[redacted]
W1.35: 10-408, c.2 [redacted]
Document Reserve

TM 10-408

WAR DEPARTMENT

TECHNICAL MANUAL

CUTTING AND PREPARING LAMB

July 1, 1943

NON-CIRCULATING

NTSU LIBRARY

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

TECHNICAL MANUAL
NO. 10-408

TM 10-408

WAR DEPARTMENT,
WASHINGTON 25, D. C., 1 July 1943.

CUTTING AND PREPARING LAMB

		Paragraph
SECTION I.	General.	
	Purpose and scope	1
	Serving of lamb in Army mess	2
	Principal cuts	3
	Order of consumption	4
II.	Cutting and boning lamb.	
	Dividing carcass into major cuts	5
	Boning lamb for roasts	6
	Boning lamb for stew	7
	Cutting lamb for chops	8
III.	Methods of preparing lamb.	
	Roasting lamb	9
	Stewing lamb	10
	Broiling lamb	11
	Griddle-broiling lamb	12
	Carving cooked lamb	13
IV.	Care of kitchen, tools, and equipment.	
	Cleanliness in kitchen	14
	Care of tools	15
	Safety rules	16
		Page
APPENDIX I.	Menu plans; foods to serve with roast lamb	28
II.	Recipe suggestions for lamb stew	28
III.	Lamb cutting test	28
IV.	Lamb charts	30

SECTION I

GENERAL

	Paragraph
Purpose and scope	1
Serving of lamb in Army mess	2
Principal cuts	3
Order of consumption	4

1. Purpose and scope.—Paragraphs 23 and 56 of TM–405 supply information concerning the cutting and preparation of lamb. This manual is designed as a supplement to these paragraphs, presenting more graphically the technique of cutting lamb and offering some additional suggestions concerning its preparation and service.

2. Serving of lamb in Army mess.—Ordinarily, in the Army mess it is most practical to cook lamb either in the form of stews or roasts, although chops, too, are sometimes served. This manual will explain how the entire lamb carcass can be divided into cuts suitable for stewing and roasting.

3. Principal cuts.—In general, roasts, stews, and chops are provided from the following parts of the carcass (see app. IV, Lamb Chart—Division of Carcass for Roasts and Stews):

a. Roasts.—Roasts are provided by the long saddle which includes the legs, loins, and rack, any one of which will provide a roast.

b. Stews.—Stew is made from the triangle, which includes the shoulders, neck, breasts, and shank.

c. Chops.—When chops are desired, they may be cut from the shoulder, the rack, or the loin end of the leg.

4. Order of consumption.—If whole carcasses are on hand, the triangles should be used first, leaving the long saddles for a later meal. The long saddle will keep longer than the triangle because of its fat covering inside and out.

SECTION II

CUTTING AND BONING LAMB

	Paragraph		Paragraph
Dividing carcass into major cuts	5	Boning lamb for stew	7
Boning lamb for roasts	6	Cutting lamb for chops	8

5. Dividing carcass into major cuts.—a. Remove the neck at the shoulder juncture (fig. 1).



Figure 1.

b. Take off the shank by cutting across the shoulder about 1 inch above the elbow joint and along the natural seam (fig. 2).

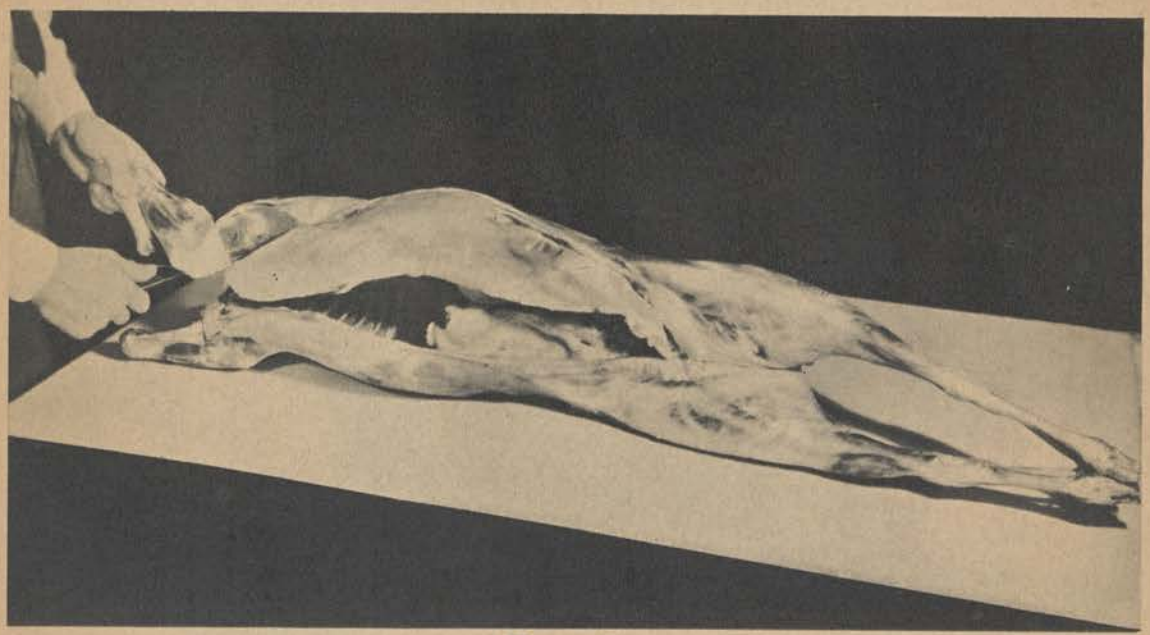


Figure 2.

c. Remove the breast by separating the flank from the loin and cutting over the ribs to the point where the shank was removed (fig. 3). Next remove the shank and the breast from the other side of the lamb.



Figure 3.

d. Separate square-cut shoulders from the long saddles, cutting between the fifth and sixth ribs (fig. 4).

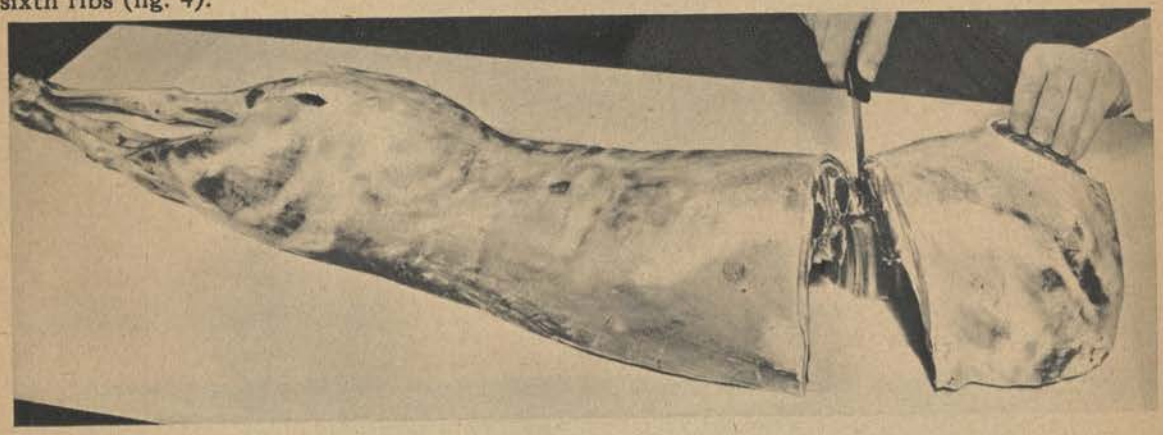


Figure 4.

e. Remove the rack, cutting back of the thirteenth ribs (fig. 5).

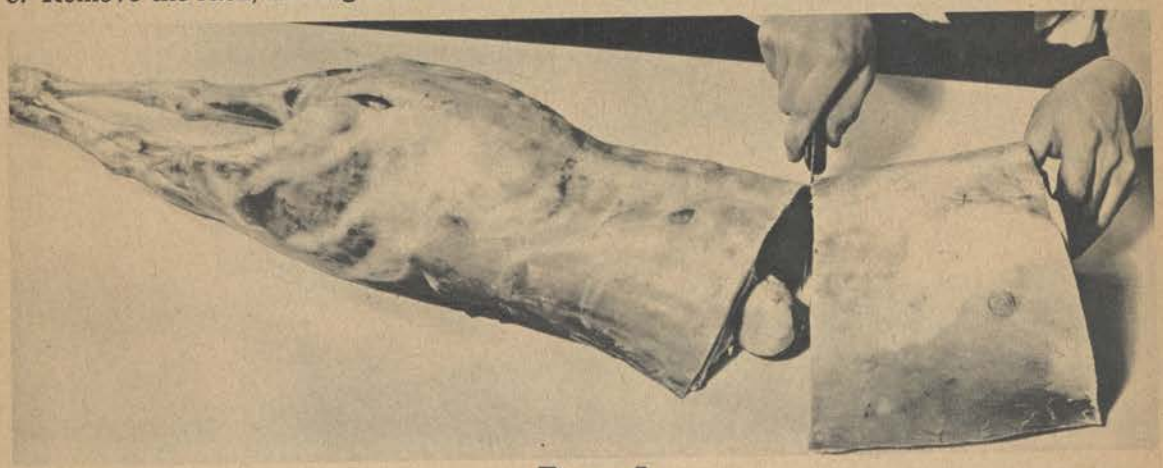


Figure 5.

f. Separate the loin from the legs, cutting just in front of the hip bones (fig. 6).

