

Backyard Rabbits

TEXAS A&M
AGRILIFE
 EXTENSION

PRAIRIE VIEW A&M UNIVERSITY
 Cooperative Extension Program



PURPOSE OF THIS PRESENTATION IS:



- ◉ To present the concept of “Backyard Basics”
- ◉ To create an awareness of the possibility of raising backyard rabbits for:
 - ◉ Meat
 - ◉ Breeding & Sales
 - ◉ Educational projects for kids
 - ◉ Extra income for kids & you
 - ◉ Adding a little “country” to backyard



BENEFITS OF RABBITS

1. Capital requirement is minimal. With some scrap wood or bamboo, net wire - a hutch can be constructed.
2. Spacing is minimal. It can be set up in backyard.
3. A rabbit is a convenient 'one meal size', thus avoiding the need for storage.



BENEFITS OF RABBITS

4. Rabbit keeping is not restricted by any taboos or particular beliefs that prevent the eating of rabbit meat or its promotion as food.
5. Feeding rabbits is very cheap. Grain is sometimes necessary and definitely will increase growth rate, but grass, kitchen peels, garden leaves, etc. can provide the main feed at almost no cost.



BENEFITS OF RABBITS

6. Rabbits can be tended by women, children or men - unlike bigger animals for it needs no force to be restrained.
7. Because they produce offspring regularly (gestation period of 28 – 32 days), they form a regular source of income instead of a large amount at once.



BENEFITS OF RABBITS

8. A rabbit is a prolific animal. It matures for table between 5 to 6 months, and will breed in 5 to 7
9. Meat from rabbit is an all white meat product that is high in protein and low in fat, sodium and cholesterol. Rabbit meat has been recommended for years by some physicians to their patients with coronary heart conditions.



BENEFITS OF RABBITS

10. It is not a smelly or noisy animal and can easily be kept near to school buildings or people's houses
11. It produces rich manure for gardening or flower beds. Will not burn plants as does chicken manure
12. Rabbits are easily transported and actually enjoy an outing from time to time



BREEDS OF RABBIT

- Do your homework
- Determine why rabbits
 - Breeding & sales
 - Meat for the family
 - Meat for sale
 - Sell as pets to:
 - Families
 - Pet stores
 - Research facilities
- What breeds are best for you



BREEDS OF RABBIT

- **Dutch:** The Dutch is a small breed with a mature live weight of 2.5-3.5kg. It has a wide white band of fur around its body at the shoulders as well as a white stripe down the middle of its face.
- **New Zealand White:** This breed is used most widely throughout the world for meat production. It is all white in colour and usually weighs 3-5 kg when mature.
- **New Zealand Red:** This is essentially red but has not been intensively selected for growth rate. Mature live weight is 3-4.5kg.



BREEDS OF RABBIT

- **Chinchilla:** This breed is blue-grey in colour with a white belly. There is a thick fold of skin around the front of the chest which is very obvious when the rabbit is in good condition and sitting in a resting position. The weight range for the mature Chinchilla is 3-4.5kg
- **Californian:** This is the second most popular breed for meat production. The colour is all white but with black tipping on the nose, ears, feet and tail. The weight range for the mature Californian is 3-4.5 kg.



EXOTIC BREEDS OF RABBIT

- **Angora:**



- **The Lops:**



- **The Spots:**



Fun Breeds



Flemish Giant



Angora



Furless - for hot weather



Lion Head

HOUSING & EQUIPMENT

HOUSING & EQUIPMENT

- Rabbit housing and equipment differ from climate to climate.
- Factors that affect their design include;
 - Climate
 - Raw materials (Availability and cost)
 - Scale (large or medium) and system of production (Intensive, Extensive or semi-intensive)
 - Expertise in rabbit production



HOUSING & EQUIPMENT

Housing requirement

- **Adequate space** - Since rabbit spends its entire life in its hutch:
 - Sufficient space is needed to avoid the stress caused by restriction of movement.
 - Space should be able to provide good ventilation to prevent the animal from being choked up by ammonia (NH_3) from their urine.

Protection:

- To prevent against injury within the hutch,
- Protection from rain, direct sunlight, direct and indirect wind
- Protections from predators such as dogs, cats, rats, ants, man, etc.



