



National Agricultural Youth Show

Rabbits Manual



2022

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1. INTRODUCTION

Rabbits make excellent pets and are a wonderful hobby. It is impossible to care properly for a pet, or to achieve much out of a hobby if one does not have the basic information about the subject. It is also rewarding to look for additional challenges with one's pets or hobbies. What greater challenge can there be than to enter one's animals on show? Entering shows could lead to great joy or deep despair, but it is always a great learning experience, even after several years.

Rabbit breeding is a farming enterprise and therefore it is very difficult to lay down hard and fast rules. What works for one person may not necessarily be the best way for the next person. It may therefore be necessary for you to experiment with different methods and then stick to the method that works for or suits you.

In this booklet I will try to give you the basic facts, and some of the variables on certain aspects of rabbit breeding and showing.

Further the best of luck to you with your chosen hobby, may it bring you great joy and fulfillment in your endeavors.

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2. WHAT IS A RABBIT?

Contrary to normal belief a rabbit is not a rodent. But how can we blame a layman for believing this, when zoologists for years classified them as Duplicitenta in the order Rodenta. This classification was due to the fact that the rabbit's incisors (front teeth) are actually two teeth growing one behind the other. It was only at a late stage that the Duplicitenta's were given their own order *Lagomorpha*, due to the fact that they have 28 teeth compared to a rodent's 16. *Lagomorpha* are divided into two species, the one including rabbits and hares whilst the other is for the pikas.

A rabbit's natural body temperature ranges from 38.5 to 39.5 degrees Celsius. Rabbits are unable to sweat, so they must rely on other cooling techniques.

- a) To stay cool, they stretch to expand their body surface area. Their ears play an important part in body temperature control.
- b) Elevated temperatures cause a reduced water consumption, which contributes to dehydration and can be fatal.

Although rabbits and hares are the same species, (and they are often incorrectly named), they do not inter-breed. Amongst other differences rabbits and hares have different living habits, with a rabbit being a burrowing animal and the hare a surface living one. There are also differences between a rabbit and a hare with their infant pups. Newborn rabbits have closed eyes, no fur, and are unable to move. The newborn hares are born with open eyes, furs included, and they can jump around.

Rabbits have been kept in captivity since 1 000 BC with domestication taking place in the monasteries during the middle ages. It would appear that this was due to the fact that unborn or newly born young rabbits were not regarded as meat and could thus be eaten during Lent.

A number of variations are recorded prior to the 18th century. These include color variations, the Dutch coloring and the Angora "wool". Mutations, including the Rex and Satin fur that have been carefully bred to give us the wonderful animals we see on the show bench today, occurred at later dates. The Other breeds seen are either due to casual crossbreeding or more often the careful study of genetics and planned breeding.

Why are rabbits kept today?

There are a number of varying reasons. These include:

For pets
For meat
Commercially (to make money)
For therapeutic or rahabilitation purpose
For research or loloratory work

No matter what the reasons for keeping rabbits, they will always be found to be one of the most interesting, wonderful and loving creatures one can find.

3. HOUSING / SANITATION

Rabbits are easy to please when housing them. Some people give their pet rabbits the run of their house or garden, whereas other people keep them in colonies. Most breeders, however, keep their rabbits in individual hutches (cages). No matter how one keeps your rabbits, there is certain criteria that should be adhered to. These include shelter, cleanliness, draught free and dry conditions.

Shelter

A rabbit can tolerate a large temperature range, especially at the lower end of the range, but can succumb to heat stroke. It is also advisable to keep rabbits, especially coloured ones, out of direct sunlight as this "kills" and discolours the fur. Some people, especially overseas breeders, believe in keeping their rabbits in dark areas for this reason.

A male rabbit held in temperatures above 29.4 ° C for several consecutive days can undergo temporary sterility. Older rabbit males are more susceptible than younger rabbit males. Male rabbits can be temporarily sterile for 60 to 90 days. (As a result, some people, especially international breeders, prefer to keep their rabbits in dark conditions.)

Cleanliness

Although rabbits have bred and thrived in unhygienic conditions, they are susceptible to disease. It is therefore recommended that their environment be kept clean and hygienic to enable them to achieve their full potential. A sick or diseased rabbit will be refused on a show. If it should get past benching (the process that is followed when putting your rabbit on a show) it will be disqualified by the judge and isolated.

Draught Free

As stated, rabbits can tolerate large temperature differences, especially cold, but they are very partial to draughts. Draughts can cause numerous problems such as colds, sniffles (pasteurella), and even ear infections. These could all be fatal diseases and you could soon be sitting without any rabbits.

Dryness

Water is fine for fish to live in. However, all earth bound creatures need water to survive (drink), but find living in damp conditions most uncomfortable and distressing.

Size of Hutch

In the old days it was stated that a rabbit hutch should be 0,1 square meter per 500 gm adult weight. Today most breeders prefer standard size hutches. A breeding hutch is normally 900 mm (wide) x 600 mm (deep) x 450 mm (high) for most medium or large breeds. Small breeds are sometimes kept in smaller hutches. Some commercial breeders however prefer hutches 600 mm x 600 mm x 300 mm or 450 mm, and then place the breeding box on the outside of the hutch. When building or purchasing a hutch always remember to take the length of you arm into

consideration. It is always difficult if you have to try and climb into a hutch to get a rabbit out of a corner.

Materials required

If the hutch is to be kept under roof it could quite easily be all wire. The hutch can however be made from any material, as long as certain things are taken into account. Things to consider include that rabbits will chew on most things, especially wood. Steel gets very hot and cold. Asbestos gets cold and the rabbits will chew on it. Further, one must remember that the hutch must be cleaned and disinfected regularly. Provision must also be made for food and water. If one decides on a solid floor instead of a wire floor, you must remember that it will require very regular cleaning. Thought should then be given to placing sawdust or straw on the floor.

Cleanliness

All food and water containers should be cleaned every day. The hutch should be cleaned once a week, more often if it has a solid floor, and disinfected once a month. All droppings should be cleaned away daily. Further, a watchful eye should be kept for any fly, insect or odor build up. The cause of these problems must be found and corrected immediately. Always remember, prevention is better than cure.