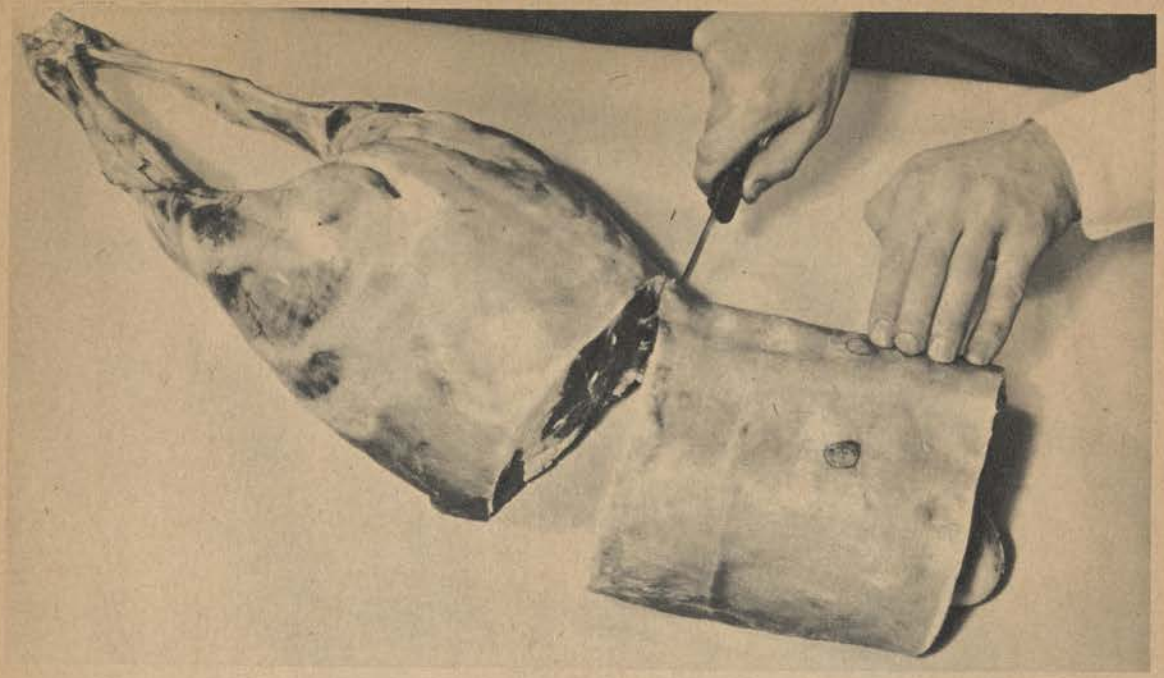


Figure 6.

g. Split the legs (fig. 7).

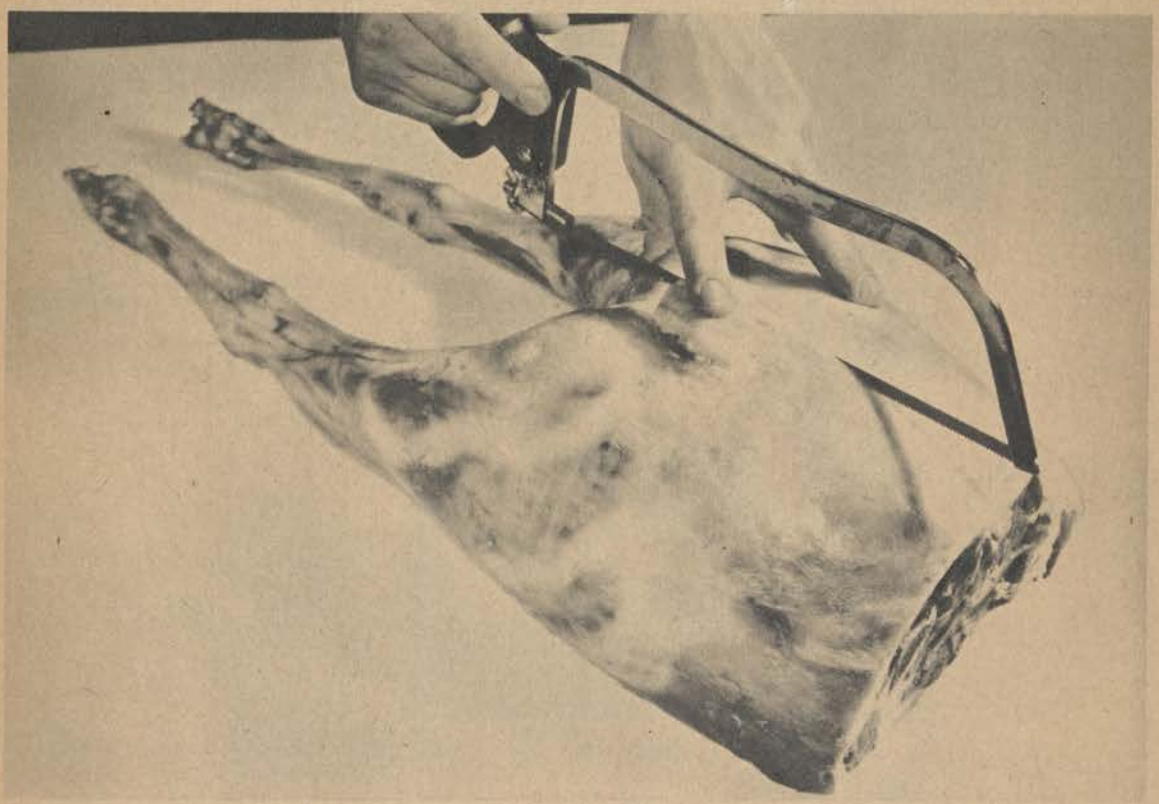
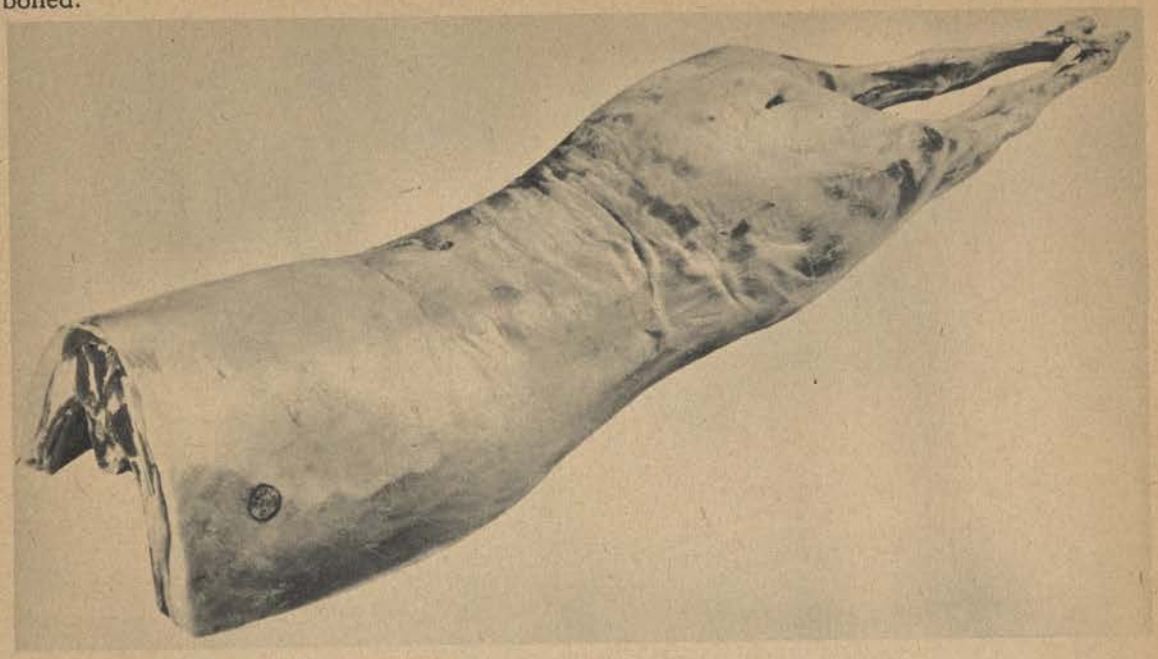
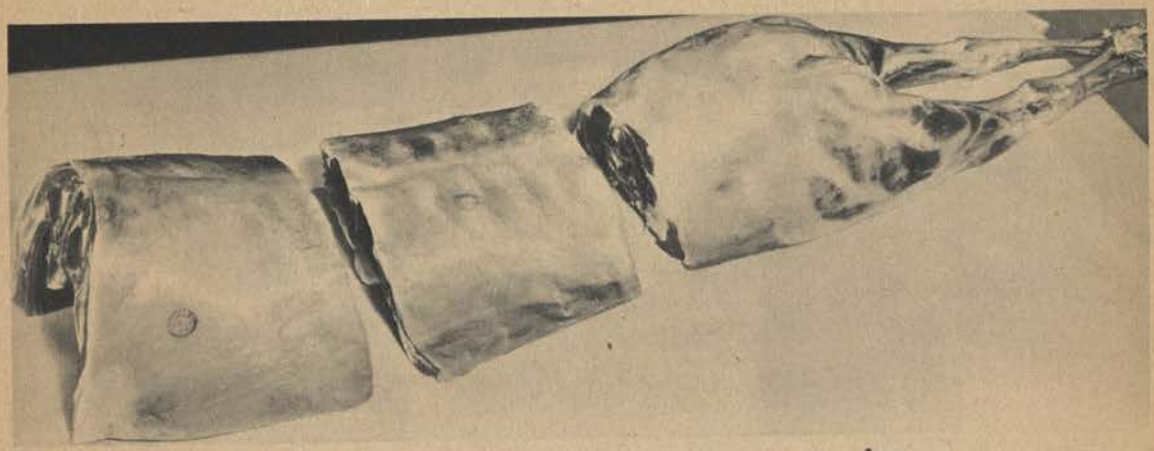


Figure 7.

6. Boning lamb for roasts.—Three principal cuts of lamb that can be used as roasts are cut from the long saddle; they are the rack, the loin, and the leg. Shoulders, cut from the triangle, also are sometimes used for roasts. (See par. 7*a*.) All of these roasts are easily boned.



Long saddle



Rack

Loin

Legs



Boneless rack roast



Boneless loin roast



Boneless roasts from two legs

Figure 8.—Division of the long saddle into roasts.

a. Boning leg roasts.

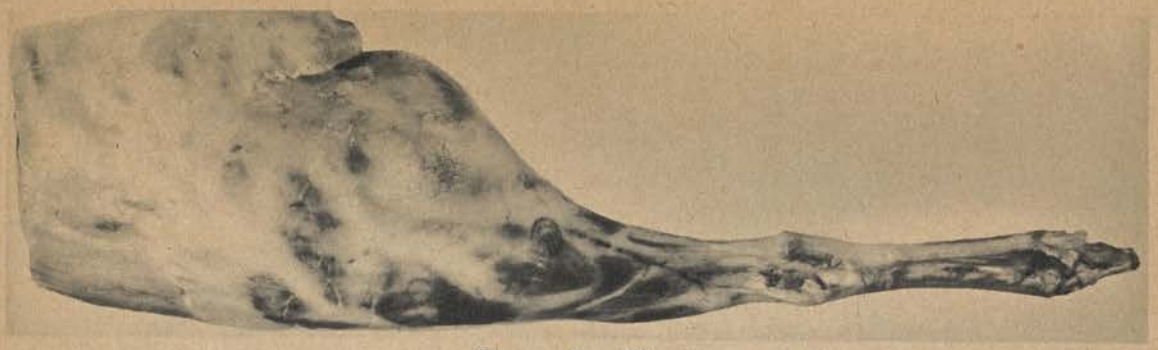


Figure 9.—The leg.

