

To complete the removal of the leg turn the turkey and cut as indicated in Fig. 11. Continue to cut meat from rear of hip joint and dislocate the joint. Then, by placing knife against hip bone and pulling sharply on the leg, the oyster in the back will peel out clean. Turn the turkey over and remove opposite wing and leg.

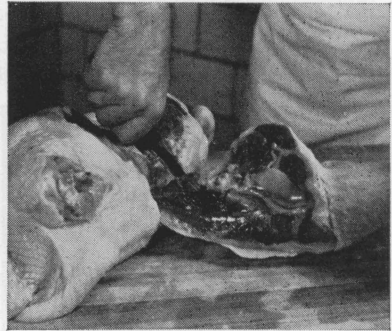


Fig. 11



Fig. 12

Separating the thigh and drumstick is easy when cut at joint as shown in Fig. 12. Place leg flat on cutting board with skin side down. Cut through at light colored streak of cartilage connecting the thigh and drumstick bones. Note: If steaks are to be made from the thigh meat do not separate thigh and drumstick until meat has been removed from thigh bone as shown in Fig's 19 and 20.

The first step to separate back from breast is to cut through flanks as shown in Fig. 13. Be sure to put knife through both flanks, as this will save time in cutting.

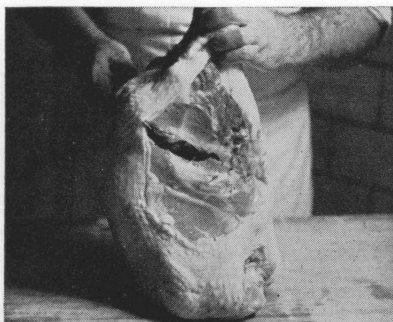


Fig. 13



Fig. 14A



Fig. 14B

The next step in cutting the turkey into pieces is to cut from wing joint opening back through the soft cartilage connecting the ribs.



Fig. 15

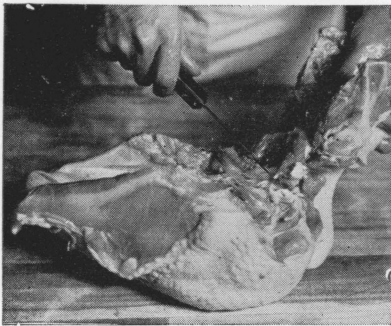


Fig. 16

The final step in separating the breast and back is to apply pressure at ends of the breast bone and back which will cause them to separate at the wing joints, then cut remaining flesh and skin holding the breast and back together.

There are two well-meated pieces on either side of the back close to the neck. These can be cut off as shown in Fig. 17.

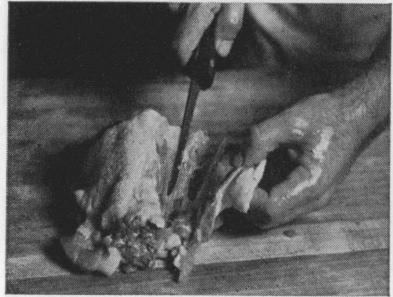


Fig. 17

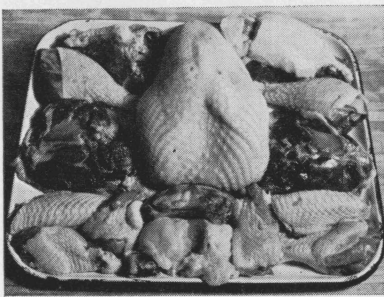


Fig. 18

The turkey is now completely cut into pieces which include the giblets. The different pieces and parts may be prepared and cooked in many ways and the quantities may be selected as needed for the occasion.

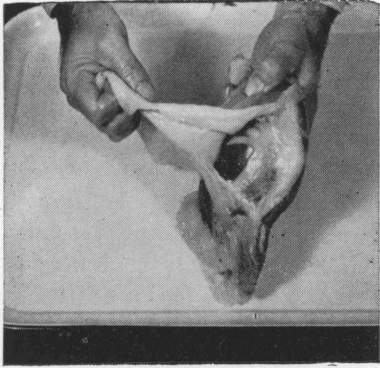


Fig. 19

If boneless turkey steaks are to be made from the thigh meat, do not disjoint thigh and drumstick until after meat has been removed from thigh bone. The first step in this procedure is to pull the skin off the thigh meat as shown in Fig. 19.