4. FEEDING / NUTRITION

As previously stated, rabbits are easily pleased and I personally have heard of rabbits eating and enjoying grapes, apples, mealie meal, porridge with milk and even chocolates.

Rabbits, however, do require a high protein diet, normally between 12% and 14%, although some people claim they need up to 18% protein. As a result, most people feed one of the commercial rabbit pellets on the market. Other animal feeds are sometimes experimented with. It is rumored that feed that contains urea must be avoided. Pellets are easier to feed rabbits rather than other foods, because it contains essential vitamins.

- Vitamin A is primarily used to sustain the rabbit's general health and development, as well as the proper functioning of the nervous and reproductive systems. It also aids in physical growth. Green grasses, roots, and hay contain vitamin A.
- Vitamins B plays an important role in the rabbit's cell metabolism.
- Vitamin D plays an important role in the growth of the rabbit and promotes the formation of bone tissue. Vitamin D is essential in winter for the rabbit. Vitamin D can be obtained in milk and any grass dried out in the sun.

However, the different producers do use different ingredients and one should not suddenly change from one pellet to another. One must slowly introduce the new pellet or food over a few days, for example 25%, 50%, 75%, 100%. This method of introducing new feeds could eliminate a lot of problems with diarrhea (runny tummies). It has been noticed that by feeding different feeds or pellets from different producers, certain problems could arise or disappear from the rabbitry. These problems could vary from rabbits not eating, scratching their feed out of the feeder, growth rate (feed conversion), the fur becoming coarser or softer, weaner mortalities or even varying conception rates. These problems do not manifest themselves overnight, but require constant

monitoring over a period of time, 6 months or even a year. One must also be aware of any other factors that could have caused or corrected the problem.

Most breeders agree that adult "large" rabbits should receive between 110 gm and 120 gm of pellets per day. There is, however, two schools of thought on feeding, lactating does (female rabbits with babies) and weaners (rabbits up to 12 weeks old). The one school advocates ad-lib feeding (feed accessible at all times), the other school prefers feeding rations even from an early age.

If one feeds pellets one should feed some type of hay to supply bulk and roughage. The odd tit-bit green feed or vegetables can also be given, but once again too much at a time could cause runny tummies.

One can feed rabbits on greens only. You then have to feed larger quantities (approximately 1 kg per day). The rabbits must then also be fed twice a day as wilted greens should not be left in the hutch. Most greens can be fed. Some would naturally be more nutritious than others and each rabbit would have its own preference. I have been told not to feed rhubarb, tomato plants, uncooked potato and onions as they could be fatal. As a result I have avoided these specific greens. I have, however, fed most other greens including grass cutting (which have not been splayed), pruning from trees, debudded flowers, etc. I have even fed "kakiebos" to breeding stock. It is claimed by some to cure worms. However, I find it assists in controlling flies in the rabbitry. Some people state that not too much lettuce should be fed to rabbits kept in confined spaces.

Rolled oats, sunflower seeds, peanuts, etc. have also been fed at odd times for specific reasons, normally before a show to luster of the coat. In the old days breeders developed their own rations. Because these rations were not in pellet form, the rabbits used to waste and this practice has almost ceased to exist. Further I have seen and heard of rabbits being fed on supplements of mealie meal, porridge and milk or even bread.

A further requirement of any rabbit is fresh water. When feeding pellets, it is necessary to supply water two or three times a day. As a rabbit could drink up to 1 liter per day, I have been told by somebody that his three rabbits have not drunk any water in one year. I found this very strange, and on further questioning was informed that they were fed solely on greens, five fresh lettuces a day being the basic ingredient of the meal. As lettuce contains a high quantity of water, this would appear to be the reason for this abnormality.

5. BREEDING

You have now bought your rabbits, you have housed them, experimented with feeding them and now you want to breed with them. What now? Do you just throw the buck and doe together and hope for the best, or do you carefully plan and organize the mating and breeding of your animals? The choice is yours, depending on what you wish to achieve. Once again you would require some basic information, and I have still not met somebody who can show animals from a pot-luck situation.

The gestation period (the time from mating until giving birth) of a rabbit is 30 to 32 days. I will give information on breeding in a controlled environment as I do believe it is the only way if one wants to show rabbits. There are different thoughts on when and how to breed rabbits. Commercial breeders breed on a five week cycle, that is, the doe produces a litter every 5

weeks, breeding the rabbits at an early age. This is done so as to produce the maximum number of offspring to try and make the venture as profitable as possible. Some showmen believe you must never breed a rabbit in stress. This would include whilst still developing or even when molting (that is losing old fur and growing new fur). Other will only breed for shows that is mate the rabbits that their offsprings is a certain age for the show. However, most breeders breed on a regular system, for instance a ten week cycle, thereby combining the "best" of both worlds.

The rabbits would be housed in individual hutches so that breeding can be controlled. As a rabbit is territorial one should take the doe to the buck's hutch. The buck should try and mount the doe within a short while of her being placed in his hutch. If the doe is ready, she will lift so that the buck can mate with her. On completion of mating, the buck will fall off, normally sideways but sometimes backwards. Some people will leave the doe until mated three times, normally with 10 to 20 minutes, whilst others will remove the doe and put her back with the buck 12 hours later.

After this, things continue normally, for 28 days, except that some breeders increase the doe's ration after 14 days. At 28 days the doe is given a nest box (this could be a variety of styles and size depending on the breeder) with nesting material. As previously stated, this could be placed inside or hung on the outside of the hutch. The doe will then build her own nest. Normally just before having her kits (babies) the doe will pull her hair (fur) from her belly and place this in the nest. She will then have her babies and you are also a rabbit breeder.