(1) Remove tail bone (fig. 10).

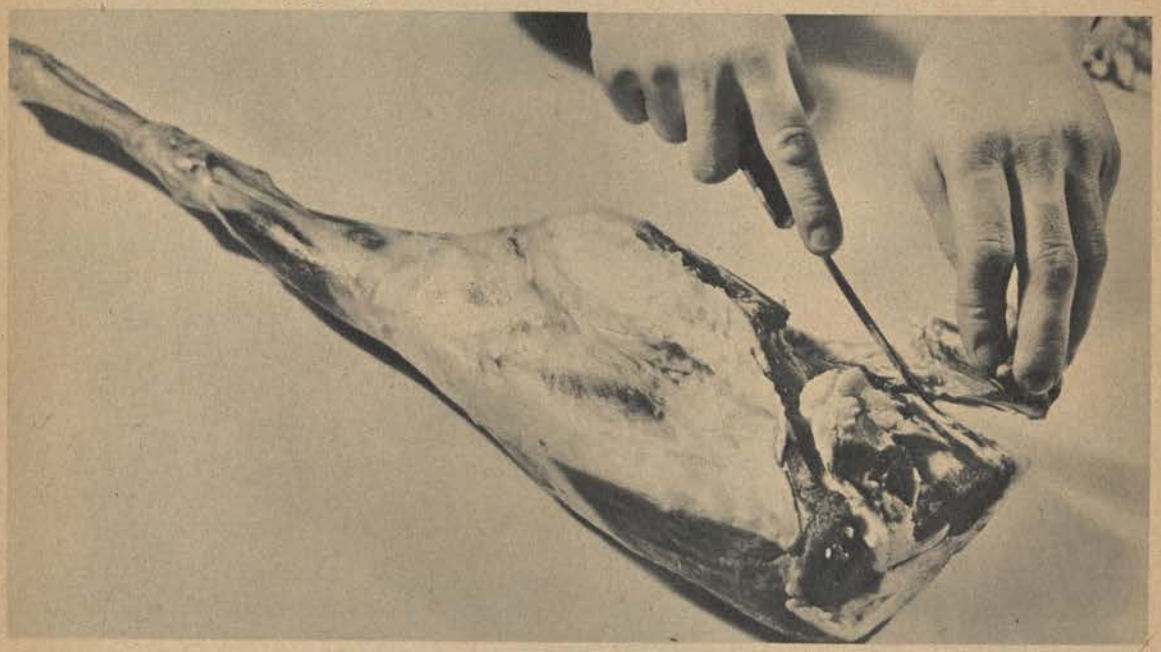


Figure 10.

(2) Remove pelvic bone (aitch and hip) by unjointing it at the ball-and-socket joint, then cutting closely around it (fig. 11).



Figure 11.

(3) Split inside leg muscle so that the leg bone can be removed (fig. 12).



Figure 12.

(4) Pull fell from shank meat (fig. 13).



Figure 13.

(5) Cut off shank meat (fig. 14).

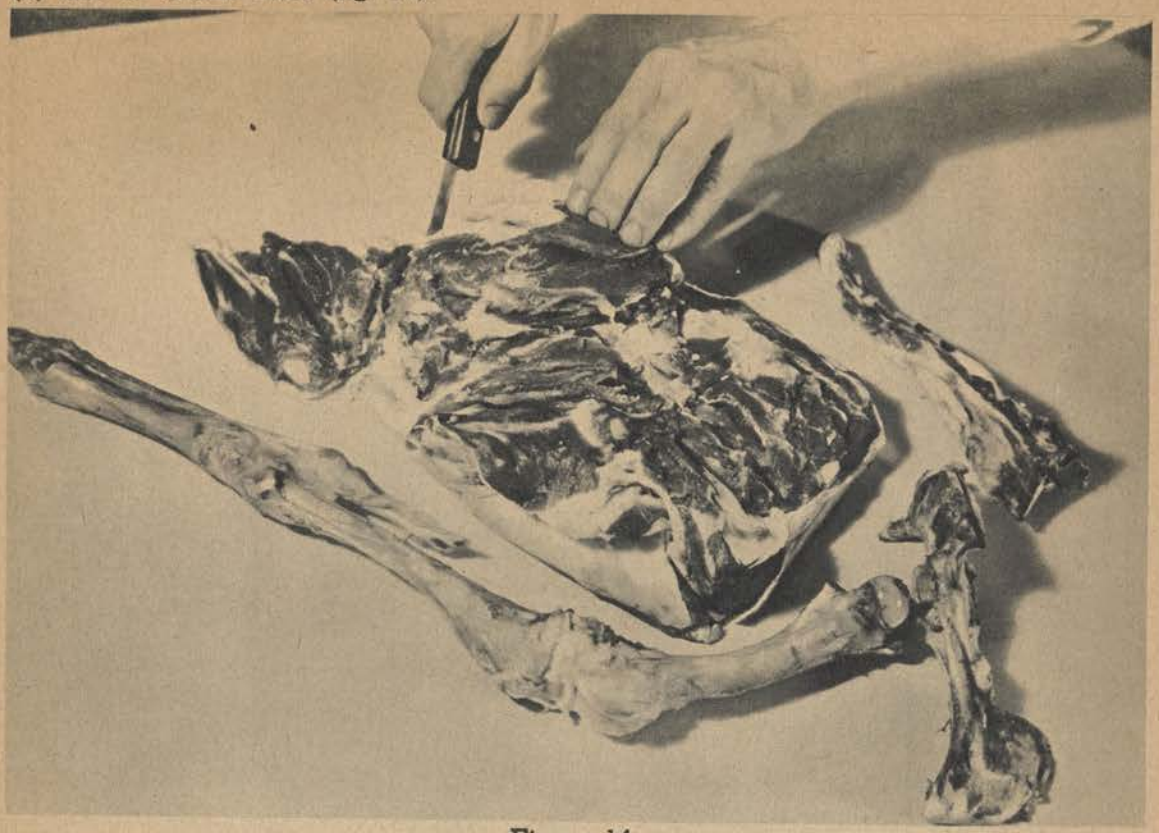


Figure 14.

(6) Place shank meat lengthwise in pocket left by the removal of the pelvic and leg bones (fig. 15).



Figure 15.

(7) Roll and tie (fig. 16).

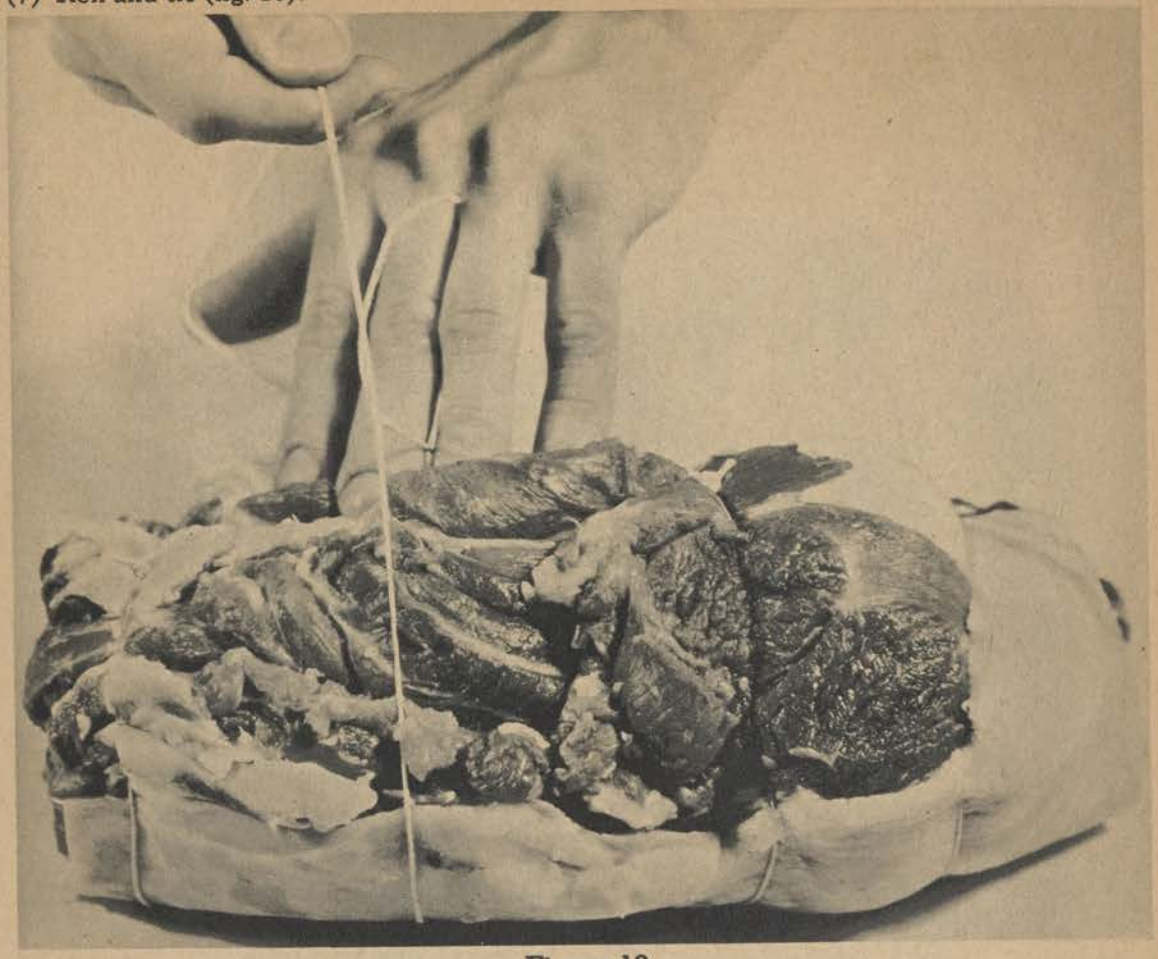


Figure 16.

(8) Figure 17 shows boneless roasts from two legs.

