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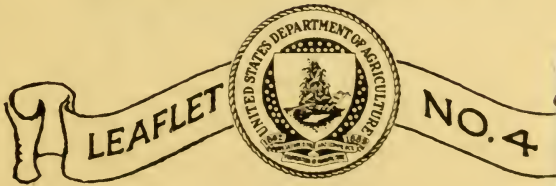
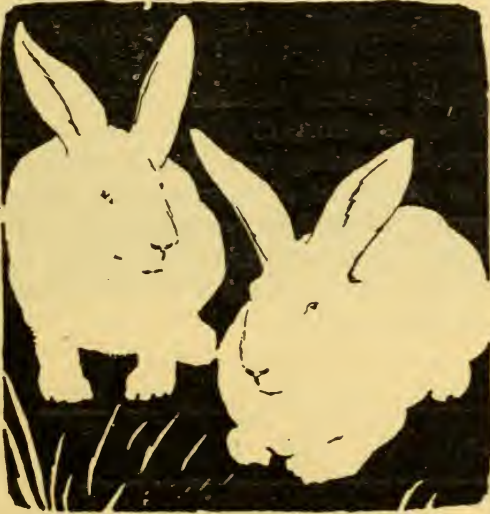
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RESERVE

# Raising DOMESTIC Rabbits



LEAFLET

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follows

THE PRODUCTION of domestic rabbits has developed during the past few years into an industry that promises to become important throughout the whole country. This leaflet has been prepared to furnish concise information on the following phases of the subject:

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Other publications of the department on different phases of the industry will furnish more detailed information. One now available, Farmers' Bulletin No. 1519, "Rabbit Skins for Fur," describes kinds of skins, methods of killing, skinning, preserving, grading, marketing, and tanning. Lists of breeders of utility and of fancy rabbits, prepared for the use of persons who wish to purchase stock for breeding or other purposes, may be procured on request addressed to the Biological Survey, United States Department of Agriculture, Washington, D. C.

Washington, D. C.

March, 1927

This leaflet is a contribution from the  
Bureau of Biological Survey, E. W. Nelson, Chief  
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# RAISING DOMESTIC RABBITS

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**R**ABBITS have been bred for food and fur in this country for many years, and during this time the meat of both wild and domestic rabbits has had a place on the American table and the pelts have been a staple in the fur trade.

In the Western States, especially in southern California, rabbits are produced in large numbers; some breeders keep only 50 or 100 animals, others 1,000 to 5,000 or more. Almost

**Demand and Supply** everybody in the rural districts there has at least a few. Several slaughterhouses are operated in the Los Angeles district, where from 25,000 to 50,000 rabbits a month are killed, dressed, and marketed, and the demand

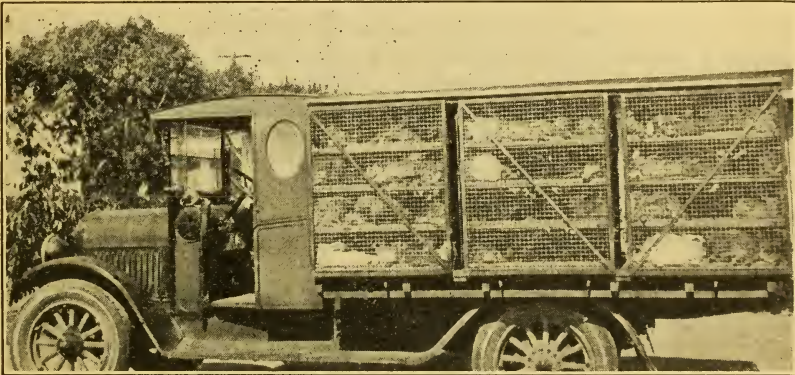


FIG. 1.—Live rabbits collected by auto truck for transportation to slaughterhouse and market

still keeps ahead of the supply. Rabbits are served at hotels and restaurants along with other meats, and large quantities are used on the home table. More than \$1,000,000 worth of dressed rabbit meat was marketed in the city of Los Angeles in 1926.