Normally the doe will kindle (have babies) and look after the kits without any problems. If problems should occur, here are a few tips to remember. If the doe does not pluck fur after kindling, and it is cold, catch the doe and pull some other belly fur out, placing the fur in the nest. This action is normally enough to remind the doe to do the job herself. If the doe kindles outside the nest box and the kits are warm, they (and the fur) can just be placed in the nest box and rubbed with a handful of fur. However, if the kits are cold, hold them by the head and immerse as far as possible in warm water, rub them with a cloth and place in the nest box. As the doe only has eight teats, it sometimes happens that she has too many kits (and sometimes when only having a few kits) and she does not look after all of them. If you have another doe that has kits almost the same age, you could foster the kits out. This works well when the two litters are different breeds (types) but it could upset the records when the litters are the same breed and color. I have, however, seen does with large litters make two nests in the box, split the kits and happily raise 12 beautiful babies. Some breeders say you should not disturb the nest for a day after the doe has kindled. Other says that you must first put Vaseline on the doe's nose before fostering kits to her. I have found neither appropriate in my program. I can work in the boxes even whilst the doe is kindling, although I would not advocate the practice. I foster kits by just rubbing them with fur from the foster mother's nest end then placing them between the other kits.

Once the mother has kindled, you should double her rations and if possible, supplement with some green lucern or other green titbits to stimulate milk production. After 1 to 2 days the kits will start to grow fur, at about 10 to 12 days their eyes should open. During their third week the kits should start coming out of their nest box and start eating solids. The kits can be weaned (taken away from their mother) from 3 weeks old (normally commercial breeders). It is usually the practice to wean two weeks after re-mating the doe, unless of course if the babies are getting too big and the mother has not been remated.

Some breeders advocate that the weaners be left in the hutch and the mother be removed to avoid stress. Most breeders, however, wean into another hutch, hutches or even colonies.

Whichever method is used, one should separate the sexes before the 14th week so as to avoid any unwanted pregnancies.

Most breeders advocate that a buck should be used 1 day and rested for 2 days to build up his strength. Here again I have successfully used a single buck three or four times in a day and then given him a week's rest. As a result of these "rules" one needs 1 buck and 10 does in a five-week breeding cycle or 1 buck for 20 does in a ten-week cycle.

Problems relating to breeding

False pregnancy (Pseudopregnancy) is a condition in which a female rabbit appears pregnant and experiences pregnancy characteristics but is not necessarily pregnant. The reason for this phenomenon may be triggered by breeding with a sterile male rabbit, or as a result of physical stimulation of another female rabbit (by a female rabbit climbing on other female rabbits), which causes a hormonal reaction which gives the impression that the climbed female is pregnant. The false pregnancy lasts about 17 days and no mating occurs during that time, it is a normal occurrence that has no negative consequences for the female rabbit.

After mating, the female rabbit is not pregnant. The problem emerges as a result of overweight rabbit males, which induces a lack of libido. Inadequate nutritional values for rabbits, as well as injuries to rabbits, are other causes that add to the breeding crisis.

6. HEALTH /DISEASES

They say that a good stockman will pick up any problem in his stock before any signs manifest themselves. This is true, but there is no magic involved. The whole secret is that the person is involved with his/her animals and is observant to their habits. If one feeds and water one's own rabbits, you will immediately notice if they are not eating or drinking properly. By observing the droppings, one will immediately notice any change (softness) in the droppings. Another give-away is that by observing the behavior of the rabbits, you will soon know how each rabbit behaves at different times. If you are observant you will soon pick up any strange behavior or listlessness in any rabbit. These are all tell-tale signs that the stockman will note, thereby impressing people with this magic he/she possess.

A happy contented rabbit living in hygienic conditions will normally not have many problems. But even in the best run rabbitries, the odd problem can and will occur. The idea of this chapter is not to make you a veterinarian but to give you an idea of some of the more common problems experienced as well as some cheap home remedies. This list is far from complete and further problems will require additional research.

When signs of poor health are identified during show, the cause, treatment and prevention should be addressed. Since the list is not comprehensive, you are urged to do your own studies to achieve a complete understanding of rabbit diseases.

Parasites

Parasites are a common concern in rabbits, and they are often not detected internally or externally. The symptoms of parasites differ, as do the causes. If the rabbit shows any symptoms, seek veterinary assistance.

Condition	Symptoms	Cause	Treatment	Prevention
Ear Cancer	<ul style="list-style-type: none"> - It begins at the base of the ear as a scab. - It grows faster, becomes larger, and can spread. - Scratching ears and shaking head 	An infection of the inner ear occurs and is caused by a mite.	The cheapest is to apply baby oil or sweet oil. It will need to be administered repeatedly, as the ear cancer returns easily.	Isolate infected rabbit. Clean ears regularly with cotton wool and oil.
Fur mites, fleas and lice	<ul style="list-style-type: none"> - Hair loss across the face, neck, and back. - On the body, bare spots will appear. 	Mites also known as: <i>Listropharcy gibus</i>	“Cat flea powder” can be applied. Repeat the application to fully monitor the mite's life cycle.	“Rodent” monitor, and clean bedding on a daily basis to ensure hygiene.
Coccidiosis	<ul style="list-style-type: none"> - Diarrhea. - Decreased appetite. - lethargic - Weight loss - Hypodipsia (lack of thirst) 	Caused by a single cell parasite or protozoa that infects the liver and intestines.	Anti-coccidiosis treatment such as toxoplasmosis can be administered. Sulfaquinoxaine can be given in water and food.	Keep cages clean. Highly contagious. Survival very little.

Overall condition

The list of symptoms, causes, and treatments should not be construed as a comprehensive approach to treating the various conditions. If the rabbit exhibits any symptoms, seek professional assistance.