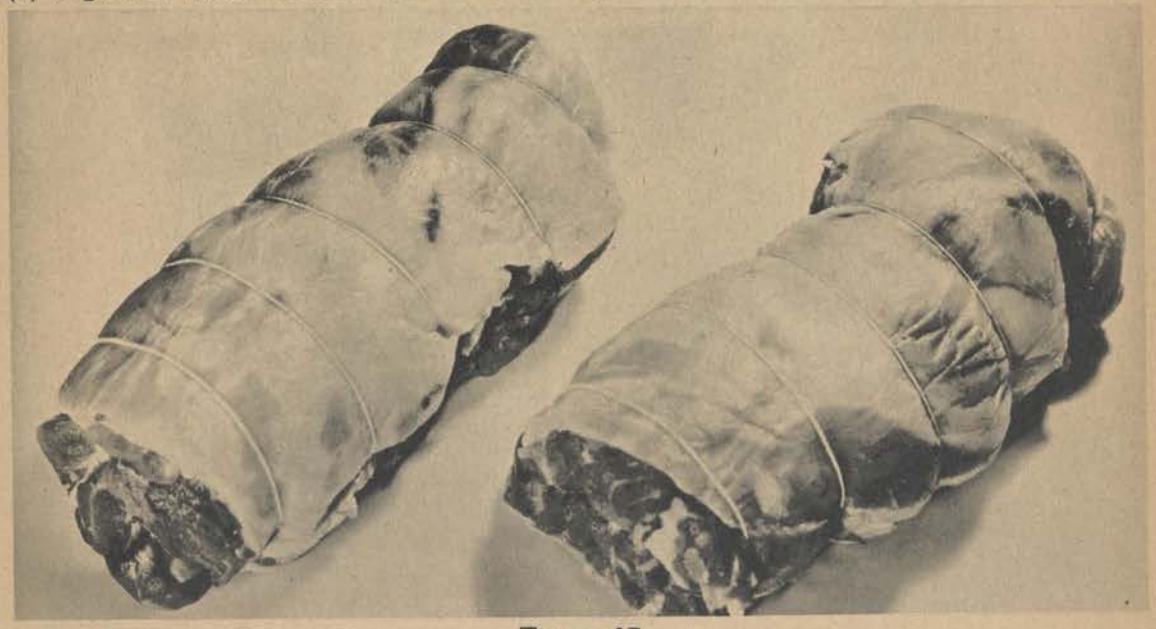


Figure 17.



Figure 18.—The loin.

b. Boning loin roast.

(1) Loosen meat from backbone (fig. 19).



Figure 19.

(2) Remove backbone (fig. 20).



Figure 20.

(3) Figure 21 shows a boneless loin roast.



Figure 21.

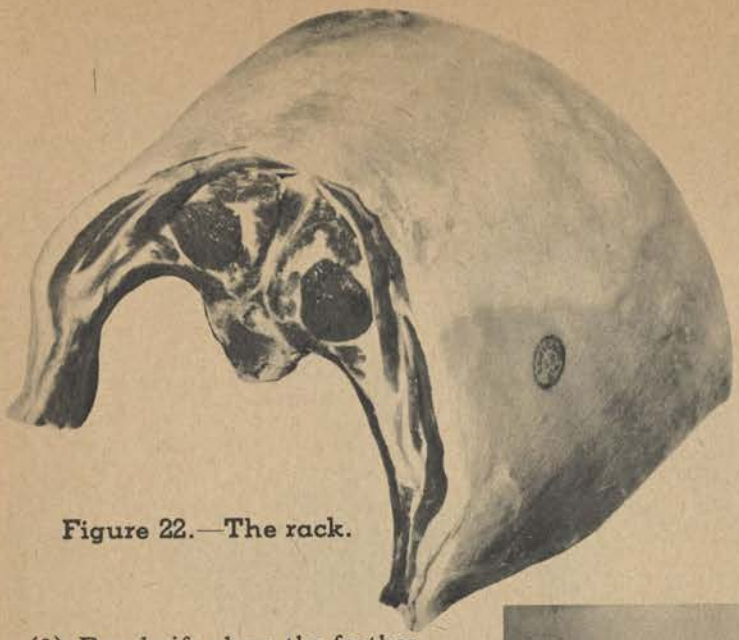


Figure 22.—The rack.

c. Boning rack roast.

(1) Pull off the fell (fig. 23). (For best results the lamb fell and excess fat should be removed, if the meat is to be used for stew. It need not be taken off when roasts or chops are made. The fell is removed most easily when the meat is chilled.)



Figure 23.

(2) Run knife along the feather-bones, then lift the meat from the ribs (fig. 24).

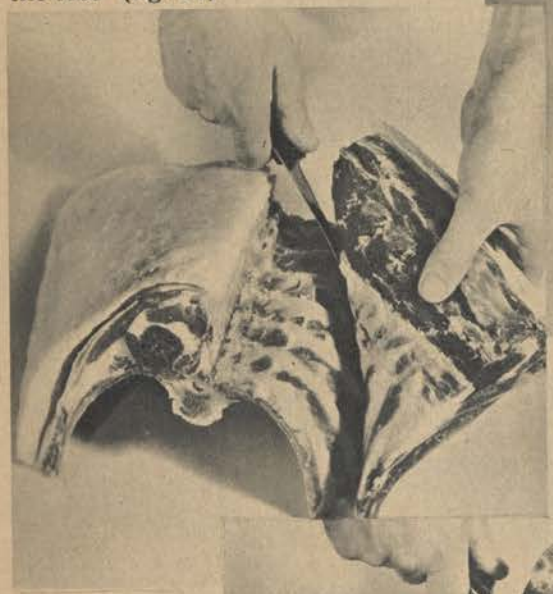


Figure 24.

(3) Turn the rack around to facilitate the removal of the remaining rack meat (fig. 25).



Figure 25.



Figure 26.

(4) Pull backstrap from each half of the rack meat (fig. 26).

(5) Reverse ends before tying to make a uniform roll (fig. 27).



Figure 27.

(6) Roll and tie (fig. 28).



Figure 28.

(7) Figure 29 shows boneless rack roast.

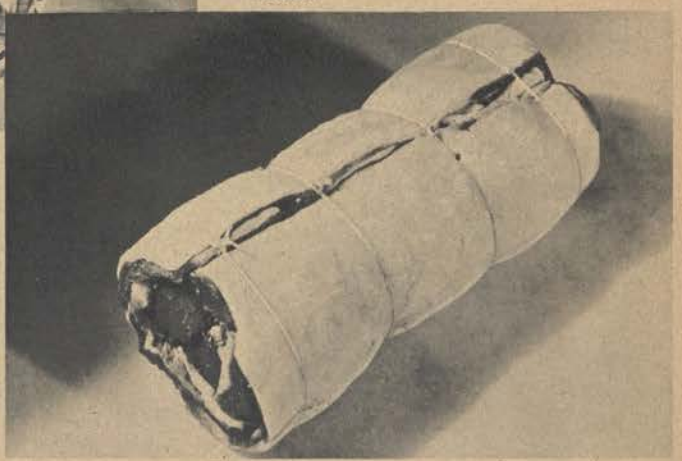


Figure 29.

7. Boning lamb for stew.—The triangle can be used most advantageously as stew, in the Army mess. Boneless meat is recommended since this eliminates any possibility of bone splinters. Fragments of bone are invariably present when a cleaver is used to cut up meat that has not been boned. The bones may be cooked in water with onions, carrots, celery, and pearl barley to make a savory Scotch broth.



The triangle.



Breasts Shoulders Shanks Neck



Boneless meat for stew



Bones for broth

Figure 30.—Division of the triangle into cuts for stew.

LIBRARY

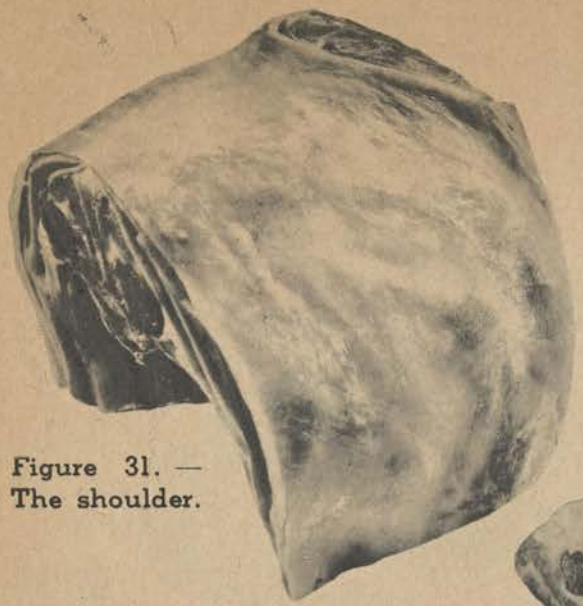


Figure 31. — The shoulder.

a. Boning shoulder.—The shoulder is an accommodating cut. It will provide either a tasty stew or savory roast, depending upon the need.

(1) Remove both shoulders from unsplit ribs and backbone (fig. 32).

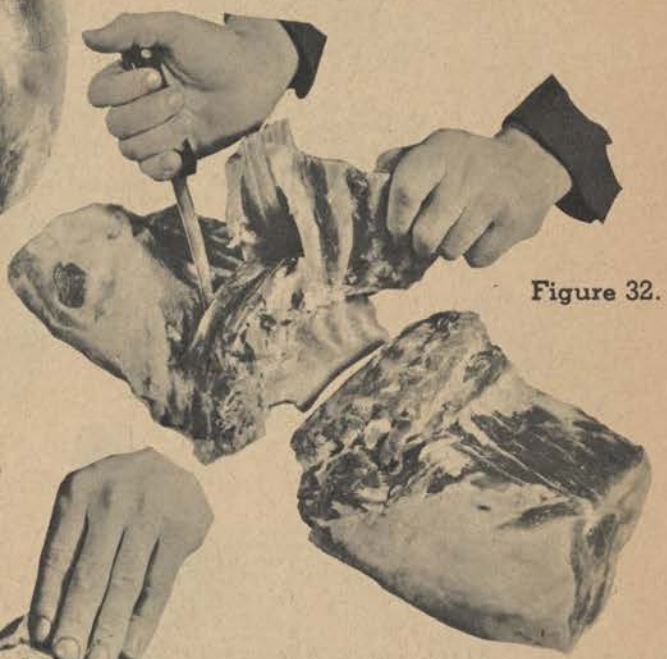


Figure 32.

(2) Pull backstrap from shoulder (fig. 33).