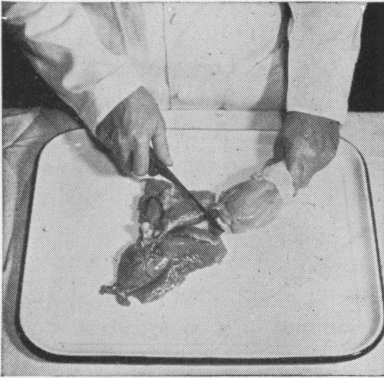


Fig. 20A

After the skin has been pulled off the thigh meat the next step in removing meat from bone is to cut around joint, leaving cartilage around joint attached to drumstick, as shown in Fig. 20A. Next cut along thigh bone and with the side of the knife blade, push the meat toward the end of the thigh bone as shown in Fig. 20B. After the meat has been completely removed from bone, separate the thigh bone from the drumstick, as shown in Fig. 20C.



Fig. 20B

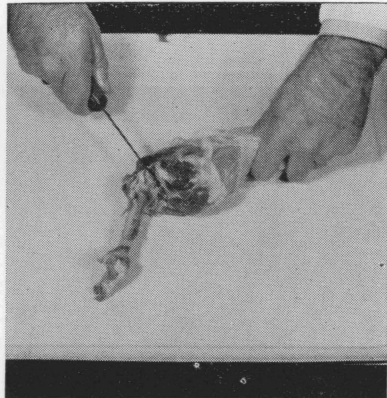


Fig. 20C

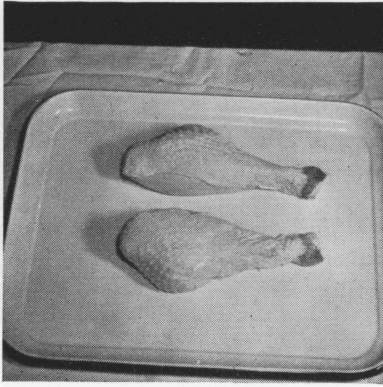
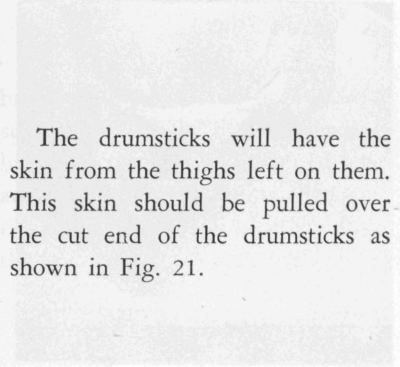


Fig. 21



The drumsticks will have the skin from the thighs left on them. This skin should be pulled over the cut end of the drumsticks as shown in Fig. 21.

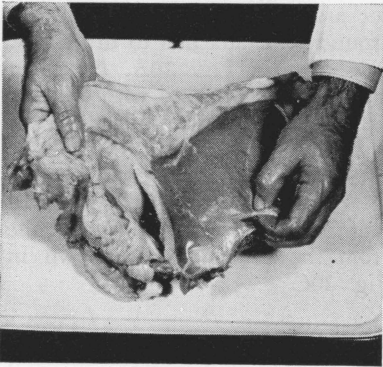


Fig. 22A

When the breast meat is to be used for steaks the procedure shown in Fig. 22 A, B, and C are recommended. A is removing the skin which can be put with back and neck pieces for soup stock. B is cutting meat from breast bone and C is removing tissue which connect breast muscle to bony structure of body. This is important for it is undesirable for this tissue to be in the steaks.

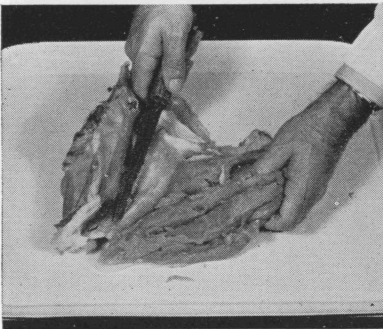


Fig. 22B

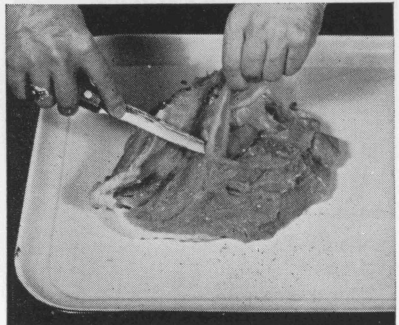


Fig. 22C

After thigh and breast meat have been removed from the bones, cut each kind of meat into 4 ounce portions. There is a difference in the texture of the light and dark meat; therefore, keep them separate when making steaks.