Condition	Symptoms	Cause	Treatment	Prevention
<p>Sore Hocks</p> <p><i>(Since their hair is usually thinner, Rex are more likely to experience the condition.)</i></p>	<p>Inflammatory due to secondary infection at the bottom of the heels because there is hair loss under the legs. This causes the inflamed area to appear dry and red.</p>	<ul style="list-style-type: none"> - Thin hair covering the feet - Long toenails. - Surfaces that are dirty or rusted, such as broken wire surfaces. 	<p>By making and applying a Vaseline mixture or use healing oil.</p>	<p>By placing a solid area in the cage for the rabbit to sit on e.g. 'n mat or plank.</p>
<p>Pasteurella</p> <p><i>(Occurs in various forms but the most common form namely "Snuffles")</i></p> <p>It is highly contagious</p>	<p>Affects the respiratory tract (lungs). It occurs as a white mucus in the nose. The rabbit has a wet sneeze and rubs off the mucus with its forepaws, which then becomes matted.</p>	<p>It is produced by the <i>Pasteurella sp.</i> Organism causes. The spread is induced by stress.</p>	<p>Onderstepoort produced a vaccine that could be given every 6 months. The issue is that it forms a lump in the neck, and the judge note it.</p>	<p>Reduce the stress experienced by the rabbit. The most effective is to remove the sick rabbit. If eviction is not possible, the rabbit should be isolated. The disadvantage of isolation is that the rabbit will wane further and develop secondary infections such as abscesses before it dies.</p>
<p>Abscess</p>	<p>It occurs as lumps on the rabbit's body filled with puss.</p>	<p>The rabbit suffered injuries. Abscesses may be caused by a variety of secondary bacterial infections.</p>	<p>The abscess should be pushed open if it does not burst open, after which as much puss as possible should be squeezed out. Disinfect the wound and apply healing oil or a mixture of Vaseline and Flower of Sulfur to it.</p>	<p>Good sanitation. Keep nails short. Keep wounds clean.</p>

Condition	Symptoms	Cause	Treatment	Prevention
<p>Malocclusion</p> <p><i>(The teeth are detached. The Dutch dwarf is more prone to the condition, also known as "buck teeth")</i></p>	<p>The elongation of the teeth and can grow into the nose up to the mouth and form a complete circle.</p>	<p>Rabbits' teeth (as well as their nails) are continuously growing. The jaws are perfectly formed so that the teeth wear off while chewing. If the rabbit's jaws do not wear off properly, the teeth grow until the rabbit is unable to feed and dies. It is exacerbated by injuries but are more likely to be a breeding deficiency.</p>	<p>The teeth can be clipped so that the rabbit can eat. Or Wood can be given to chew on. Roots and leaves are important.</p>	<p>By applying selective breeding to eliminate defective genes. The condition only occurs in the third or fourth generation. As a result, a large percentage of the breeding animals will carry the defective genes.</p>
<p>Wry neck</p>	<p>The rabbit's neck is skewed to one side, resulting in the total loss of balance.</p>	<ul style="list-style-type: none"> - Inflammation of the inner ear caused by a bacterial infection. - Breeding deficiency. - Injuries. 	<p>Tetracycline ointment can be used as an ear drop on a regular basis. In the vast number of cases, there is no medicine available, and the animal must be evicted.</p>	<ul style="list-style-type: none"> - Keep the chances of getting a respiratory infection down to a bare minimum. - Look at breeding. - Do not let the rabbit stand in a draft.
<p>Wounds</p>			<p>Healing oil or Vaseline mixture</p>	

Condition	Symptoms	Cause	Treatment	Prevention
Bowel obstruction “fur blockage”	<ul style="list-style-type: none"> - Little or no appetite coupled with weight loss. - Droppings will have hair in it. 	Blockage of the intestinal tract caused by hair build-up in the digestive system, which impedes the normal movement of food into the digestive system.	Mineral oil can be applied on a small scale.	By providing roughage to the rabbit who is more likely to develop the condition, Angora’s, on a regular basis.
Diarrhoea (Tummy run)	Loose droppings and, in severe cases, a dirty anus.	Due to the rabbit’s diet, as well as various bacteria	<ul style="list-style-type: none"> - Remove all food. - Feed only dry grass or hay and give plenty of fresh water. - There is a solvent with a sulphur base that can be applied to drinking water 	Diet with a high fibre content can be given. Do not change the diet of the rabbit abruptly.
Myxomatoses (Virus)	<ul style="list-style-type: none"> - Swollen eyes. - Lethargy. - Swelling develops further over the body and can lead to skin bleeding. - Difficult breathing. - Decreased appetite. - Fever. - Leads to stiffness 1 to 2 weeks from infection 	Bite of mosquitoes and flies	Wipe eyes with clean water.	Keep cages clean. Remove old food that can attract flies.

Pregnancy-related conditions

Condition	Symptoms	Cause	Treatment	Prevention
Mastitis	Mammary glands that are warm swollen, and hard. Can result in a fever	Bacterial infection causes the condition and can occur before birth or after the infant is weaned.	Antibiotics should be administered, and the mammary gland should be milked.	Monitor the production of the mammary gland and milk the mammary gland if the amount of milk produced exceeds the amount consumed by the young.

In conclusion, this list is by no means comprehensive. There are still a number of other problems that you might encounter, whilst enjoying your hobby, but you will then have to do a bit more research on your own. Please note that I have given some tips to assist in handling problems. Therefore, if any problem persists or something strange happens, please call on your veterinarian. If he does not know he is more capable to find out what is wrong.

Finally, as said before, prevention is better than cure.

7. BREEDS AND BODY TYPES

For a number of years now, there has been a ban on the importation of rabbits. When people could import, they did not always receive top quality stock. Also, South Africans have a tendency to cross breed, especially when breeding commercially. As a result of this, there is limited stock available for showing. There are also difficulties to be watched for when breeding with certain breeds. I will try and give a short overview of most breeds available in the country, as well as mention some of the breeds available in Zimbabwe. Unfortunately, we can not import any of their rabbits, but if you are in Zimbabwe you could try and see some of their breeds.

The aim of the various breeds in the manual is to demonstrate and classify their characteristics, and no points will be deducted if the showman does not have a "pure" breed rabbit (most rabbits are crossbreeds of different breed rabbits). The rabbit show is about you as a showman, and not your breed of rabbit.

BODY TYPES

Another way to categorize rabbits is by body shape. There are mainly five body types.



"Semi-arch"

The "arch" or curve is distinctive, starting at the back of the shoulders and extends to the tail.

This includes the English, Lops, and Chinchilla Gigantea rabbit breeds.

Cylindrical

The body form is long and cylindrical in shape.

This include the Himalayan rabbit.