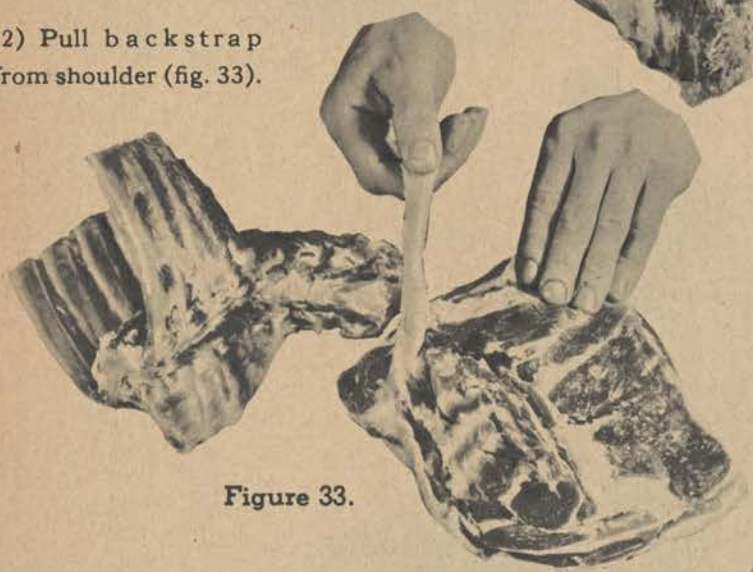
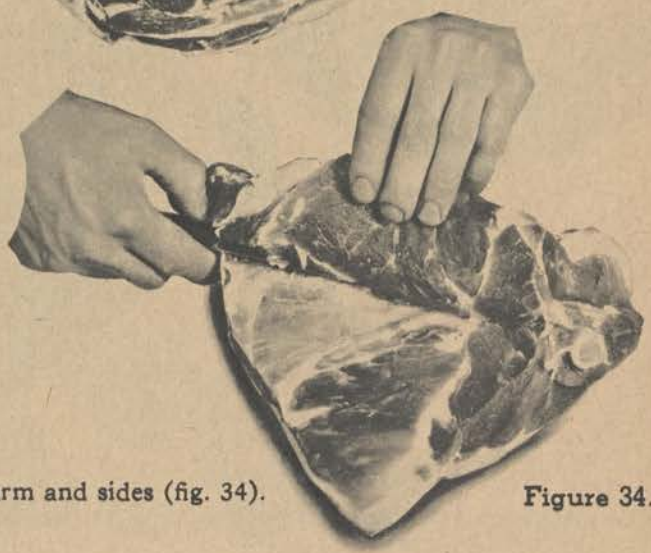


Figure 33.



(3) Open shoulder from arm and sides (fig. 34).

Figure 34.

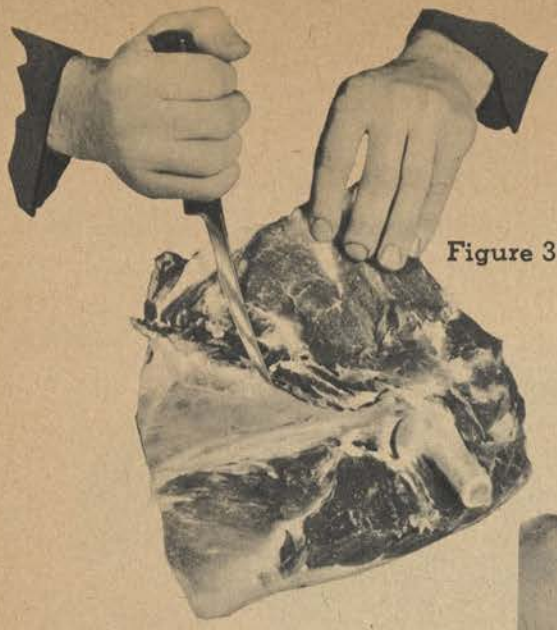


Figure 35.

(4) Cut meat from top surface of arm and blade bones; then run the point of the knife along the edges of these bones (fig. 35).

(5) Unjoint and remove the arm bone; then scrape the end of the rib bone (fig. 36).

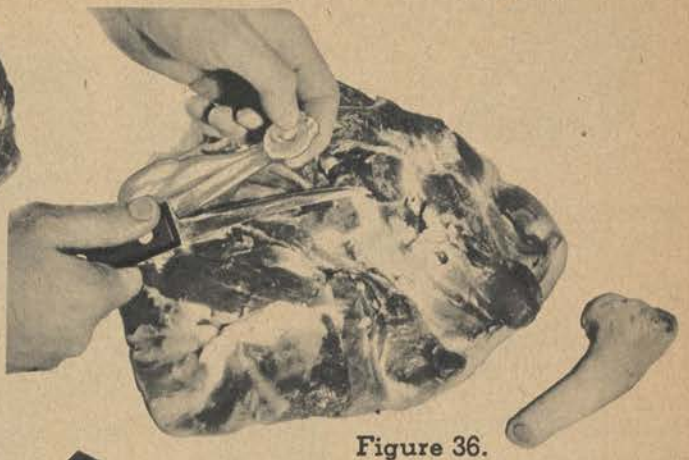
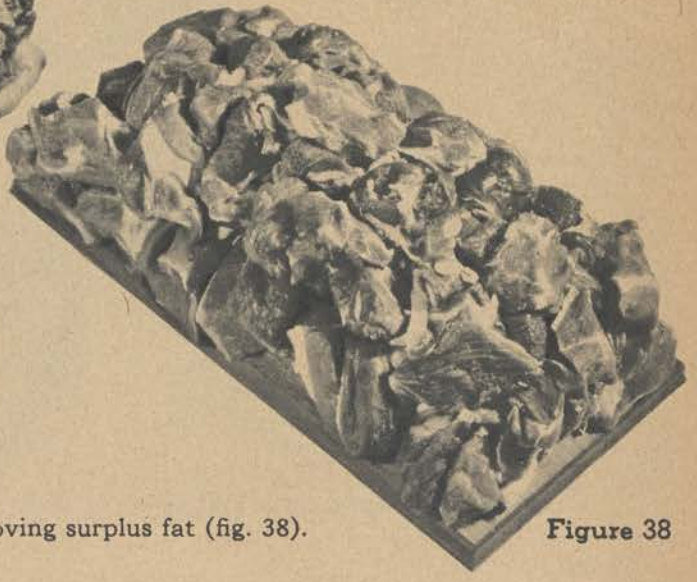


Figure 36.



Figure 37.

(6) Pull out the blade bone (fig. 37).



(7) Cut meat into stew after removing surplus fat (fig. 38).

Figure 38

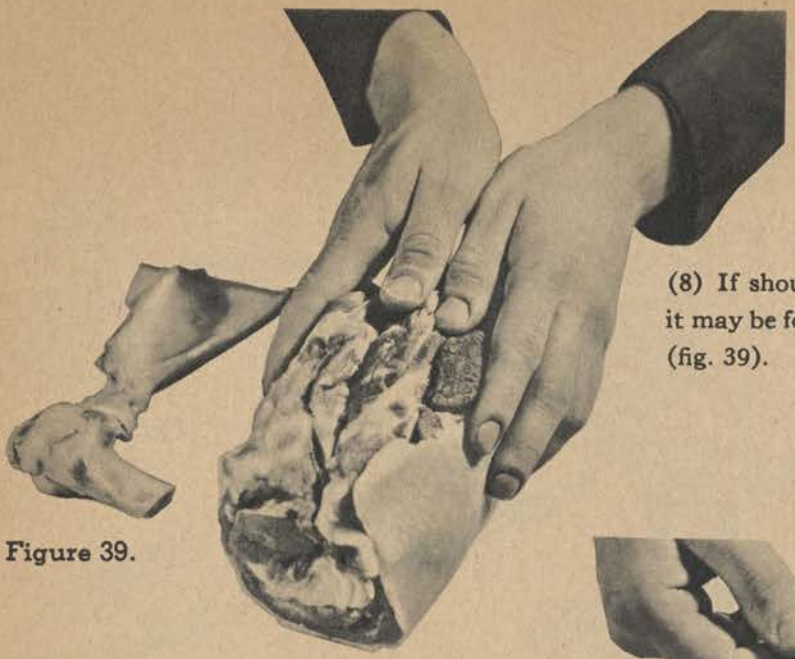


Figure 39.

(8) If shoulder is not used for stew, it may be folded into shape for a roast (fig. 39).

(9) Tie boneless shoulder (fig. 40).



Figure 40.

(10) Figure 41 shows boneless roasts from two shoulders.

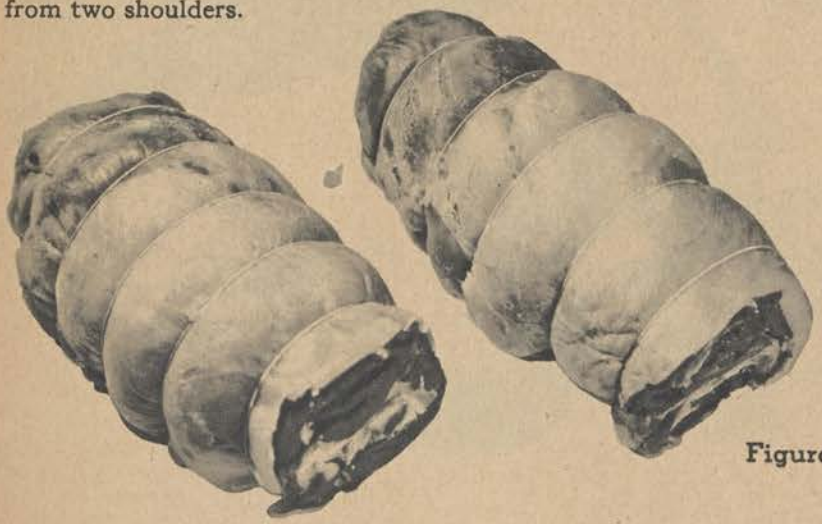


Figure 41.

b. Boning breast.



Figure 42.—The breast.

(1) Remove fell and surplus fat from the outside of the breast (fig. 43).

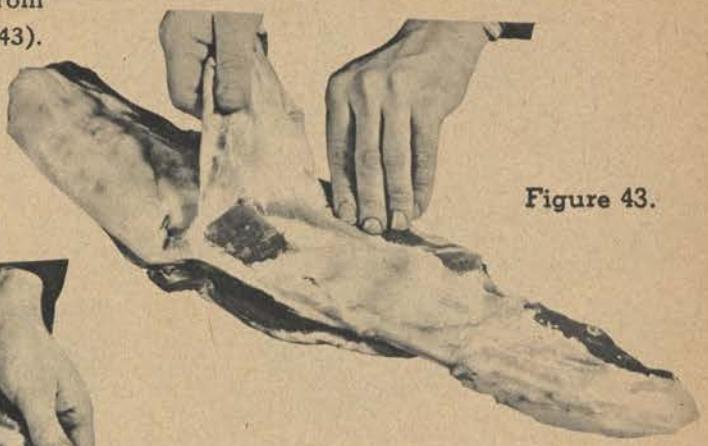


Figure 43.

