



## RABBIT MANAGEMENT GUIDE

### ABOUT THE ANIMAL:

- Rabbits are prolific and will breed year round in well-managed rabbitries.
- Does have been known to kindle up to 23 young at one time. The average is eight.
- Rabbits usually have 4 to 5 litters per year. With proper management, rabbits can be kindled intensively.
- The young are ready for market at 4 to 5 pounds. With proper care and feeding they will be 8 weeks old or less at this stage.
- Rabbits have an efficient feed conversion ratio, which is the amount of feed consumed per pound of gain.
- A doe can produce up to 10 times its own weight, or more, in offspring per year.
- Rabbit meat is one of the most nutritious meats available. It is highest in protein, lowest in fat and cholesterol, has the least number of calories per pound and has only 8 percent bone.

	<u>Protein</u>	<u>Fat</u>	<u>Calories per lb</u>
Rabbit	25.5%	10.2%	795
Chicken	21.5%	11.0%	810
Veal (med. fat)	18.8%	14.0%	910
Turkey	20.1%	20.2%	1,190
Lamb (med. fat)	15.7%	27.7%	1,420
Beef	19.0%	28.0%	1,440
Pork (med. fat)	13.3%	45.0%	2,050

*U.S. Dept. of Agriculture Statistical Breakdown*

- Rabbit meat is especially good for babies, senior citizens and anyone with stomach disorder because it is easily digested.
- Rabbit meat can be prepared in over 300 different ways.
- Unlike wild rabbit, domestic rabbit meat is pearly white, tender, juicy and mild in flavor.

### RABBIT MANAGEMENT CONSIDERATIONS:

#### *SELECTING THE PROPER TYPE OF EQUIPMENT FOR YOUR RABBITRY*

The design of your rabbitry is going to be dictated, to a certain extent, by the amount of space you have available, climactic conditions and other local factors. You might want to spread your hutches out in a single row for easy maintenance, or limited space may require that you stack cages in tiers of two or three. In warm climates, a fogging system is necessary to maintain even temperatures. On the other hand, colder climates require a design that will retain heat, while still providing adequate ventilation.

#### Hutches

Although there are still many types of hutches in use, over 90 percent of commercial rabbitries rely on the all-wire type with hardware cloth floors. The reason is simple. This type of cage provides adequate ventilation and is easy to keep clean, since the floors do not collect dirt or wastes. These "self-cleaning" hutches mean a lower incidence of disease and less time spent on routine maintenance.

Generally, these hutches are suspended from the ceiling of the rabbitry by wires, leaving adequate clearance below for removal of wastes. If the hutches are hung in tiers, the cages on the lower levels should have solid tops to serve as dropping boards. These tops should slope to the rear, and overhang the cage by 4 to 5 inches.

This type of hutch is available from commercial suppliers or you can easily build your own from galvanized wire mesh found in most hardware stores. Any practical size mesh can be used for the tops and sides, but the floors should be one and a half inch mesh for small breeds and one and five-eighths inch mesh for larger breeds. Under no circumstances should chicken wire be used for hutches. As a general rule, provide approximately 1 square foot of floor space per pound of body weight. Average height is 1.5 to 2 feet.

## POPULAR BREEDS

BREED	MATURE WEIGHTS	COMMON COLORS	AREAS OF PRIMARY USE
American Blue & White	8 - 11 lb	Blue & White	Meat, Show
American Chinchilla	9 - 12 lb	Blue & White	Fur, Show
American Giant Chinchilla	12 - 16 lb	Blue & White	Meat, Fur, Show
American Sable	8 - 9 lb	Rich Brown	Fur, Show
American Silver Fox	9 - 12 lb	Black & Blue w/Silver	Meat, Fur, Show
Angora	5 - 8 lb	Variable	Wool, Show, Hobby
Belgian Hare	8 lb	Red, Tan, Chestnut	Show, Hobby
California	8 - 10 lb	White w/Color Tipped Ears & Nose	Meat, Laboratory, Show, Hobby
Champagne D'Argent	9 - 12 lb	Blue, White, Silver	Meat, Show
Creme D'Argent	8 - 9 lb	Orange-Silver	Meat, Show
Checkered Giant	11 lb & up	Black & White	Fur, Show, Hobby
Dutch	3.5 - 5.5 lb	Various Colors w/White Belt or Band	Laboratory, Show, Hobby
English Spot	9 - 12 lb	White w/Various Colored Spots	Meat, Laboratory, Show
Flemish Giant	13 lb & up	Variable	Meat, Show
Himalayan	2.5 - 5 lb	White w/Color	Laboratory, Show
Lop (English & French)	10 lb & up	Gray, Brown	Show, Hobby
New Zealand	9 - 12 lb	White, Red, Black	Meat, Laboratory, Show, Hobby
Palomino	9 - 11 lb	Golden, Lynx	Meat, Show
Polish	3.5 lb	White, Black, Chocolate	Laboratory, Show
Rex	7 lb & up	Variable	Fur, Show, Hobby
Satin	8 - 11 lb	Black, Red, Blue, Copper, White	Fur, Show, Hobby
Silver	6 lb	Gray, Fawn, Brown	Fur, Show
Silver Marten	6.5 - 9.5 lb	Black, Blue, Chocolate, Sable	Fur, Show
Tan	4 - 6 lb	Black-Tan, Blue-Tan	Show, Hobby