Compact

Most of the rabbits are small and light.

Includes English Angora, Havana, Jersey Woolly, Dutch Dwarf and the Dutch Rabbit.



“Full Arch”

This physique is characterized by a more upright posture. The arch bends from the shoulders to the hips and tail.

This includes the Belgian Rabbit, Black and Tan rabbits.



Commercial

This physique is more based on the ideal meat producing breeds. These types of rabbits are larger with a smooth bend "arch" from the back to the hind legs.

This includes French Angora, Cinnamon, California Harlequin, New Zealand, Rex, Satin

BREEDS

FANCY BREEDS

Angora

Three types of Angora were imported into this country. Each is different and has its own characteristics. Unfortunately they have also been crossed and one must be very careful with them.

English

A small rabbit of approximately 2,7 kg, round in shape, like a snowball. The English Angora has a very fine (soft) hair. The hair shaft (some people incorrectly call it wool) is very thin if measured individually and is used to knit garments (jerseys, etc). It is often mixed with other fibres such as wool when spun to give it additional strength. The English Angora is seldom seen on shows today as it does not produce as much "wool" as the other two types. Sometimes coloured Angoras are shown as English Angoras, but these are usually either crossed breeds or coloured German Angoras.

German

A large rabbit of up to 5 kg with a thicker hair than the English. The German Angora also has a large number of guard hairs (very coarse, long and straight hairs) interspersed. The combination of these hairs enabled the "wool" to be spun on its own. This "wool" is used overseas for thermal underwear. When shown, these animals are required to have good furnishings (that have fairly large amounts of longish hair) on ears and feet.

French

These rabbits were imported in the 1980's during the "angora wool boom". Their hair was supposed to be between the other two breeds, making them ideal for knitting garments. However, the animals imported did not conform to any show standard.

Unfortunately it is very difficult to find "pure" Angoras of a breed today. There are a number of people still looking after the odd Angora, and there is an "Angora farm" in Oudshoorn, but only one regular showman in KwaZulu-Natal. An Angora must be plucked or clipped regularly (it is kept for its hair) otherwise it will become an unruly mat and could die. On a show one is looking for hair length of almost 100 mm. Therefore, trimming and grooming is very important.

Belgian Hare

Although this is a rabbit, it looks like a hare and hence its name. It is a large animal of 4kg, but because of its shape requires a cage larger than any other rabbit of a similar weight. It also has a slightly shorter fur than most other rabbits and it is therefore advisable to keep them on solid floors. The hare requires a lot of training to sit properly on the show bench. There is only one breeder showing "hares" in KwaZulu-Natal.

Black and Tan

A beautiful little rabbit of 2,2 kg, which unfortunately was crossed with the Fox, causing it to become too large and to lose a lot of its tan colouring. A few dedicated breeders in Gauteng have persevered and are now showing the odd animal

Dutch

A very popular breed, often incorrectly sold in pet shops as “dwarfs”. A small rabbit, 2 kg with distinctive markings, roughly front half white, and back half and head coloured. This rabbit receives most of its points on a show bench for its markings. It is very difficult to breed a perfect Dutch but they have done very well on shows. Dutch are bred in the following colours: black, chocolate, blue, yellow, tortoiseshell, steel-grey and brown-grey.

Tri-coloured Dutch

A slightly larger rabbit than the normal Dutch. Bred by crossing the Dutch with a Harlequin. Only Heather Heron in KwaZulu-Natal would have the patience to tackle a project like this, considering the stock available.

English

Called the English Spot or English Butterfly because of its distinctive markings. This is a white rabbit with a coloured butterfly on its smut, a herringbone mark down its spine and a large number of spots at specific places on its fur. It is claimed that you can only paint a perfect English, but can never breed one. There are, however, a few people who will always look for a challenge and breed the English. This is another breed which receives most of its points for its markings. The English are also very popular with the public at shows although they are slightly larger, being between 2,6 kg and 3,6 kg in weight. The English can be shown in five colours, namely black chocolate, blue, tortoiseshell and grey.

Flemish Giant

This very large rabbit is often incorrectly thought of as an ideal commercial rabbit. The Flemish is a fancy rabbit and is shown in this class. The British Rabbit Council (BRC) only recognizes one colour, steel, whereas the European Standard recognizes a number of colours. The European Standard, however, calls for a larger rabbit than the BRC. As the breeders are presently battling to achieve weights, this is a major problem.

Harlequin / Magpie

The marking on these two rabbits are supposed to be identical, only their colours differ. The Harlequin being black and yellow, whereas the Magpie is black and white. The standard calls for the head to be half white / yellow and half coloured with the ears being the opposite colour to the head. The body is banded, with the feet being opposite colours. There is only one person showing these breeds in KwaZulu-Natal. The British Standard allows for brown, blue and lilac as well as the black.

Himalayan

A small snaky rabbit of 2,2 kg. The Himalayan is a white rabbit with pitch black on its nose, ears, feet and tail. A very good show rabbit when in condition, but requires perfect timing. Young rabbits normally show bridling (brownish hairs) on the feet or the smut (nose marking), is not fully developed, whereas older rabbits develop eye stain (eyebrows). Normally only a few exhibits are seen on the shows.

Netherlands Dwarf

Everybody's favourite and a fancier's nightmare. This small rabbit (1.12 kg maximum) does not breed like other rabbits. Pure-bred Dwarf litters are seldom as large as three, therefore demand exceeds supply. As a result people are often misled into buying "dwarfs" which are in reality crossbreeds or just baby rabbits. The most distinctive features of the Dwarf, apart from its size, are its short ears and flat looking face. The Dwarf is shown in red eyed white (rew), blue eyed (bew) or coloured. They come in almost any conceivable colour or pattern. People, however, tend to cross the "rew" and "bew" which gives a mismarked "dutch" pattern which requires a lot of perseverance to achieve show quality animals. This breed is achieving great success at Gauteng shows and is very popular with showmen but breeding is a problem.