(2) Cut the skirt back from the rib cartilages (fig. 44).



Figure 44.

(3) Cut the rib bones from the breast (fig. 45).

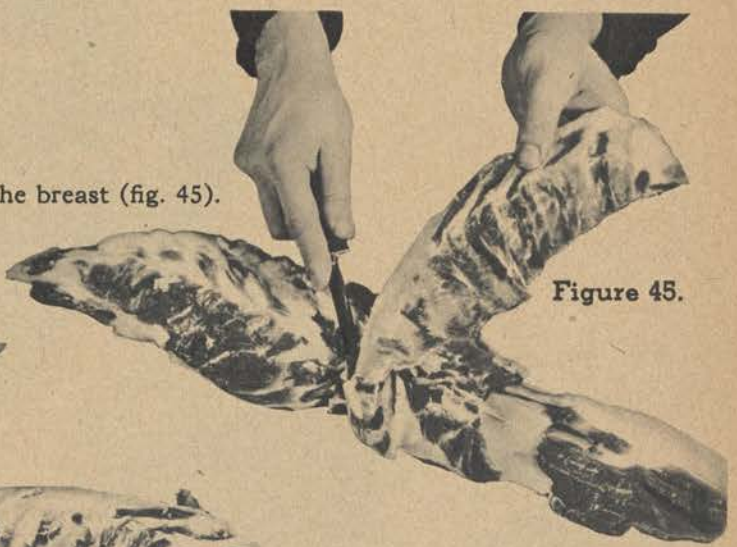


Figure 45.



Figure 46.

(4) Remove the excess fat from the inside of the breast, then cut for stew (fig. 46).

c. *Boning shank.*

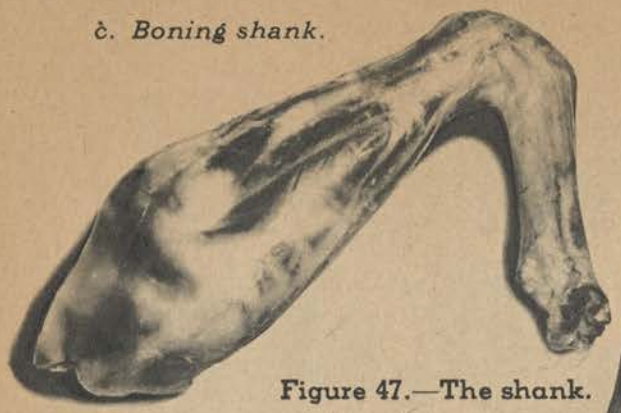


Figure 47.—The shank.

(1) Remove the fell (fig. 48).

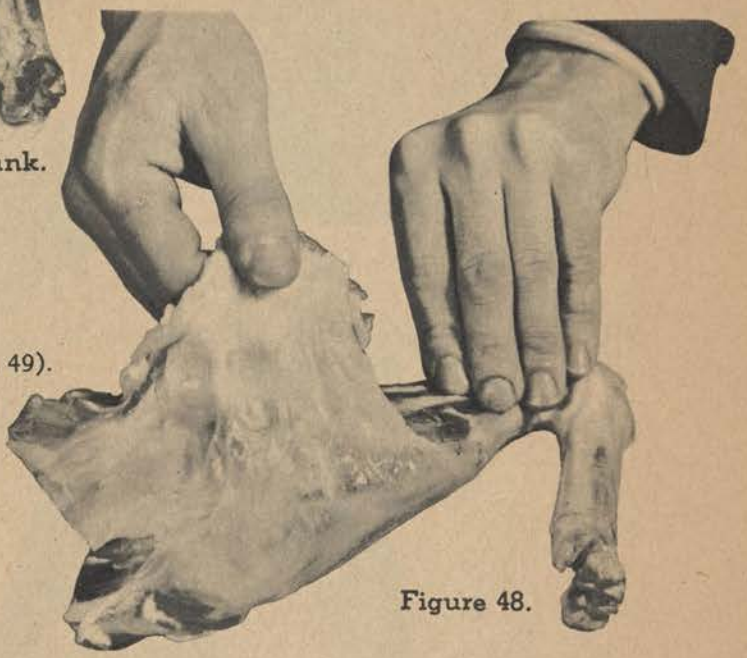


Figure 48.

(2) Cut meat from around the bone (fig. 49).

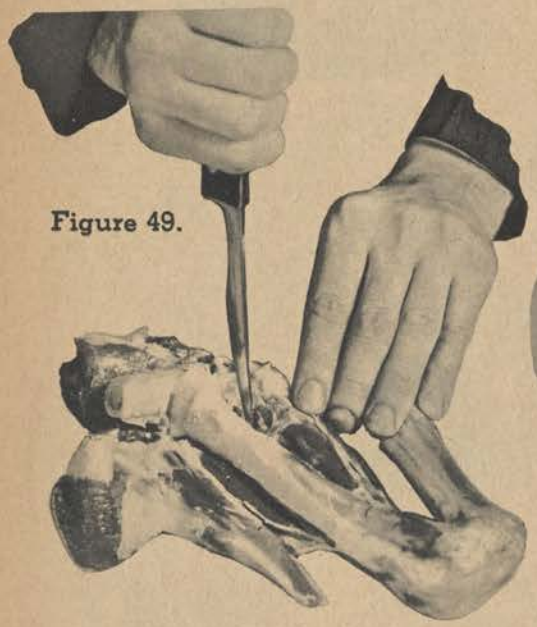


Figure 49.



(3) Remove bone from meat and cut the meat into stew (fig. 50).

Figure 50.

d. Boning neck.



Figure 51.—The neck.

(1) Remove the fell and excess fat (fig. 52).



Figure 52.

(2) Cut meat from around the neck bone (fig. 53).

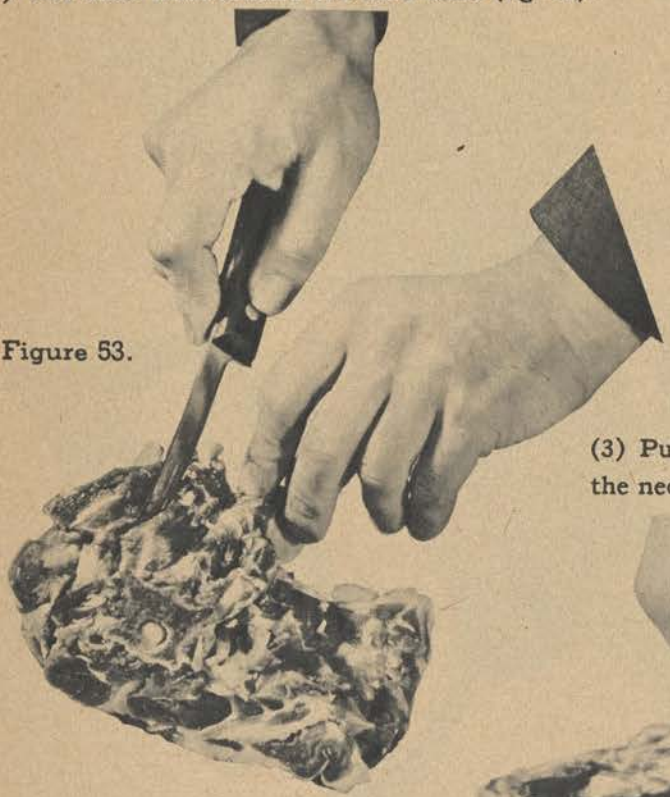


Figure 53.

(3) Pull out the backstrap, then cut the neck meat into stew (fig. 54).



Figure 54.

8. Cutting lamb for chops.—Lamb chops can be cut from the shoulder, the rack, the loin, and the leg. The neck, breast, and shanks can be boned out and the meat ground and made into patties to be cooked with the chops.

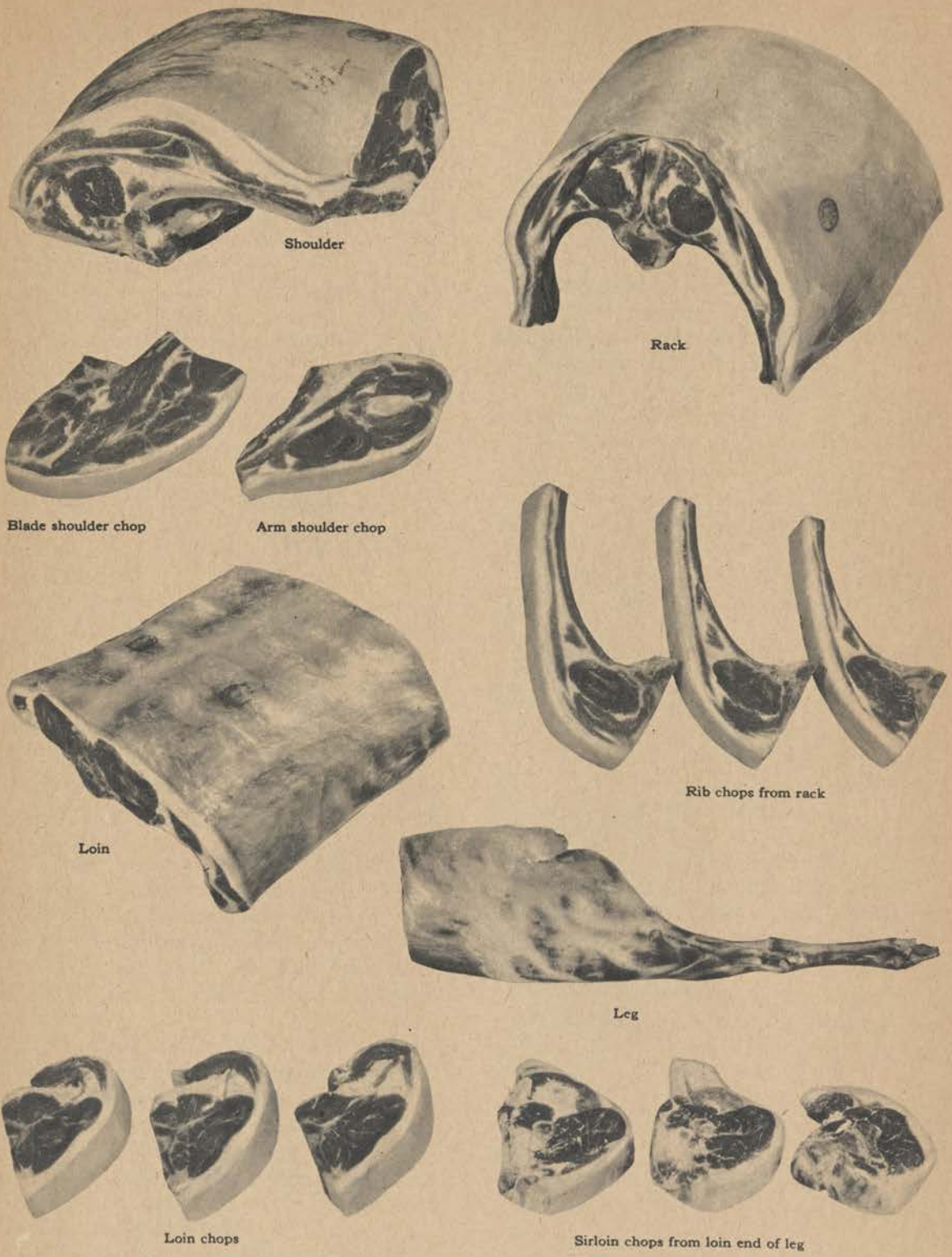


Figure 55.—Chops cut from shoulder, rack, loin, and leg.