Fig. 23

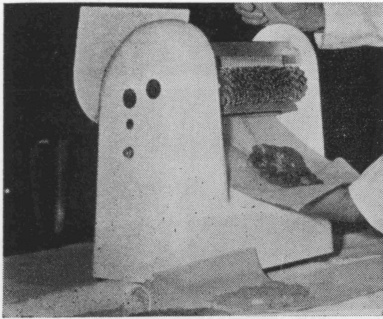


Fig. 24

The next step in making steaks is putting the pieces into the machine. It will be necessary to put them through more than one time. The number will depend on machine, number of pieces in the 4 ounce portions, and the efficiency of the operator.

When the 4 ounces of meat have been put through the machine in the proper manner and number of times, the steaks will look like those in Fig. 25.

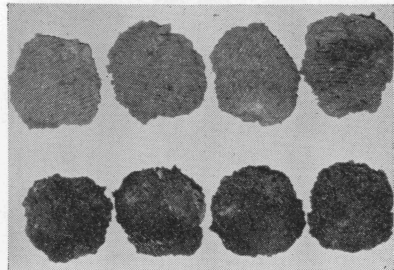


Fig. 25

FRYER TURKEY

Young turkeys have been used for frying in some local areas for many years. It also has been practiced to some extent by producers of turkeys for home use. It has

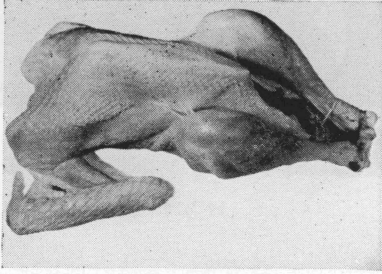


Fig. 26.—Drawn and trussed fryer turkey.

not, however, been a common practice of producers to market turkeys as fryers. According to research work done by the Poultry Department of Texas A. & M. College, the cost to produce a pound of fryer turkey is more than for 26- to 28-week old birds. This makes it necessary to market fryer turkeys at prices above those for turkeys 26 to 28 weeks old if equal profits are to be expected.

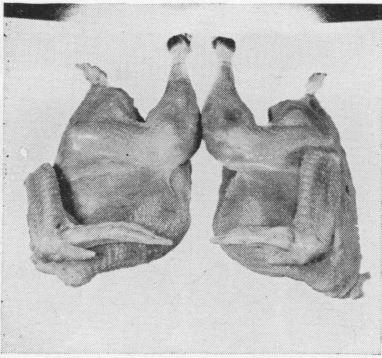


Fig. 27.—Fryer turkey halved.

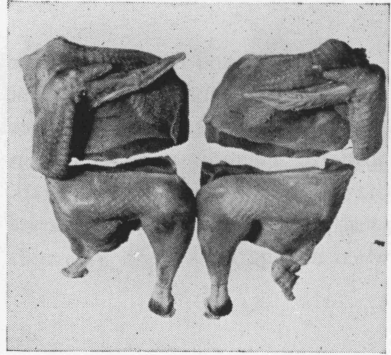


Fig. 28.—Fryer turkey quartered.

Turkeys 10 to 12 weeks old weighing 5 to 6 pounds are the sizes most commonly used for frying. The meat is tender and is

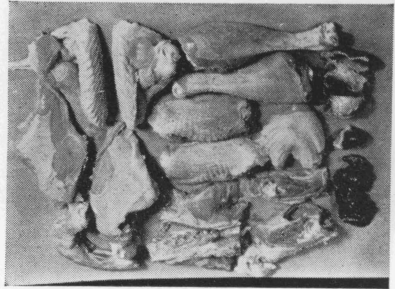


Fig. 29.—Fryer turkey disjointed.

generally considered a delicacy. Where the local conditions are favorable for such a product it offers an excellent opportunity to market turkeys at seasons other than Thanksgiving and Christmas. It also offers an opportunity to lengthen the hatching period and take advantage of expense incurred to produce and market hatching eggs during the regular hatching season. Some producers are selling the toms only as fryers. This leaves the hens in the flock, which usually sell at

a higher price than the toms when 24 to 30 weeks old.

Fryer turkeys are commonly served as quarters by restaurants and cafes and disjointed when used in the home. If they are to be barbecued before serving they are usually halved.

SMOKED TURKEY

Turkey that has been thoroughly and efficiently smoked is truly an appetizing product. There is an abundance of eye appeal, flavor and aroma. When the process of smoking is complete, the meat is thoroughly cooked and is ready and easy to serve.

Turkeys used for smoking should be of good quality. They need to be well fleshed and well finished, and properly processed the same as for roasting. When this kind of turkey is used, followed by a good smoking process, the finished product will be of highest possible quality.

There are different procedures used in curing and smoking and also different ingredients used in the curing of the turkey before smoking. One successful method developed by the Texas A. & M. College Meat Laboratory is given here:

Step 1. — Chill bird to remove animal heat before pumping for curing.

