

BREEDING TECHNIQUES

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Genetics

Thousands of factors called 'genes' determine the make-up of your stock. These genes are strung together in groups and the groups are called 'chromosomes'. There are twenty two pairs of chromosomes in each egg cell. One of each pair comes from the dam and the other from the sire.

The egg cells are developed in the ovaries. When they are mature they become small, sac like enlargements on the surface. The sac will rupture if any form of sexual stimulation is employed – for example, by a mating, or being ridden by a litter mate. The egg cells are then released approximately ten hours afterwards and the eggs are able to be fertilized approximately two to four hours after this.

On mating, the buck will release many thousands of sperm cells. A single sperm cell meets a single egg cell, and the number in the resulting litter will depend upon the number of mature egg cells that become fertilized.

In Breeding

Briefly, this is the interbreeding of relatives – i.e. brother to sister, mother to son, father to daughter. Parent to offspring matings can be recommended to the newcomer to orange and fawn, as this very close breeding will bring out both desirable and undesirable factors. In this chosen strain. With expertise, he should be able to continue to improve the good points, but drastic culling is essential to stamp out the bad ones. It is essential never to breed together two animals that possess the same bad fault.

Line Breeding

Breeding within a chosen strain, but not as closely as in breeding. You can stamp the outstanding animal's characteristics into your stud by keeping his descendants closely related. A close knowledge of the strain is required and constant reference to each animal's pedigree, to

check that you are keeping a good percentage of the desired animal in each generation. This is why it is so essential to (a) buy stock from and tip top stud and (b) always ask for a pedigree form. Fur & Feather can provide pedigree forms.

Age to Mate

This varies among the breeds – a small breed such as Polish will mature earlier than the Flemish Giant. Rex are usually mature at between six to seven months old. They can be used for breeding as long as they remain in good condition and produce satisfactory offspring. Quite a few 'old age pensioners' have produced Champions! Some fanciers breed old stock with youngsters quite successfully.

When To Mate

Spring and early summer. (see section on Sterility). Not the dates of the shows you wish to support, and the ideal ages of the stock on the dates of these shows, and mate up accordingly remembering to allow the period for gestation (See Gestation Period).

Heat Period

When the doe becomes restless, stamps her feet and becomes generally excitable, one can assume she is in her heat period. This will last 15 to 16 days. There are two days at the beginning and two days at the end of this cycle when the doe will be reluctant to mate and here eggs will not fertilise, being either immature or degenerating.

Mating

Always put the doe to the buck, and remove his food and water pots and any other obstacles such as mounds of bedding. If both buck and doe are ready the mating should take place within a few minutes, or almost immediately. If the doe is excitable, she may have to be restrained or tried again later.

Test Mating

Returning a mated doe to the buck with a few days does not give a reliable check. A doe in kindle will often accept the buck again during her pregnancy – or will refuse the buck and give every appearance of being pregnant, but is not. It is possible to determine the development of the foetus by an external examination – gentle probing with the fingers, known as palpitation. If you can master this technique you will also be able to recognize retain young, abscesses, impacted caecum etc and with prompt action may save the life of a valuable breeding doe. If you require more information on this technique, consult one of the several excellent books on rabbit keeping and in particular, study the photographs and diagrams. Practical assistance from an expert fancier will also be of benefit.

Failure to conceive

- a) Sterility
- b) Too young or too old
- c) False pregnancy
- d) Poor condition, disease; injury
- e) Retained foetus

a) Sterility

In its wild state the rabbit breeds vigorously throughout spring and early summer but becomes barren during the autumn and winter months. The domestic rabbit, by enjoying the same constant temperature and feeding routine, is brain-washed into breeding throughout the year, but this is not to be recommended with show rabbits as there is still a tendency to a barren period in autumn and winter and this can last one to five months. Inadequate diet, heavy moult and long sterile periods, or if the does do conceive they will produce smaller and lighter litters, or will neglect their young.

b) False pregnancy

Sometimes a doe will convince itself (and mother nature too!) that it is pregnant, when it is not, and oddly enough she will not conceive during this period of simulated pregnancy. This can happen to a doe who has `ridden' her own litter, or to female litter mates who have been left together too long. A false pregnancy usually ends

approximately three weeks after the doe has been removed top a single hutch: when she attempts to make a nest, or rakes her bedding, this is the time to mate her up.

c) Poor condition; disease; injury

Poor condition speaks for itself; you know the remedy. After a winters lay-off many breeding does become fat and lazy and this build up of internal fat will prevent conception. Discontinue pellets, etc and feed a good quality hay and as much succulent green as can be consumed during your visit the rabbitry. (Before you leave remove the uneaten green from the hutch to prevent it from being eaten in a soiled state,) Exercise mum to be in a large hutch, or put out in the garden each day in an enclosed run. Always examine breeding stock carefully before use. A rabbit that is injured or in ill-health should not be used for breeding purposes. If in doubt consult a local breeder.

d) Retained foetus

See article on Good Husbandry: Care of Breeding Doe to follow in the next issue.

Gestation period

This is 31 to 32 days from the time of mating and will establish the date your doe should kindle. I say should, as you may have litters as early as 29 days and as late as 35 days after mating. With an overlong gestation, it could be that the young will be abnormally large, or unborn dead. Regular and careful attention to diet should be maintained during the gestation period, and ample quantities of clean fresh water available at all times.

Lost litters

If the doe scatters her litter, or for any other reason the babies are born dead, reduce her food ration to curb milk production. Examine the doe carefully and if all is well she can be re-mated in a day or so. She should accept the buck quite readily.

Re- Mating

The doe can be re-mated as soon as the litter is weaned. i.e. at about six weeks of age. Two Spring litters in fairly rapid succession is considered quite usual practice amongst rex breeders, and can be followed by a summer mating. Continuous breeding will lower fitness of the doe and as a result the litters will lose size and vigor. But lengthy periods of rest could also cause sterility and poor litters, so do try to aim for the happy medium. Approximately three litters per year will keep the doe busy and active and your hutches full of show hopefuls.