SECTION III

METHODS OF PREPARING LAMB

	Paragraph
Roasting lamb	9
Stewing lamb	10
Broiling lamb	11
Griddle-broiling lamb	12
Carving cooked lamb	13

9. Roasting lamb.—a. Season with salt and pepper.—Seasoning may be added before the lamb is cooked.

b. Place roast on rack in pan, fat side up.—As the fat melts, it runs over and through the meat, thereby making basting unnecessary.

c. Do not sear.—Searing does not keep juices in. Meat and gravy will brown satisfactorily without any initial searing.

d. Do not add water.—In an oven of moderate temperature, drippings will not burn. If heat cannot be kept moderate, however, a small amount of water may be added.

e. Do not cover.—If the roast is covered, steam surrounds the covered meat, making it a pot roast.

f. Roast at constant temperature (325° F. or 16 counts).—A moderate temperature reduces shrinkage and increases flavor, juiciness, and tenderness.

g. Turn boneless roast.—A boneless roast will cook more uniformly if it is turned once or twice.

h. Cook until meat is as well done as desired.—For medium done roasts, cook 35 to 40 minutes per pound. For well done roasts, cook 40 to 45 minutes per pound.

10. Stewing lamb.—a. Cut meat into small pieces.—If possible, bone meat as in paragraph 7.

b. Season meat with salt and pepper.—So that salt will penetrate small pieces, season at the start of cooking.

c. Brown meat on all sides in hot fat.—Although meat may be put directly into the water without having been browned, a browned stew has more flavor than a light stew and is usually preferable.

d. Cover meat with hot or cold water.—Meat should be entirely covered with water so that it will cook uniformly. The water need not be boiling as this does not seal in juices any more than searing does.

e. Cover kettle and cook at simmering temperature.—Meat will be more flavorful and juicy when simmered at 185° to 200° F.

f. Cook meat until tender.—Meat will be done when it is tender—in about 2 to 2½ hours.

g. Add vegetables before meat is done.—Vegetables should be added just long enough before the meat is done for them to become tender.

11. Broiling lamb.—a. Turn heat to highest point.—Cooking heat is regulated by the distance of meat from the fire or burner. (See *b* below.)

b. Put chops in broiler.—Place 1-inch chops 2 inches from heat, and 2-inch chops 3 inches from heat.

c. Broil until top side is nicely browned.—Meat will be about half done at this point.

d. Season browned side with salt and pepper.—Salt is added after browning, so that juices will not be drawn out through the relatively large exposed surface.

e. Turn, brown, and season second side.—Only one turning is necessary since searing does not keep the juices in.

f. Cook until meat is as well done as desired.—For chops 1 inch thick, 12 to 15 minutes is usually enough cooking time.

g. Serve hot.—Broiled meat should be served on hot plates as soon after cooking as possible.

12. Griddle-broiling lamb.—a. Place meat on ungreased griddle.—Enough fat cooks out of the meat to keep it from sticking to the pan.

b. Brown, turn, and brown on the other side.—This develops flavor and aroma.

c. Season with salt and pepper.

d. Turn occasionally.—This insures even cooking.

e. Scrape away surplus fat as it collects on the griddle.—Meat should griddle-broil, not fry.

f. Do not add water, and do not cover.—Meat will braise in the presence of water.

g. Cook until meat is as well done as desired.—Chops 1 inch thick should be cooked 12 to 15 minutes.

h. Serve hot on hot plates.

13. Carving cooked lamb.—The following procedure should be followed to carve lamb efficiently and attractively.

a. Let meat "set" before carving.
b. Remove strings and skewers.
c. Hold meat firm.
d. Carve meat on wooden board or table.
e. Use a thin, sharp knife.
f. Cut across the grain.
g. Make uniform slices.
h. Keep carved meat hot until served.

SECTION IV

CARE OF KITCHEN, TOOLS, AND EQUIPMENT

	Paragraph
Cleanliness in kitchen	14
Care of tools	15
Safety rules	16

14. Cleanliness in kitchen.—The following rules of sanitation should be followed by all men in the kitchen.

a. Wash hands frequently.

b. Keep fingernails short and free from dirt.

c. Wear clean linen.

d. Scour and scald meat trays.

e. Wash grinder after each use.

f. Keep floor clean.

g. Inspect left-over food thoroughly before using it.

h. Keep soiled linen dry and away from heat.

i. Clean meat blocks and work tables after every use.

j. Clean inside of refrigerator, including all fixtures, and flush drain pipe with hot water. Do this frequently and at regular intervals.

k. Wash, scour, scald, and air all utensils.

l. Wash and boil all towels and cloths each day.

m. Clean all garbage cans at regular intervals and keep them covered at all times.

15. Care of tools.—*a.* The following measures should be taken to insure that all tools are in the best operating efficiency:

(1) Keep knives and cleavers sharp.

(2) Sharpen dull knives on water or oilstone.

(3) Use smooth or nearly smooth steel on knives to keep them sharp.

(4) Use boning knife for removing bones.

(5) Use steak knife for cutting steaks and roasts.

(6) Wash knives in warm water, rinse, and wipe with dry cloth.

(7) See that the saw blade is sharp and that it has plenty of set.

b. All meat cutters should take care to avoid the following abuses of their equipment:

(1) Don't ruin temper of knife on a power-driven dry stone.

(2) Don't use knives for cutting bones which should be sawed.

(3) Don't ruin handles by leaving knives in boiling water.

(4) Don't abuse sharp knives by cutting string, rope, sacks, etc.

(5) Don't throw sharp knives together.

(6) Don't use a saw for any purpose other than sawing bones.

(7) Don't use a cleaver for cutting wire, driving nails, or opening cans and wooden crates.

16. Safety rules.—*a.* Always hold a knife firmly.

b. Wear a metal safety glove when boning meat, if such a glove is available.

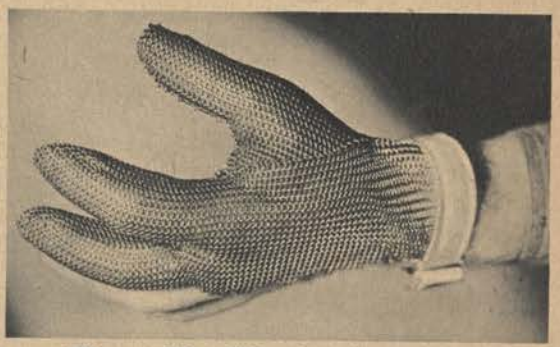


Figure 56.—Metal safety glove.

c. Use a hand meathook when boning meat.

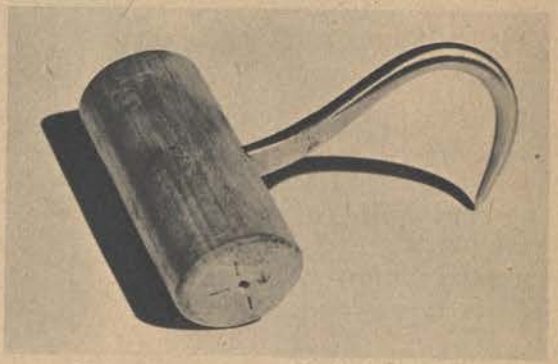


Figure 57.—Hand meat hook.

d. Use boning knives equipped with guards.

e. Keep the floor free from fat, waste, and trimmings.

f. Never use hands or fingers to force meat into grinder. Use a meat or wooden stomper.

g. Avoid lifting excess weights.

h. Give immediate medical care to all cuts and bone scratches.

i. Never grab for a falling knife.

j. Don't lay meat on knives.

k. Don't force the saw. It may "jump."

l. Don't crowd the working space.

m. Don't carry a knife when both hands are needed to carry meat or heavy packages.

