RABBIT TRACKS: Breeding Techniques and Management

Introduction

Rabbits have a very high reproductive rate compared to other livestock. They become sexually mature within a few months of birth and have relatively short pregnancies. They produce large litters and are unique in that they can be rebred immediately after kindling (giving birth). With an intensive breeding program a doe can be expected to have 60 weaned young a year. Such intensive breeding is not recommended, however, for the beginner and is seldom used in commercial production.

Breeding Schedule

When setting up a breeding system for your rabitry, your first consideration should be your purpose for raising rabbits. If you’re raising rabbits for meat, you may want to produce as many fryers as possible. If you’re mostly interested in showing rabbits, you may want your does to have only a few litters each year and time them to provide stock of the proper age for showing.

Rabbit breeding schedules are usually based on 7-day intervals for ease in record-keeping. Many commercial rabbit producers will breed does back 14 or 21 days after kindling. A 35-day breed-back schedule is recommended. You can shorten the interval between kindling and breeding as you gain experience. However, intensive breeding programs may increase the number of does culled annually due to "burn out."

No matter what breeding schedule you use, always check the condition of the rabbits before mating them. It would not be wise to remate a doe in poor condition or one nursing a large litter 21 days after kindling, as it could affect her reproductive performance. This could result in poor fertility, a small litter or high death rate in the young produced. When possible, mate several does on the same day or within a few days. Kindling will take place at about the same time (28 to 32 days later), which will make fostering the young easier if it becomes necessary. Does should be expected to produce seven or eight young in a litter, but they may occasionally have smaller litters.

Mature bucks can be used daily for single matings over long periods of time without affecting their fertility. However, if they are used to service several does within a day or two, they should be allowed to rest for a few days before mating again. In large commercial rabbitries, one buck may be kept for each 10 to 15 does, while small producers may need a buck to doe ratio of 1 to 5 or...
even 1 to 2. An intensive breeding program will require more bucks to service the same number of does than a less intensive breeding schedule.

Age to Breed

Different breeds of rabbits reach sexual maturity at different ages. The smaller breeds become sexually mature earlier than the larger breeds. Small breeds (such as the Polish) can be bred at 4 to 5 months of age. Medium breeds (for example New Zealands and Californians) become sexually mature at 6 to 7 months of age. The giant breeds (such as the Flemish giant) should be at least age 7 months when bred. The females of all rabbit breeds reach sexual maturity earlier than the males. This means that does can be put into production before bucks of a similar age.

Mating

When does become receptive to mating, they will usually show signs of being in heat. They may act restless, rub their chins on feed and water containers or other equipment, and show a desire to join other rabbits. The vulva (external genital organ of the female) of does that are ready to mate is slightly swollen, moist and reddish-pink. A small, dry, pale (whitish) vulva means that the doe is not ready to breed. Before any mating attempts, examine both the buck and doe to be sure they are in good condition and free of disease and injury.

A doe should always be taken to a buck’s cage for mating, because does usually resent intruders (even a buck) being placed in their cages and will become defensive. Also, if a buck is placed in a strange cage, he may spend a long time sniffing around the cage before breeding the doe. When a doe that is ready for mating is placed with an active, experienced buck, mating should occur almost immediately. Of course, mating young inexperienced stock may require more time than mating experienced breeders. At the completion of the mating act, the buck will usually fall over backwards or on his side.

Some rabbit raisers allow the buck to mate with the doe twice before returning the doe to her cage. Others prefer to take the doe back to the same buck for a second mating 8 to 12 hours after the first mating or to mate her with a different buck. Be sure to record the date of all matings so that preparations for kindling (such as placing a nest box in the doe’s cage) can be made at the proper time.

Often a doe will refuse to mate with a buck. When this happens, try her with another buck or return her to the cage and try her again in about 2 to 4 days. Don’t leave a doe unattended in a buck’s cage. An aggressive buck and a nonreceptive doe left alone together could hurt each other. In some cases it may be necessary to restrain a doe for mating. Do this by holding the doe by the fold of skin over her shoulders with one hand. Place your other hand under her body between the hind legs (this raises her hind-quarters to the normal height for service) and move her tail up or to one side. Most bucks will readily adapt to such assistance by the rabbit raiser. When does are restrained for mating, they should be remated later because the first mating may not “catch.”
Breeding Problems

Rabbits often show a natural decline in productivity during the late summer, fall and early winter. Both reception and conception rate may decrease during this time. Selecting breeders from stock that produces well all year will help ensure good production during this period.

Exposure to temperatures over 85°F for 5 consecutive days can cause temporary sterility in bucks. Old bucks tend to be more susceptible to heat than young bucks and can remain sterile for 60 to 90 days. To help reduce male sterility due to hot weather, keep breeding bucks in the coolest part of the rabbitry and mate them frequently.

Pseudopregnancy (or false pregnancy) is when a doe seems to be pregnant but is not.

This can result from a sterile mating or from physical stimulation, such as being mounted by another rabbit, which causes a physiological response in the doe resembling pregnancy. During pseudopregnancy, which lasts about 17 days, the doe will not breed. The condition is normal and is not harmful to the doe, but it will delay the time of breeding.

Another common reproductive problem is does that fail to conceive after mating. This is usually because they are too fat or have been out of production for a long period. Excessively fat bucks can also pose a problem because they tend to be lazy and lack libido (sexual desire). Poor physical condition, old age, disease, injury and inadequate nutrition are other factors that can cause reproductive problems. As a rabbit raiser, you should strive to keep your breeding animals in a trim, active and healthy condition for the best reproductive performance.

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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.