Step 2. — Pump the bird with brine mixture by injecting 10 percent of its weight. Stitch with a pressure pump using small or medium sized needle. Pump bird to give uniform distribution of brine in all muscles. This will require on each side of the bird three stitches in breast, one in thigh, one

in drumstick, one in wing and one in back.

BRINE MIXTURE FOR CURING:
This mixture should give a reading of 45 to 50 percent saturation when measured with a sodium chloride salometer.

10 gallons of water
9 pounds of salt
1 pound prague powder
1½ pounds sugar
4 ounces ham spice emulsion

Step 3. — After bird has been pumped, cover it with the brine mixture. Be sure bird is covered with the solution. Keep it in this solution for three days.

Step 4.—Remove bird after three days and drain thoroughly. Be sure none of the brine is left in the pockets of body cavities. Put it in stockinette and hang breast down.

Step 5. — After it is about dry, put it in the smoke house with the

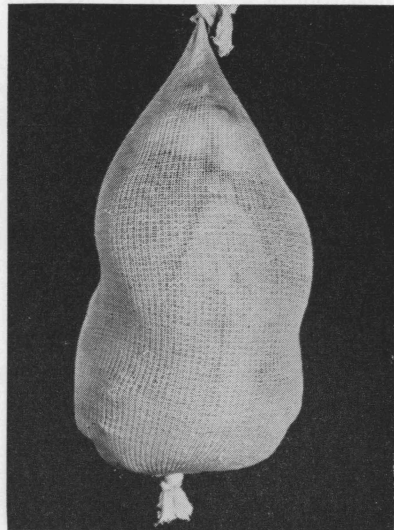


Fig. 30.—Turkey in stockinette. It has been properly dressed, drawn, and processed for smoking.

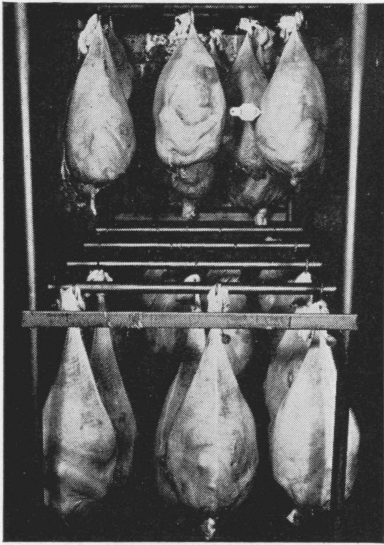


Fig. 31.—Turkeys hanging on rack in smoke house. They are hung to allow equal circulation of heat and smoke around each. Note the meat thermometer in the turkey, also its location.

heat control set at 170° F. As soon as it is completely dry, smoke can be applied.

Step 6. — Smoke to a light lustrous pecan nut brown. This usually takes 8 to 12 hours.

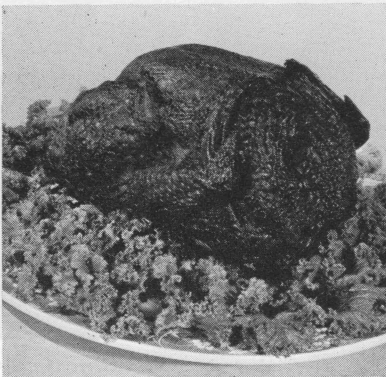


Fig. 32.—Smoked turkey fully cooked.

Step 7.—When the desired color is obtained, increase the temperature in the smoke house to 185° F. Cook the bird until the inside temperature at the thickest breast muscle area is 160° F. To determine this heat accurately it is necessary to insert an inside meat thermometer in the bird at the thigh joints and breast muscles. Approximately 20 percent shrinkage may be expected from this process.

Step 8.—This process will cook the bird sufficiently to be eaten without additional cooking. This cooked product will not keep in ordinary refrigerator temperatures any longer than other meats such as cured ham. If the birds are to be held longer than two weeks they should be frozen, packaged and held at 0° temperature.

This and other cure mixtures have been used successfully when smoking turkeys:

- 1 gallon water
- 1¼ pounds Tender Quick

When this mixture is used the same steps as listed 1 through 8 should be followed.

BARBECUE TURKEY

Some people prefer the flavor of barbecue to any other obtained by the different methods of cooking turkey. This method of cooking offers another way to use turkey throughout the year. It may be barbecued whole, halved, quartered or disjointed.

When buying or selecting turkeys to barbecue be sure they are well fleshed and finished. The higher the quality, the more delicious the finished product. If turkeys are over one year old they

should be precooked in the oven until tender, using the moist method of cooking.