Lops

The English Lop, with its very large ears, would be a very popular rabbit if it was available in this country. I have only seen one and this was apparently then crossed with a French Lop. A breeder managed to get of the offspring but could not get to either of the standards. Most Lops seen in this country are due to the rabbits having weak ear carriage and therefore not having the muscles to hold the ear/s upright. There seems to be the odd English Lop as well as Dwarf Lops in Zimbabwe.

Jersey Wooly

The breed was obtained by crossing French Angora and Dutch Dwarf. The Jersey Wooly has a compact physique and weighs between 0.45 kg and 1.36 kg, which is why they are classified as a dwarf variation. Their ears are small, measuring between 5 cm and 7.6 cm long. The American standard recognizes six distinct fur color types, of which the most common fur color is white-black and pointed white-blue variation.

NORMAL FUR BREEDS

Beige

A beautiful, smallish rabbit with a wonderful colour. This rabbit has a sandy under colour with a bluish tinge over the top. When a good one arrives on the show bench it normally goes far. I can only think that the Beige's size and slight variations in colouring has prevented these rabbits from being seen outside KwaZulu-Natal. In Britain they have been almost overwhelmed with a very dark tinge, this has led to the Isabella standard being accepted.

Californian

One of the two most popular commercial breeds in the country. The Californian was developed in America as a meat rabbit with a usable pelt. This white rabbit with coloured markings on its nose, ears, feet and tail should weigh between 3,4 kg and 4,5 kg. Dedicated breeding has got

the animals on the show bench back to size. Problems are still being experienced with the coats as well as the depth of the colour on the extremities. The Californian is judged according to the American standard, with one exception: chocolate markings are allowed in Southern Africa (as per British Standard).

Chinchilla Giganta

A very large rabbit with a wavy blue and white patterned coat. The coat colouring is due to the distinctive colouring of the hair, slate blue, then a band of white, followed by another band of blue, interspersed with black guard hairs. As this is a rather long rabbit, it does not dress out very well when slaughtered, but has been used in commercial rabbitries. This is another breed where difficulty is being experienced to achieve adult weight on a regular basis.

Cinnamon

Another American meat breed imported into this country to cater for the blacks who did not like a white rabbit with red eyes. This large breed is brown in colour with darker extremities (nose, ears, feet and tail) and a, black (smoke grey) tinge over the coal. Unfortunately it was not successful as a meat rabbit and is now only seen on the odd show. The Cinnamon comes in different shades and apparently only the dark shade is breeding in Zimbabwe. This is not a problem in South Africa. The problem, like all large breeds, is to consistently achieve adult weight.

Deilenaar

One of the newer entrants to the local show scene, this rabbit was developed by a breeder trying to improve the tan in the black and tan by crossing it with a red rabbit. The animals arriving on the show bench are showing improvement. However, problems are being experienced with adults exceeding the 3,5 kg maximum weight. The other problem is that there is still too much variation in both the red and black shadings of the rabbits, even in a litter. This rabbit is mainly seen in Gauteng.

Fox

In my opinion one of the most beautiful rabbits around (especially the black or "silver" fox), unfortunately previously not viewed in the same light by the general public. This medium sized, coloured, rabbit has a white belly and white markings on its jawline, nostrils, inside its ears as well as white tickings on its flans and rump. At one stage it was not often seen but due to some dedicated breeders, it is now back with a vengeance. Mostly seen in black, the odd chocolate is shown, with blues being few and far between. The standard allows for lilacs as well, but I have not seen one for a number of years.

New Zealand

The New Zealand White (NZW) is the most popular commercial rabbit. As a result it is the one breed that has been crossbred the most. The American Standard, to which it is judged calls for a rabbit in excess of 4,2 kg. A large number of the exhibits seen are either underweight or have the wrong coat (fur). Most exhibits on the shows are either young or intermediate (between 6 and 8 months old) animals. In KwaZulu-Natal some New Zealand Reds are to be seen, but it would appear that they have the same problems as their white counterparts. The black coated variety seems to have died out, whereas I have never seen a blue in this country.

Sable

Two types, Martin and Siames, that are not often seen on shows due to their habit of being in continuous moult. This is a smallish / medium sized rabbit seen in different shades of "brown".

Smoke Pearl

A rabbit identical to the Sable, but with a blue (grey) colour.

South African Red

Due to the cross breeding of the different "red rabbits" imported into this country, a standard was drawn up to accommodate the offspring of these animals. At one stage there was only a single breeder in Gauteng breeding this breed but due to its meat producing abilities, this breed is now becoming more popular.

Havana

Due to its short, rounded stature and weight of no more than 2.95 kg, the Havana rabbit is known as a compact breed. The Havana's fur is short and soft, with four major colors classified by American standards. The colors include chocolate, blue, black and broken (this refers to a mixture of different colors).

Other Varieties

At odd times other varieties do appear on the show bench. Recently *Perffee* and *Lynx* have been shown in KwaZulu-Natal whereas Chinchillas and Havannas have been seen in Gauteng. It is therefore incorrect to say that other breeds do not exist in this country. However, one should always check to ensure that there is a standard for the "new breed" one has discovered before purchasing such breeds.

SPECIAL FUR BREEDS

Rex

A medium sized rabbit with a short coat (fur) of approximately 12 mm in length. The standard calls for a very dense coat, resulting in a beautiful velvet appearance especially in a good black specimen. Due to its short coat the Rex requires special attention and it is advised to keep Rexes on solid floors. Rexes come in a large variety of colours and patterns with dwarf Rexes now being very popular in Britain. The special attention Rexes require as well as the narrow heads (snippy faces) and lack of density in some specimens prevent more of these animals being seen on shows.

Satins

These rabbits have the most beautiful sheen (satinisation) on their coats, thence their name. Most Satins shown in South Africa are of the British type, which is small and cobby (round) in shape. In Zimbabwe the American Satin is seen more often. This is a larger, meat type animal. KwaZulu-Natal normally only shows the Ivory (white) Satin, which does very well on the shows. In Gauteng one will often see coloured varieties that normally lack density. Britain regards the Satin as a normal fur today, whereas Natal has a separate section for Satins. It is therefore imperative to ensure your animal is entered in the right section when showing.