In California rabbits are usually marketed as fryers at 8 weeks of age, when they weigh about 4 pounds each. The producer sells his 8-weeks-old rabbits direct to the slaughterhouse or

**Marketing** wholesale meat markets. The slaughterhouses operate large trucks that call at the rabbitries regularly each week to buy market rabbits and haul them into Los Angeles, where they are killed, usually the following day. (Fig. 1.) The dressed rabbits are sold to local meat markets, clubs, hotels, and restaurants. One large concern not only kills rabbits and furnishes the wholesale markets with fresh meat daily but also manufactures fresh and smoked rabbit sausage, jellied and pressed rabbit meat, meat loaf, and other rabbit-meat products. The producer usually



receives 18 to 20 cents a pound for live rabbits, a price that nets him a margin of 40 to 50 cents a head over the cost of production. The dressed carcass, with head and feet off and entrails removed, usually retails at 40 to 50 cents a pound.

Successful rabbit raising requires good stock, good management, and good organization. Healthy, vigorous animals are necessary as a foundation. Good management, which includes breeding, feeding, housing, and marketing, is essential if a substantial profit is to be made. Appreciating the fact that progress in industry depends very largely upon organized effort, rabbit breeders have formed many local and State clubs throughout the country, the majority of which are affiliated with some national body representing the entire rabbit industry. These organizations are developing rapidly and are helpful in fostering this growing industry.

There are 18 breeds of domestic rabbits recognized by the National Rabbit Federation as being distinctive in type. In some instances

### **Breeds and Varieties**

there are several varieties of a breed, alike in size and type but with a wide range in color. These breeds and varieties are divided into two separate classes, or groups, known as utility and fancy.

The utility breeds, so classed because of their size and ability to produce a marketable carcass and a good pelt during a reasonable feeding period, are the American, Beveren, Chinchilla, Checkered Giant, Flemish Giant, New Zealand, and French Silver (Champagne d'Argent), and their varieties.

The fancy breeds, which are kept principally for show purposes, include the Angora, Belgian, Dutch, English, Havana, Himalayan, Lilac, Lop, Polish, Silver Gray, and Tan, and their varieties.

The American White, American Blue, New Zealand White, New Zealand Red, and the White Flemish are the varieties most extensively bred in the United States for meat and fur. Any breed or variety in the utility class, however, may be bred for commercial purposes and made to pay if properly fed, housed, and cared for, although the five mentioned are considered the most profitable because of their combination of good fur and meat qualities.

The age at which rabbits may be bred varies according to the length of time required for them to attain full size. In the utility breeds this is usually at 7 or 8 months. In small

**Breeding.** breeds it may be at 5 or 6 months. It is not advisable to breed rabbits after they are 4 years old. Old does are generally mated with young bucks, and young does with old bucks, as this increases the vigor of the progeny.

The period of gestation is 31 days. It is customary to breed each doe four times a year, allowing 31 days for gestation and 60 days for her to raise and wean the young, after which she is bred again. For example, if a doe is bred on January 1 she will probably kindle January 31; the young are usually left with her for eight weeks, when they are ready for market, and she is bred again about April 1. The second litter is ready for market on July 1, when the doe is bred the third time. This brings the fourth breeding about October 1.

A breeding doe can raise six or eight litters a year, but if bred this frequently she will soon break down and be worthless for further

breeding purposes. When breeding is exclusively for meat, five or six litters are sometimes raised in a year, but such intensive breeding is usually limited to about a year or a little more, when lack of strength and vitality is manifest and the young fail to grow properly. The doe is then sent to market and a younger and more vigorous one substituted. When rabbits are bred for show purposes or when great vigor and vitality are desired, it is best not to breed the doe more than two or three times a year.

Allowing an interval of three months between each breeding period gives the doe time to regain flesh and vitality after suckling the young and before being bred again, thereby insuring stronger and better offspring.

The number of young in a litter varies greatly. Litters of 10 or 12 occur, and sometimes more, but these are too large for one doe to raise. Only 6 of the best young should be saved, unless the doe is an exceptionally good mother. As with cows, does vary in the quantity of milk they give, and therefore some are capable of raising larger litters than others. It is advantageous to have several does bred at about the same time, for it is then possible to adjust the number of young by transferring some from one doe to another.

Each breeding doe must have a separate hutch for herself and her young, and the buck must also be kept by himself. One buck is sufficient for 10 breeding does. At mating time the doe should be placed in the hutch of the buck (never put the buck in the doe's hutch) and the animals watched to see that they mate. If actual copulation takes place the buck will usually fall over backward on his side afterward, and then the doe should be immediately removed to her own hutch. If the doe runs from the buck and does not accept service within four or five minutes she should be taken away and returned again two or three hours later. A buck and doe should not be left together for protracted periods, as they are apt to fight and injure each other. Ten days after the doe is bred she should be returned to the buck, as a test, and if she then refuses his advances it may be concluded that she is pregnant.