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## Watering Systems

The most efficient watering system is the self-watering system. Fresh water is a major factor in a rabbit's growth. Therefore, crocks and cans must be constantly cleaned and periodically checked to ensure an adequate supply. The self-watering system, however, is completely sanitary and makes water available 24 hours a day with little or no maintenance. It has also proven to be a significant factor in reducing disease.

## Feeders

If crocks or cans are used, they should be placed high enough to avoid contamination and fastened so they cannot be tipped over.

Metal feeders, attached to the cages from the outside, are the most common type. Since rabbits love to chew on wood, metal is a more logical choice. Mounting them on the outside of the cages makes refilling faster and easier.

## Nest Boxes

Nest boxes should give the doe seclusion, provide adequate ventilation and protect the litter from drafts. A box 12 x 12 x 24 inches, with one side cut down to six inches for easy entry, is sufficient. During winter months, the box should be insulated and filled with straw.

## Breeding

As in any breeding operation, you should always breed from good stock.

- Generally, small breeds mature earlier than larger ones. Polish can usually be bred at 4 months; medium weight rabbits at 6 to 7 months; and the giants at 9 to 12 months. Many commercial breeders, however, begin breeding successfully at 5 months.
- The normal estrus cycle is 16 to 18 days, with 2 infertile days at the beginning and the end when the doe lacks interest in the buck. Rabbits are induced ovulators and ovulation occurs only after mating.
- The doe should always be taken to the male's hutch for breeding. If she does not mate within a few minutes, she should be removed and returned later. Does will show a false pregnancy following unsuccessful matings. This false pregnancy lasts 17 days, and the doe will not breed during this period. For this reason, most commercial breeders will generally rebreed the doe on the 18th day.

- Bucks should be used no more than 2 or 3 times per week, although they can be successfully used several times per day for short periods. As a general rule, one buck should be maintained for every 20 does.
- The most important factor is to keep animals in top body condition. Overweight animals produce unsuccessful matings and poor litter quality.

## Kindling

The normal gestation period is 31 days and the doe will usually eat less 2 or 3 days before kindling. The nest box should be placed in the hutch on the 28th to 29th day. The nest box is kept out of the hutch until this time to avoid contamination by the doe. Most litters will be kindled at night, and the doe should not be disturbed while kindling. If the doe is not given seclusion, she will destroy the litter. After the litter is kindled, the doe pulls more fur from her body to make a nest. This plucking of fur is in no way harmful, except to the doe's immediate appearance. Many breeders will keep several nest boxes with clean fur for first litter does and other does that do not pull enough to make a good nest.

The average litter size is 8, but it can range all the way from 4 to 14 or more. Since the average doe is equipped to nurse approximately 8 young, it is a common practice to breed several does at the same time, and then transfer young from the large litters to the small ones 2 or 3 days after kindling to even out the milk supply.

## Weaning of Litters

Normal weaning time is 8 weeks, although some producers wean at 6 weeks. Some commercial breeders gain an extra litter per year by rebreeding the doe at 6 weeks while she is still nursing her litter, and then weaning the litter at 8 weeks. Segregate the sexes at the time of weaning.