8. SHOW PREPARATION

A lot will depend on which breed you choose as to what show preparation is required. Certain breeds such as the Belgian Hare and Polish (only seen once) require to be taught to pose on the show bench from an early age. Some breeders claim that the Dwarf must be taught from a young age to sit on a small block of wood so as to enhance its cobby shape. The Angora, especially the English variety, requires constant grooming to prevent matting, without over grooming and thinning of the coat.

There are, however, certain rules that apply to all breeds when showing them. You could get away without applying some of the rules sometimes, but a well-prepared animal will normally get the top honours. One should always ensure that the animal conforms to the standard of the breed, or as close to the standard as possible. Check for any disqualifications. These include bent bones or deformities, buck teeth, runny eyes, ill health, white toe nails in coloured rabbits and under or over weight in some breeds. Any rabbit being entered on a show should be handled regularly. It should be removed from its hutch, placed on a "table" where it is taught to sit as quietly as possible, even when placed next to other rabbits. The rabbit must then be handled the same as when it is going to be judged.

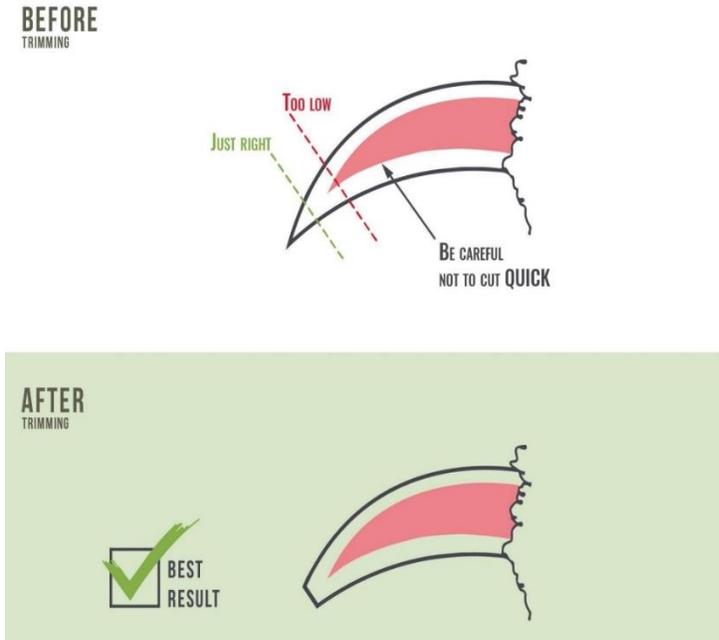
The rabbit must be clean, no hutch stains. Therefore, the hutch must be kept clean. Any hutch or other stains should be removed / cleaned before the show. Sometimes, if time allows, the rabbit will clean itself if the stained area is wet. In emergency cases one can use a potato or lemon to clean the animal. The rabbit's toe nails should be cut about two weeks before the show, toe nails should be clipped regularly anyway. When cutting the toe nails be careful of the blood vessels in the nails. These are easily seen in white nails but are more difficult in the darker nails.

One should try and avoid moult in the rabbit. This is normally done by brushing the loose hairs out of the coat for a period prior to the show. Whilst the rabbit is sitting on the table, rub your hands through the fur. This brings out the loose fur. If you wet your hands or use a damp cloth or chamois to brush the rabbit you normally find the process is quicker. Some fanciers try feeding vitamins or other feeds to prevent or accelerate moult. A sudden change in weather conditions could bring on moult. The rabbit should be transported to the show in a travelling box. The box should be such that the rabbit will not wet itself if it urinates in the box. It is advisable not to place a white rabbit on newsprint as the ink could stain the fur. One should also ensure that the rabbit has fresh air and if possible avoid overheating as a rabbit perspires easily.

A number of fanciers believe in rubbing potato starch or corn flour into the rabbit's coat the evening prior to the show, to remove any dust or slight stains. One must, however, either ensure that you do not put in too much or otherwise remove any excess powder the morning before judging, as the coat could look dull and lifeless.

Regular brushing of the coat with a chamois or clean sheep's wool can also improve the sheen on the coat. Some breeders believe in feeding the odd sunflower seed or peanuts to their show animals. Preparation does not take that much time, but gives your animal a far better chance on the show bench to do its best for you.

Cutting of nails



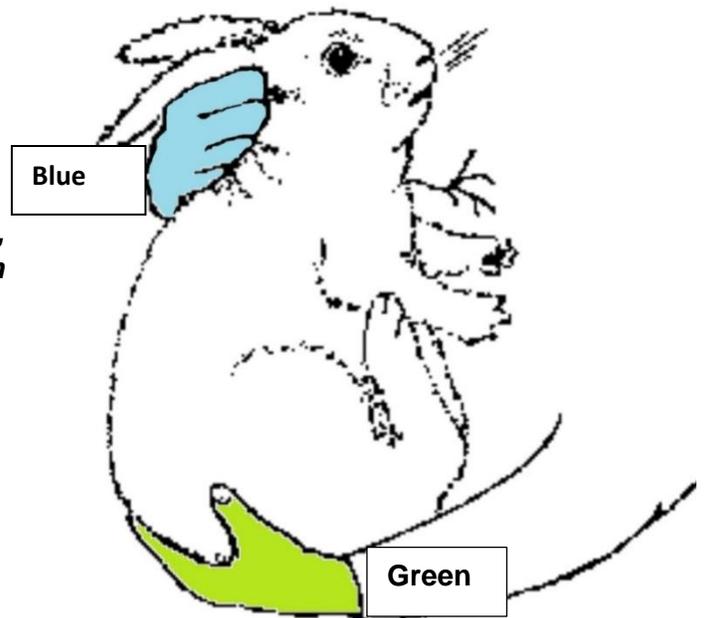
A rabbit's nails grow at a fast rate and can become overly long. A rabbit's nails must be trimmed two weeks before the show. Any type of nail clippers including dog clippers, may be used to cut the nails. When cutting, bear in mind that the blood artery should not be cut, but rather cut in front of the blood artery (as shown in the figure). A light source would be needed to determine the location of the blood artery in rabbits with dark nails. If bleeding happens, maizena may be used to regulate blood flow, maizena acts as a coagulation factor.