An accurate record should be kept of the date each doe is bred, and a few days before the young are expected the hutch should be carefully cleaned, and the nest box, containing plenty of hay or straw, placed inside. The doe will make her own nest. A day or two after the young are born she may be removed from the hutch a few minutes for an examination of the nest to determine the number of young in the litter and to remove any dead ones. No other disturbance of the young is advisable until they are large enough to come out of the nest and run about the hutch. At this time the nest should be cleaned and fresh straw provided.

The young may be weaned when about 6 weeks old, but it is best to leave them with the doe until they are 8 weeks old, after which the sexes should be separated and, if not marketed, the males and females should be placed in separate hutches. In open runs a considerable number of young does may be kept in the same inclosure until they are ready for market or for breeding. The same is true of young bucks, unless some are unusually quarrelsome. Unruly young bucks must be separated from the others.



Clean bright oats (whole or crushed), rolled barley, well-cured alfalfa hay, and a small quantity of some kind of green feed, preferably carrots, is the daily diet used in most rabbitries.

**Feeding** Wheat bran mixed with oats or barley (equal parts by volume) may be fed about once a week, with good results. Clover hay may be substituted for alfalfa where the latter is not available, but alfalfa is preferable and is eaten more readily by the rabbits. The hay should be cut into about inch lengths before feeding, as it is consumed more easily and with less wastage. Other greens may consist of rutabagas, potatoes, cabbages, mangels, or lawn clippings. Lawn clippings and other green feeds should always be fresh and clean and not fed when moldy or fermented. Some breeders feed no green stuff; others use all that is available. It is usually wise to avoid both extremes, but green feed must be used with more caution than is necessary with dry feed, and only the best of any kind should be fed. Spoiled, moldy, or dirty feeds are to be avoided as they cause sickness and disease.

Rabbits should be fed twice daily. The quantity of grain required depends on the age and condition of the animals, and also on the kind and quantity of hay and green feeds they receive. Some rabbits require more grain than others. Only by noticing the condition of each animal day by day can its feed be properly regulated. Does require more grain while suckling young than between breeding periods.

Mature rabbits should never be allowed to become too fat unless wanted for the table, as overfat animals frequently will not breed and sometimes will die from excessive heat. They should always be watched carefully for health and condition and be fed accordingly. Young rabbits, while growing, may be fed all they will clean up in 30 minutes at each of the two meals. Excess feed should not be allowed to remain in the feed dishes and become sour or dirty, for it will cause indigestion and other ills. Mineral salt should be provided in some form, preferably in spoons, that can be fastened to the side of the hutch. These spoons can be purchased at most any rabbit or poultry supply house. Fresh clean water should be kept before the rabbits at all times as water is almost as essential as food. Keep the feed and water dishes scrupulously clean.

Rabbit houses of various sizes and designs are used in different sections of the country. The type required depends very largely upon the climate. Where warm weather permits, as in California, an open-type house is used almost exclusively. Some are closed on the back, others on the back and ends, and others have only a roof over the hutches, the sides open all around. In the North and East, or wherever the weather is severe, greater protection is needed.

**Houses and Hutches** The essential features of a rabbit house, no matter where located, are light and fresh air. These are necessary to the health of the animals. Houses should always be so constructed, however, as to prevent drafts, for drafts cause colds and other diseases. A house of moderate size that will accommodate 500 animals or less is also preferable to a very large one, as rabbits kept in smaller units are less liable to contract disease.

Rabbit hutches should have about 10 or 12 square feet of floor space, the dimensions for a standard hutch being 4 feet long, 30



inches deep, and 24 inches high, inside measurement. Hutches for Flemish Giants are frequently built 5 or 6 feet long. Where there is plenty of room, it is best to have the hutches in single tier, but to save space they are frequently built two tiers high. Hutches built more than two tiers high are inconvenient, hard to clean, and animals in them are more difficult to observe. Rabbits are more easily cared for and less likely to become diseased in well-built hutches of the proper size than in extemporized ones, which become foul and unwholesome unless frequently cleaned and rebedded with straw, leaves, or other absorbent. Self-cleaning hutches require no bedding and are easily kept in good order.