<b>BREEDING TIMETABLES</b>			
<b><u>Breeding Program</u></b>	<b><u>Kindle to Rebreed</u></b>	<b><u>Kindle to Wean</u></b>	<b><u>Kindle to Kindle</u></b>
5 cycle	42	56	73
6 cycle	28	42	60
7 cycle	21	35	51
8 cycle	14	28	45

## **Sanitation Guidelines**

A good sanitation program, preventing disease and eliminating parasites, costs far less than the cure.

1. The removal of soiled bedding and wastes and keeping the hutches dry are basic factors. The all-wire hutch considerably simplifies the task. This is the reason for its wide acceptance.
2. Watering crocks and cans should be thoroughly washed and disinfected as often as possible. This cannot be done too often to avoid coccidiosis, which is why the self-watering system is highly recommended.
3. Clean and disinfect all nest boxes before using.
4. Any rabbits showing signs of disease or parasites should be immediately isolated from the rest of the herd.
5. Isolate newly acquired rabbits or those returning from shows from the herd for at least 2 weeks.
6. If as many as 1 percent of the stock die in a two-day period, obtain a laboratory diagnosis and follow the pathologist's instructions.

## **HEALTH:**

### ***GENERAL HEALTH PROBLEMS AND ILLNESSES***

1. ***Diarrhea:*** This disease is often referred to as bloat, scours, mucoid enteritis or diarrhea. It accounts for a high percentage of death in young rabbits. Greatest mortality occurs in age groups 5 to 9 weeks, just before or after weaning. The disease does not confer immunity and its cause is unknown.

Symptoms are listlessness, lack of appetite and below normal temperature of 102 to 103 degrees. The animal grits its teeth, shows intense thirst and may be bloated. Constipation or severe diarrhea can result in weight loss of 20 to 25 percent in 1 or 2 days. The digestive system is usually full of a watery substance and there is usually an excretion of a clear, jelly-like substance.

2. ***Coccidiosis:*** One of the most common diseases of rabbits. Animals that recover from this disease frequently become carriers of this disease. Any rabbit showing signs of the disease should be removed from the herd. There are two forms: liver and intestinal. So-called nasal coccidiosis is the result of rabbits contaminating the mucous membranes of their nose while practicing coprophagy (eating their feces). Coprophagy is normal in rabbits and many other species as a way of recycling nutrients, especially B vitamins.

Symptoms--Young rabbits are most susceptible. Rabbits exhibit diarrhea, poor appetite, rough hair coats and slow growth. Small white spots are found on the liver and intestines may be thickened and pale.

Treatment--Sulfaquinoxaline or Corrid in drinking water at 0.04 percent continuously for 2 weeks is recommended for the liver type of coccidiosis.

3. ***Tapeworm Infestation:*** Rabbits are intermediate hosts for two tapeworms of the dog. The rabbit is also an intermediate host for tapeworm in the cat. Dogs and cats should not be allowed near the rabbits' feed, water and bedding as they transmit tapeworm eggs in their feces. Dogs and cats should not eat the intestines of rabbits because they may become infected and continue the cycle of infestation.
4. ***Ketosis:*** Lactating does appear dull and listless and may have diarrhea. It is the result of excessive fat and too little exercise. There is no satisfactory cure but it can be prevented by proper feeding or restricting feed, if necessary, to prevent excessive fattening.

5. ***Slobbers:*** Excessive saliva is produced by young animals. It is caused by feeding too many greens.

6. ***Sore Hocks:*** Sores appear on the hocks and rabbits sit humped and appear listless. It is due to an infection and inflammation of the foot pad.

Treatment--Soak hocks in warm, soapy water and apply zinc oxide salve. Place the animal on clean bedding.

7. ***Sore Eyes (Weepy Eyes):*** Infected animals have a watery, milky discharge around the eyes due to a vitamin A deficiency, infection or injury.

Treatment--Bathe eyes in warm boric acid solution and use an antibiotic ointment of 5 percent sulfathiazole.

8. ***Ear Mange:*** Scabs or crusts form in the ear and the animal shakes its head and scratches its ear. To prevent, keep hutches clean and avoid introducing new stock carrying mites.

9. ***Vent Disease (Rabbit Syphilis):*** Infected animals have a rawness around the vent which may be swollen and covered with scabs. The organism is spread in breeding. Isolate infected animals, remove scabs and apply antibiotic ointment daily.