PREDATOR-PROOFING HUTCHES

1. Use small gauged wire no bigger than ½ inch that wildlife can not fit their hands into.
 - a) Make sure wire is securely attached to the structure of the enclosure with no edges or lips that little fingers can get into.
 - b) Rabbits must be put in a secure den at night for added safety. Predators mostly come out at night.
2. Build an enclosure around the rabbit hutch.
 - a) This is a good technique if you have more than one rabbit hutch.
 - b) You can then have the rabbit hutches built anyway you want as long as the perimeter enclosure has a roof and if rabbits are allowed out into the large enclosure during the day.



Examples...



TYPES OF CAGES & HUTCHES

Indoor hutches: These are kept inside a house, barn or stable. The stable is a place in which or under which the hutches are placed.

Advantages:

- It provides good conditions for the rabbit and the rabbit keeper
- Easy access to animal
- Provides maximum protection
- The individual hutch can be easily cleaned and disinfected
- It allows ease increase in production

Disadvantage:

- Most are purchased and can be very expensive



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TYPES OF CAGES & HUTCHES

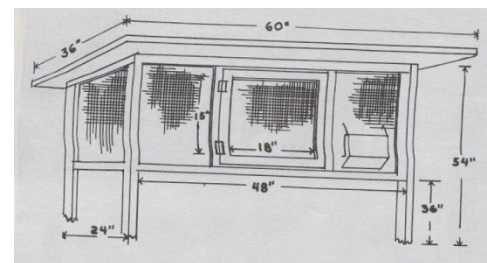
Outdoor hutches:

The requirements of space, protection and ease of management can be achieved through appropriate design, construction and placement.

Design: A typical rabbit hutch dimensions are follows;

- 3-4 feet above the ground
- Height of hutch: 24" at the front, 20" at the back for easy drainage
- Width: 20-24 inches
- Length: 36-48 inches

Construction: The materials used in construction would usually be locally available materials.

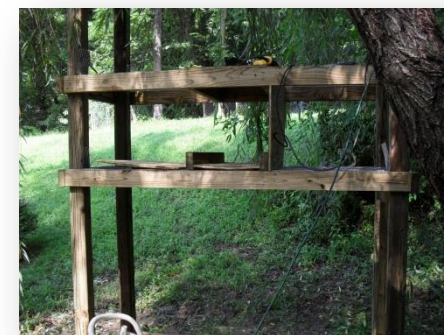


TYPES OF CAGES & HUTCHES

Outdoor hutches:

Placement of the Hutch

- Placed near a house wall / fence to provide shade and protection from the elements.
 - Too much sunlight may be stressful & cause over-heating
 - Too little is also undesirable because the hutch may become damp, there will also be reduced disinfection by the sun's ultraviolet rays, and Vitamin D synthesis by the rabbit may be impaired if it does not experience some direct sunlight.
- It is important to site hutches under trees in a very hot environment
- The site must ensure security against predation. This is achieved when hutches are kept near keeper's house.



TYPES OF CAGES & HUTCHES

Outdoor hutches:

Advantages:

- Requires low capital
- Materials are always available
- Appropriate when starting production

Disadvantages:

- No perfect protection against predator
- Not easy to increase the number of hutches quickly (it limits production)

▪ **Other Considerations:**

- **Floor Method:** This involves keeping the rabbits on the ground in a fenced area provided with simple boxes for shelter.
- **Fence:** A fence should be built around outdoor hutches and fitted with a padlock gate.

HOUSING EQUIPMENT

Required Equipment:

- ❑ Water trough
- ❑ Feeding trough
- ❑ Kindling (nest) box
- ❑ Forage / Roughage rack

Water/Feeding Trough

The materials for water/feeding trough should provide the following;

- it should be impossible to tip over
- Deep enough to discourage scratching out of contents
- It must not cause injury to the rabbit
- It should not be expensive to prevent increase in cost of production



HOUSING EQUIPMENT

Roughage / Forage rack

can be fitted inside or outside of the hutch

- It must not limit feed intake
- It must contain fresh succulent forage

Nest boxes

- This can be open or closed. An open top 12" x 18" x 10" plywood box works well. This comes in when the animal is about to kindle.
- It should not be placed until the animal is about to kindle
- It should be draught free/proof
- It should prevent the young rabbits leaving until they are at least 2-3 weeks old.