Consumers in large cities can usually buy barbecue turkey from some one specializing in such products. For those who do not have this opportunity and those who want to prepare their own pit barbecue, these suggestions will be helpful. The following procedure for building trench, use of wood, preparation of turkey, cooking and methods of serving is given through courtesy of Short Course Department, Oklahoma A. and M. College.

TRENCH FOR BARBECUING: The trench in which turkey is to be barbecued can vary as to size, shape and structure to meet the needs. It should be constructed to maintain heat and moisture. For home use, a pit 3 feet deep (2½ feet below ground level and 6 inches above) 2 feet wide and 5 feet long will be ample. A wall 4 inches thick made of concrete or brick and walled inside with layer of fire brick laid in fire clay makes good construction. The top must be constructed to cover tightly in order that heat and moisture will be held. After turkey has been put in the pit and cover on top, the cracks should be covered with wet sand.

WOOD FOR FUELS: Black jack oak is one of the best woods for making coals. Start fire in bottom of trench and burn out wood until there are about 18 inches of coals accumulated. This will probably take about two hours.

PREPARATION OF TURKEY: Prepare turkey by putting either drawn whole bird, halves, quarters or

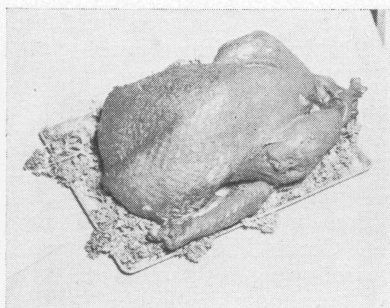


Fig. 23. Barbecued turkey ready to be served.

pieces into stockinette. If stockinette is not available wrap in cheese cloth. Next wrap in burlap and tie with butcher twine.

When this has been done and the coals in the pit are ready, dip the wrapped turkey in water to wet the burlap thoroughly. Then place the packages on the coals and cover the trench at once and be sure to seal top by covering cracks with wet sand.

TIME TO COOK: Time required to cook will be about six hours, but meat can be left in longer and not overcooked.

HOW TO SERVE: Take turkey out of pit, cut strings and unwrap. Meat may be taken off the bones and barbecue sauce and salt added to taste.

BARBECUE SAUCE MIXTURE

For 50 Pounds Meat

- 4 quarts of catsup
- 1 quart of Worcestershire Sauce
- 1 cup of lemon juice
- 1 pound butter
- 1 pint of barbecue sauce

For 5 Pounds Meat

- 1 cup of catsup

- 1/4 cup of Worcestershire Sauce
- 1 tablespoon lemon juice
- 1/10 pound of butter
- 1/8 cup of barbecue sauce

Other procedures and sauces may be used successfully. This one may more nearly meet your needs.

Prepare the turkey as for roasting. Grease bird thoroughly with the following barbecue sauce, then salt and pepper lightly:

- 1/2 pint vinegar
- 4 tablespoons of salt
- 4 tablespoons of white sugar
- 3 tablespoons chili powder
- 3 tablespoons paprika
- 1 tablespoon dry mustard
- 1/2 pound butter
- 1 pint water
- A dash Cayenne

Bring these ingredients to a boil. Put the bird in a closed pit in which coals have been made and the temperature is around 225° F. Place the bird so the drippings will not get in the fire. Do this by banking the coals on one side and placing the turkey on the other. A drip pan may be provided to catch the surplus grease from the bird. Baste the turkey each hour with the sauce. Time to cook will vary according to size of bird or pieces, usually from 4 to 8 hours.

CANNED TURKEY

Turkey in cans is now available in many retail stores and it may also be bought in this form by ordering direct from some who have

a mail order business. This offers the consumer an opportunity to buy only the amount necessary to meet their needs. It also offers turkey in different forms. This may be turkey and noodles, turkey broth, sliced turkey, turkey pieces, turkey giblets and turkey with other products.

A few cans of these products on the pantry shelf are especially helpful when unexpected guests arrive or the need for a quick meal arises.

TURKEY PATTIES

Turkey made into patties or put into casings is growing in consumer acceptance.

To make this product, it is recommended that only meat from the thigh and breast of the turkey be used. Disjoint the ready-to-cook turkey and bone as many pieces as necessary to obtain the amount of meat desired. Approximately 20 percent turkey fat may be added to the meat. The meat and fat are ground and thoroughly mixed. *Caution:* If this product is to be frozen and stored for more than 30 days an anti-oxidant should be added as a means of controlling rancidity.

Turkey may be seasoned to suit taste before freezing or it may be frozen without seasoning. When storing turkey in this form, wrap with moisture-vapor-proof materials and freeze at 20 below zero or colder and hold at 0° F. or below.

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