There are three general kinds of self-cleaning hutches: (1) Those with slat floors and wire sides; (2) those with wire floor and sides; and (3) those with slanting board floors and usually with tight board sides and ends and an open space in the floor in the rear. Slat floors are made of 2-inch strips of board, spaced half an inch apart. Wire floors are of half-inch-mesh galvanized wire. Beneath each floor is a removable galvanized-iron pan about 1 inch deep designed to catch droppings and prevent the ground underneath from becoming contaminated. These types of hutches are used principally in California and in the South, where the climate is warm. They are not practicable in the colder North and East.

The floor of the closed type slanting-floor hutch is built of undressed tongue-and-groove lumber. The boards are placed crosswise and slope about 1 inch to the foot toward the back. A space in the floor, 6 to 10 inches wide, running lengthwise across the back of the hutch, is left open and covered with half-inch wire mesh, which allows refuse from the hutch to fall through to the ground. Blueprints of a rabbit house, a closed type slanting-floor hutch, a portable nest box, and a colony growing house will be sent on request addressed to the Biological Survey, United States Department of Agriculture, Washington, D. C.

Few housewives are familiar with the food value and delicious flavor of domestic rabbit meat. Domestic rabbits are cleanly in habits, and the nature of their food makes the meat sweet, tender, and excellently flavored. It can be better compared with chicken than with wild rabbit.

### **Cooking Recipes**

Just as with poultry or various cuts of meat, young tender rabbits may be fried or roasted, while the older ones with tougher muscles need longer, moist cooking. Recipes for both types of cooking are given below by the Bureau of Home Economics of the United States Department of Agriculture:

The rabbit should be washed carefully in cold water and patted dry with a clean towel. It may then be cut into 8 to 10 pieces (if not to be cooked whole). First disjoint the legs, cutting the hind legs into two pieces each if desired, and cut the saddle into four pieces.

**Fried rabbit.**—Cut a young tender rabbit in pieces, dredge with flour, salt, and pepper. Heat 4 tablespoons of fat in a frying pan, drop the rabbit into this, and fry slowly 30 to 45 minutes, depending upon tenderness and age. Serve with cream gravy, using the fat in which the rabbit was fried.

**Fricassee of rabbit.**—Dredge the pieces of rabbit with flour, salt, and pepper. Brown in 4 tablespoons of fat. Change from frying pan

to stewpan, cover with boiling water, and cook slowly until tender. Remove meat from broth. Thicken broth with 1 tablespoon of flour to 1 cup of broth. Boil vigorously for a minute or two, then add dumplings, cover closely and allow to steam 15 to 20 minutes. Pour dumplings and gravy over meat on hot serving platter.

**Baked rabbit.**—Split a young tender rabbit in two, cutting along the backbone. Rub with salt and a little pepper, place in a roasting pan, and dredge with flour. Lay strips of bacon across the rabbit. Pour over and around it 3 cups of white sauce or 3 cups of cream. Bake one and one-half hours, basting frequently. Serve hot with cream gravy. The liver may be boiled until tender, chopped, and added to the gravy before serving.

**Rabbit stew with vegetables.**—Cut the rabbit into pieces, cover with hot water, and simmer until the meat is almost tender. Add 4 medium-sized potatoes cut in quarters, 4 large carrots cut in cubes, 1 medium-sized or 2 small onions, or other vegetables, if desired, and cook until tender. Salt, season with a few grains of pepper, and add 3 tablespoons of flour moistened in a little cold water. Stir until the broth surrounding the stew is slightly thickened, and serve at once. This is a good method of cooking an old rabbit.

**Rabbit pie.**—Cut a rabbit into pieces, put it into a stew pan, and cover with boiling water. Simmer until very tender. Remove meat from broth and concentrate broth to about one-half. Pick the meat from the bones in as large pieces as possible. Thicken stock with 1 tablespoon of flour for each cup of broth and pour over meat. Add 2 teaspoons of salt and one-eighth teaspoon of pepper. Line the sides of a baking dish with crust, add meat mixture, cover with crust, and bake in hot oven 30 minutes. This also is a method of cooking a rabbit that is too tough for frying or baking.

**Smothered rabbit.**—Put a young tender rabbit, whole, in roasting pan, stuff with dressing, and truss, lard with 3 strips of bacon, and dredge with 3 tablespoons of flour, 2 teaspoons of salt, one-fourth teaspoon of pepper. Put 2 cups of water in pan. Allow to cook until tender and well browned, or about one hour. Remove the rabbit and thicken the gravy with 1 tablespoon of flour to each cup. Into this gravy drop baking-powder biscuits and bake uncovered until well browned.



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