The turning of a rabbit

The turning a rabbit is important in showmanship, cleaning, and preparation. As a result, mastering the procedure is important. It would also be useful when clipping the nails.

Steps:

To properly understand and follow the concept, the measures will make use of a blue and green hand. The blue hand will be on the left and the green hand will be on the right with someone who is dominant on the right. It would be the other way around with someone who is dominant on the left.



- I. Place the rabbit on a table in a sitting position, with the rabbit's back to you and the rabbit's front to the judges (The sitting position called cobby).
- II. To help manage the rabbit, wrap one hand around the bottom of the ears and firmly tighten the hold on the "loose skin" on the back of the rabbits back (as shown in the figure where the "blue" hand occurs)
- III. Place the other hand on the rabbit's bottom to support its whole weight (as seen in the figure as the "green" hand)
- IV. Raise the rabbit gently with the "green" hand and the "blue" hand to lift the front. Turn the "green" hand to the left (to flip the rabbit upside down) or vice versa (left dominant) while your other hand (blue hand) supports the rabbit's neck and head.
- V. The rabbit should be laying down. The rabbit can then be slowly lowered until it is flat on its back on the surface.
- VI. If the rabbit is lying on its back, you must keep a hold on the shoulders and ears (the blue hand must stay in place), while the "green" hand is free to have access to all the necessary equipment.

In the case, the following items are required.

Items	Function
Mat	To place the rabbit on during the show.
Shammy	The collect the final loose fur from the rabbit.
Baby-oil	During the cleaning stage, apply to the ears.
Maizena / Baby powder	To make recently washed cage stains disappear. For the rabbit's white bits.
Sheep's wool	Only suitable for dark or black rabbits.
Nail clippers	To cut the nails two weeks before the show
Lemon	Remove cage stains from legs.
Cotton Wool	Used during the cleaning process.

- ❖ **A water and food bowl for the rabbit must always be placed during the show.**

9. GUIDELINES FOR PREPARING RABBITS FOR SHOW

1. Preparation at home

- 1.1 Trim the toenails two weeks before the show, so that the bunny can be shown during the show, and potentially avoiding sore hocks.
- 1.2 Brush the rabbit on a regular basis if the rabbit molts, particularly with the change of season. The rabbit must be brushed with a soft brush, such as a baby brush or a soft comb.
- 1.3 The rabbit must be fed a well-balanced diet in order to maintain a stable microbial balance in the gut.

2. Preparation at the show

Since rabbit's experience stress during travel, or because the rabbit has been sitting in urine or droppings all night, the legs, tail, and hair are cleaned on Friday night or Saturday morning. Points are given for the showman's neatness, which is critical over the course of the show.

10. GUIDELINES WHILE CLEANING YOUR RABBIT

The participant must pack the cleaning supplies from the drum and then discuss the function of each item. Begin cleaning and preparation in the order that is most convenient for you as a participant.

1. Examine the fur for abscesses and with damp fingertips by working the fur.
2. The rabbit will then be dried and baby powder / maizena will be added to only the white parts. Sheep wool would be used if the rabbit is black. To clear the remaining loose hair, use a shammy or a soft baby brush.
3. Ears are examined for ear cancer and cleaned with a damp cotton ball.
4. Thereafter, baby oil on a cotton ball will be used to wipe the ears (use a clean cotton ball for each ear when applying baby oil as well as the damp cotton wool). The nose is examined for snuffles and cleaned with a damp cotton ball.
5. The forepaws are examined for pupae. Then the lemon is used to clean the forepaws.
6. The abdomen is checked under the tail. Using a wet cotton ball, clean under the tail.
7. Turn the rabbit over and examine the rabbit's belly to see if it's pregnant. The underside would then be cleaned by moistening the fingertips and moving through the stomach hair. After that, the rabbit will be dried, and baby powder will be added if white pieces are present on the stomach fur. If the rabbit has gray or black streaks, sheep wool is then used.
8. Inspect the back heels for sore heels. Lemon can be used to clean the hind legs. Apply baby powder to the reduce the cage stains (to make them less visible).

11. GUIDELINES FOR SHOWING

Judging

The contestant must handle the rabbit to ensure that the rabbit is displayed in good condition on the show bench.

Judging of showman

The participant must present the rabbit, and he or she will demonstrate the breed as specified in the manual during showmanship. It is not a disqualification if the breed is not "sincere." The rabbit should then be referred to as a pet rabbit, and therefore the characteristics that distinguish it from other breeds can be named.

General

- The participant must allow the rabbit to sit still for a few seconds, as this contributes to handling points.
- The participant must describe the rabbit's type of breed and the related characteristics of that breed.
- The participant should examine the rabbit from its head to the back of the tail by looking at diseases. It is wise to have a sequence (for example, to start at the nose and examine for Pasteurella, then name the symptoms and possible treatment for Pasteurella. And followed by the forepaws until the whole rabbit has been examined).
- The participant must point out possible disqualifications.
- The judge will ask the showman questions during the judging to test the participant's knowledge.

Sicknesses

The participant must name the diseases, as well as possible treatment, e.g. Ear cancer is caused by mites in the ear that result in a rough appearance. The possible treatment is baby oil for the scabies. And finally, points are given to the neatness of the showman.

12. COMPLETE SEQUENCE TO THE SHOW PROCESS

1. Comments on rabbit
 - Type of breed
 - Traits / characteristics of breed
2. Comments on fur
 - Color
 - Density
 - Texture
 - Hair and equality
 - Condition
 - Stains
3. Comments on:
 - Head and ears
 - Eyes
 - Neck
4. Comments on:
 - Toenails
 - Foot
5. Comments on:
 - Legs
6. Determine gender
7. Examine the rabbit for diseases and defects.
 - 7.1 Infectious diseases
 - Pasteurella
 - 7.2 Non-communicable diseases
 - Malocclusion of teeth
 - Abscess
 - Diarrhea
8. Examination of genitals
9. Comments on tail