APPENDIX I

Menu plans; foods to serve with roast lamb

Appetizer or soup	Starchy food	Other vegetables	Bread	Accompaniment	Salad	Dessert
Consommé	Browned potatoes	New peas	Hot rolls	Apricot sauce	Waldorf	Date-nut pudding
Purée of bean	Baked potatoes	Baked onions	White bread	Green onions	Pineapple	Chocolate cake
Fruit cup	Mashed potatoes	Spinach	Hot muffins	Guava jelly	Combination vegetable	Cherry pie
Cream of asparagus	Parslied potatoes	Corn pudding	Hard rolls	Sweet pickles	Lettuce and cucumber	Ice cream—cake
Spiced tomato cocktail	Candied sweet potatoes	Carrots	Assorted breads	Assorted jams	Raw vegetable	Fruit shortcake
Fresh vegetable broth	Boiled potatoes	Green string beans	Parkerhouse rolls	Mint sauce	Carrot and raisin	Cocoanut cake
Asparagus soup	Creamed potatoes	Escalloped tomatoes	Butter rolls	Pickled beets	Sliced tomato	Fresh pineapple
Lamb broth	Baked sweet potatoes	Creamed asparagus	Corn sticks	Browned pears	Hearts of lettuce	Chocolate pudding
Minted grapefruit	Escalloped potatoes	Cauliflower	Hot bran muffins	Mint jelly	Cole slaw	Fruit—cookies
Jellied Consommé	Buttered noodles	Rutabagas	Rye bread	Currant mint sauce	Lime gelatin	Apple pie
Fruit juice	Mashed sweet potatoes	Baked squash	Blueberry muffins	Radishes—onions	Apple, celery, and nut	Ice cream
Split pea soup	Steamed rice	Green lima beans	Graham bread	Celery—olives	Tomato and cucumber	Chocolate sauce
Spinach soup	Lyonnaise potatoes	Brussel sprouts		Crisp carrot sticks	Cottage and pineapple	Stewed apricots—cake
Cream of tomato		Buttered cabbage wedges		Piccalilli		Hot gingerbread
Cranberry nectar						

APPENDIX II

Recipe suggestions for lamb stew

Vegetables	Seasoning	Starchy food
Carrots, celery, onions	Parsley, peppercorns	Potatoes
Celery, green pepper, summer squash	Bayleaf, marjoram, garlic	Baking powder biscuits
Lima beans	Sour cream, paprika	Dumplings
Onions, apples, celery	Curry powder, minced parsley, lemon peel, vinegar	Boiled rice
Okra, tomatoes, celery	Cloves, garlic	Broad noodles
Green beans, carrots	Capers	Pearl barley
Onions, tomato purée	Celery seed, Worcestershire sauce	Spaghetti
Kidney beans, celery, onions	Tabasco, thyme	Macaroni

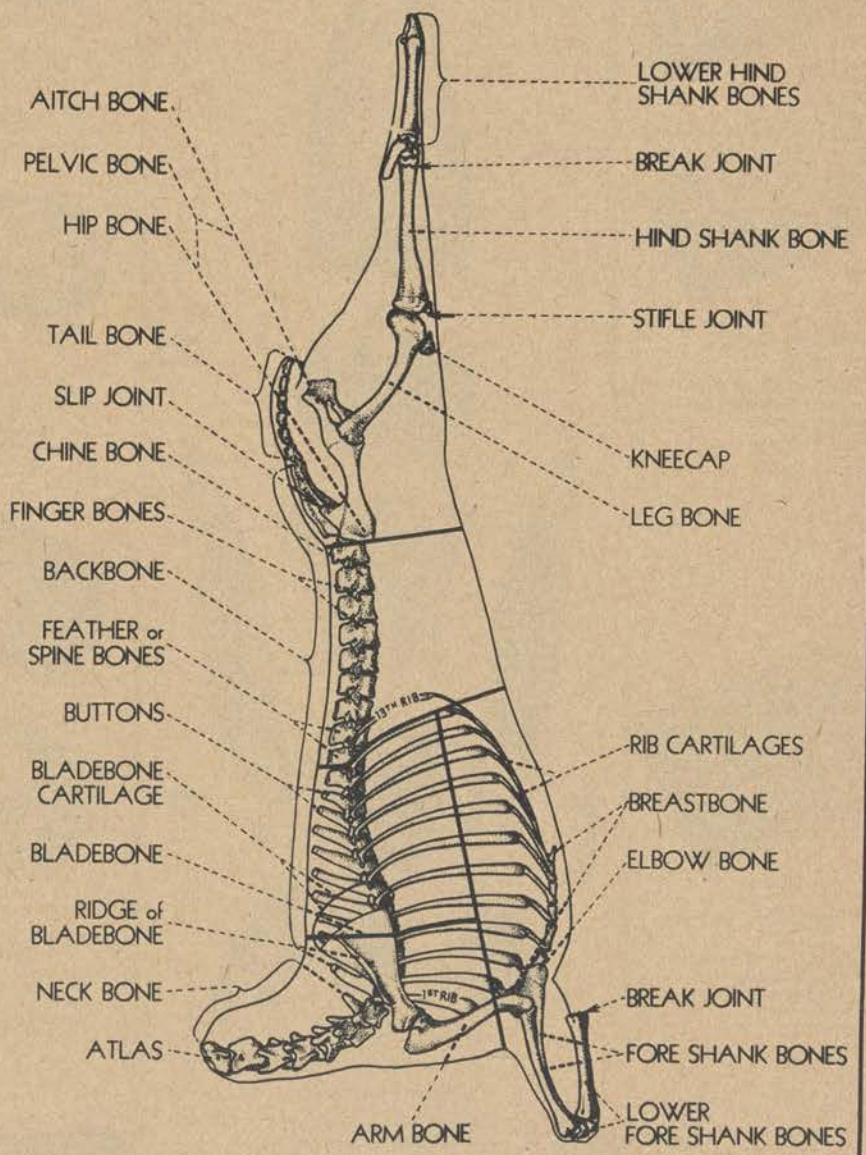
APPENDIX III

LAMB CUTTING TEST

Name of Cut	*From 100 pounds carcass Lamb*
Legs (including sirloin)	32 pounds
Loin (untrimmed)	13 pounds
Rack (8 ribs)	11 pounds
Shoulders (5 ribs)	23 pounds
Breasts, shanks, and neck	21 pounds
Total	100 pounds

LAMB CHART

LOCATION, STRUCTURE AND NAMES OF BONES

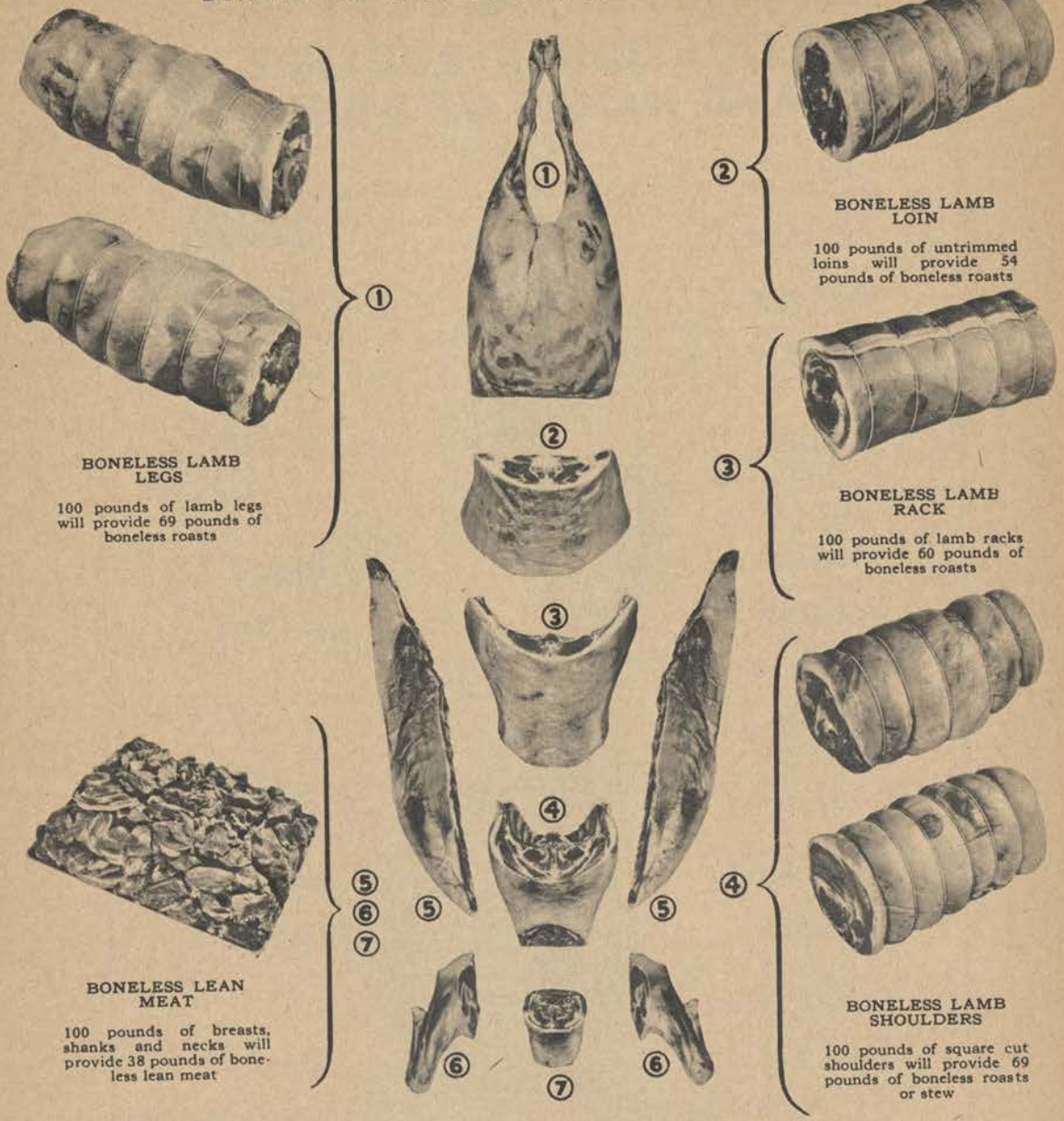


Prepared for the United States Army by the
NATIONAL LIVE STOCK AND MEAT BOARD

APPENDIX IV

LAMB CHARTS

DIVISION OF CARCASS FOR ROASTS AND STEWS



BONELESS LAMB LEGS

100 pounds of lamb legs will provide 69 pounds of boneless roasts

BONELESS LAMB LOIN

100 pounds of untrimmed loins will provide 54 pounds of boneless roasts

BONELESS LAMB RACK

100 pounds of lamb racks will provide 60 pounds of boneless roasts

BONELESS LEAN MEAT

100 pounds of breasts, shanks and necks will provide 38 pounds of boneless lean meat

BONELESS LAMB SHOULDERS

100 pounds of square cut shoulders will provide 69 pounds of boneless roasts or stew

BONES FOR SOUP

100 pounds of carcass lamb will provide 11.5 pounds of bones for soup

TRIANGLE FOR STEW

④,⑤,⑥,⑦

100 pounds of lamb triangles will provide 54.5 pounds of boneless meat for stew

LONG SADDLE FOR ROASTS

①,②,③

100 pounds of long lamb saddles will provide 63.5 pounds of boneless roasts

[A. G. 300.7 (3 Jun 43).]

BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,
Chief of Staff.

OFFICIAL:

J. A. ULIO,
Major General,
The Adjutant General.

DISTRIBUTION:
R and L (5); IC 8, 10 (10).
(For explanation of symbols see FM 21–6.)

U. S. GOVERNMENT PRINTING OFFICE: 1943

For sale by the Superintendent of Documents, U. S. Government Printing Office

TEXAS STATE COLLEGE FOR WOMEN
LIBRARY

NTSU LIBRARY
WITHDRAWN

cv 1943 mocat p 1364

UNT LIBRARIES DENTON TX 76203
1001895715