

# RABBIT TRACKS: *Feeds and Feeding*

## Introduction

**R**abbits are monogastric (single stomach), herbivorous (eat plant material) animals. They need nutrients (such as proteins, carbohydrates, lipids or fats, minerals and vitamins) in specific amounts to grow and perform at their best. Feed is very important when raising rabbits, because it accounts for about 75 percent of your production costs. In the wild, rabbits eat a variety of grains, greens, roots, and roughages. Most domestic rabbits eat a pelleted feed made to meet their nutritional needs. Rabbit pellets consist mostly of ingredients from plants (primarily alfalfa meal and wheat middlings). Pelleted rabbit feeds are available from many companies and are easy to feed and store.

Some rabbit raisers prefer to formulate (mix) their own rabbit diet. Rabbit feeds can be prepared from many readily available ingredients. The following feedstuffs are commonly used in diets for rabbits.

- Green feeds—growing plants such as grasses, weeds and leafy vegetables
- Root crops—carrots, sweet potatoes, turnips and beets
- Cereal grains—oats, wheat, barley, grain sorghums, corn and rye
- Milled feed—bran, middlings and shorts
- Hays—alfalfa, clover, lespedeza and timothy
- Protein supplements—soybean meal, peanut meal and dried milk products
- Salt



When mixing a rabbit diet, you must be sure that it will supply the rabbits with adequate amounts of the required nutrients. Diets for dry does, herd bucks and growing young should contain 12 to 15 percent crude protein, 2 to 3.5 percent fat, 20 to 27 percent fiber, 43 to 47 percent nitrogen-free extract (carbohydrate), and 4 to 6.5 percent ash or mineral. Rations for pregnant and nursing does should contain 16 to 20 percent crude protein, 3 to 5.5 percent fat, 15 to 20 percent fiber, 44 to 50 percent nitrogen-free extract, and 4.5 to 6.5 percent ash or mineral. Although protein is an expensive part of the diet, rabbits can be fed higher levels of protein than those required if the diet is adequate in the other nutrients. Thus, if it's easier, a single diet can be used for all stages of rabbit production.

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When you formulate a diet or diets for your rabbits, you must know about their nutritional needs. Also, if a rabbit diet is to be economical, you need to know the composition, cost and availability of feedstuffs. If you are considering formulating your own rabbit diet or diets, consult the references listed at the end of this sheet.

## Feeding Systems

Two types of feeding methods, “limited” feeding and “free-choice” feeding, are used with rabbits. Limited feeding involves placing a measured amount of feed (slightly less than the animals would normally consume) in a dish or crock for the rabbits each day. Free-choice feeding means that unlimited feed is available to the animals at all times. Crock or feed dishes can be used for free-choice feeding but may result in quite a bit of wasted or contaminated feed. The use of a hopper or self-feeder reduces the amount of wasted feed in free-choice feeding.

Rabbit feed and feed ingredients should be kept in a dry place and should not be stored for long periods. This is because over time the nutritional quality will deteriorate. Be careful to keep the feed free of any type of contamination, especially from rodents. Home mixed feeds, feed ingredients and open bags of pellets should be kept in sealed containers.

The amount of feed required by a rabbit will depend on many factors. These include the composition and taste appeal of the diet, the breed of rabbit, the size and age of the rabbit, the temperature and the stage of the rabbit's life cycle. Rabbits generally eat more at night than during the day. Weanling meat-type rabbits will eat about 4 to 6 ounces of feed per day, depending on their size. As a general rule, a New Zealand doe and her litter will eat about 100 pounds of feed from breeding to weaning. Commercial meat-type weanling rabbits that eat a good balanced diet should achieve a feed conversion ratio of about 3:1 (3 pounds of feed to produce 1 pound of weight gain). An unbalanced diet or too much wasted feed can harm this important part of rabbit production.

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## Water

Water is very important to rabbits. Provide your rabbits with pure, fresh water at all times. The amount of water a rabbit requires depends on its feed intake, feed composition and the temperature. When it's hot out, rabbits will drink large amounts of water. For example, a medium-sized doe and her 8-week-old litter can drink a gallon of water a day. When the temperature is below freezing it may be necessary to water your rabbits two or three times a day so the water won't freeze.



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# Coprophagy

Rabbits are unique in that they produce two types of fecal material, a hard, dry fecal pellet and a soft or "night" feces. The soft feces are produced in the cecum (a pouch located between the small and large intestines) and are consumed by the rabbit directly from its anus as they are excreted. This practice is called coprophagy (ka-prof-a-gee) or cecotrophy and usually takes place when the animal is alone. Some feces contain a mucus coating and are excreted in a cluster rather than as single pellets as with hard feces. Coprophagy is a natural process which provides the rabbit with B-vitamins which are synthesized (produced) by

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bacteria in the cecum and excreted in the soft feces. Night or soft feces are much higher in protein and water and lower in fiber than hard feces.

## Suggested Reading

Cheeke, P.R. **Rabbit Feeding and Nutrition.** Academic Press, Inc., New York, NY, 1987. 376 pp.

National Research Council. **Nutrient Requirements of Rabbits.** Nutrient Requirements of Domestic Animals Series. National Academy of Sciences, Washington, D.C., 1977. 30 pp.



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2P-5M-4:92-RP-RM

This bulletin was written by the members of the 1988-89 State 4-H Rabbit Developmental Committee. It was designed and illustrated by Cynthia Alderson, 4-H Graphic Artist. The bulletin was edited by Susan Malott, 4-H Publications Editor.