MAINTENANCE OF EQUIPMENT

1. Water and feeding trough must be washed regularly (daily)
2. Use clean rag (cloth to dry the feeder)
3. Disinfection of the water and feeding trough at least once in a week with EDTA or Izal to remove feed adhered to feeder and prevent disease outbreak.
4. Roughage rack and cage must be cleaned once in a week and disinfect when young ones are not there.
5. Checking for the development of sharp edges in hutches and on equipment which may cause injury.
6. Nest box must be removed after weaning (5-6 weeks), wash and disinfect in preparation for next breeding season.



NUTRITION



Protein level

- The protein level of the feed is very important. For efficient rabbit feeding, you need four diets. Since most rabbit producers cannot (or do not want to) handle more than one feed, a 16-17% protein feed may be substituted.
- Protein Requirements of Rabbits
 - Newly weaned rabbits - >18% CP*
 - 12-24 weeks old - 16-18% CP
 - Breeder - 15-17% CP
 - Other stocks (Normal growth) 12-14% CP

* = crude protein



NUTRITION

Carbohydrates and Fats

- Carbohydrate and fats provide energy.
 - Rabbit needs energy for contraction of muscles which enable the rabbit to move.
 - And, to make products such as hair and milk.

Note: Rabbits adjust their food intake to try and satisfy their energy requirements.



NUTRITION



Minerals

- Most of the minerals in the rabbit's body are in the bones and teeth which contain large amounts of the two minerals;
 - Calcium (Ca) and Phosphorus (P).
- Minerals also help maintain the acid-alkaline balance in the blood.
 - Ca, P and Vitamin D are often considered together because they interact with each other.
 - Other minerals are Mg, Na, K and Cl (major minerals). Examples of trace minerals are Fe, Cu, S, Co, Zn, etc.

Vitamins

- Vitamins are chemical that are require in very small amount to speed up chemical reactions within the rabbit body.
 - The most vitamins are A, D and the B vitamins - Choline and Thiamin

COPROPHAGY & CECOTROPE

Coprophagy is the eating of soft fecal-like pellets (Cecotropes) produced in the cecum. To do this, the rabbit sucks in the soft feces as they emerge from the anus, then swallow without chewing to acquire additional nutrients and protein normally lost in the production of hard pellets.

- Consumption of the soft feces starts at 4 weeks of age.
- Soft feces are higher in crude protein and lower in crude fiber than hard feces. Their higher protein level is due to their content of bacteria.
- The production of Cecotropes is a very important part of the rabbit's digestive processes. It recycles some unabsorbed nutrients as well as returning protein and vitamin B rich bacteria for enzyme digestion in the small intestine.
- A rabbit can survive without practicing Coprophagy for many days, but death is usual if they are prevented from eating their soft feces for several months.



FEEDING SYSTEM

Extensive system: total dependence on forages and kitchen wastes – the Natural System!

Advantages

- Cheap
- Easy to provide the quantity of food required

Disadvantages

- Forage availability varies with season
- The quality of the forage reduces during dry season
- It is labour intensive
- It can introduce diseases and health problems



FEEDING SYSTEM

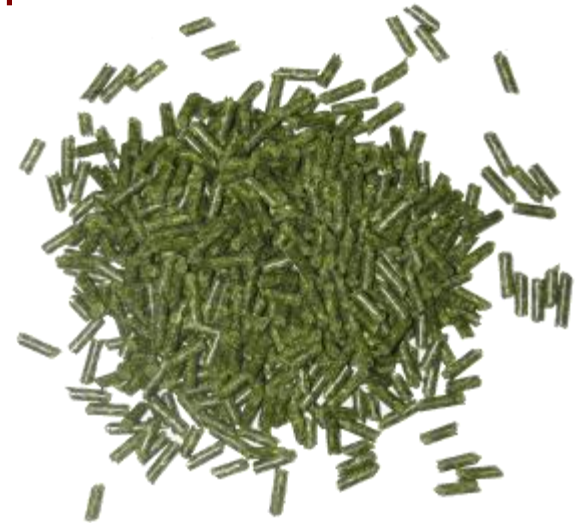
Intensive system; Total dependence on prepared concentrate foods from the feedmill.

Advantages

- High levels of production
- Little risk of disease introduction

Disadvantages

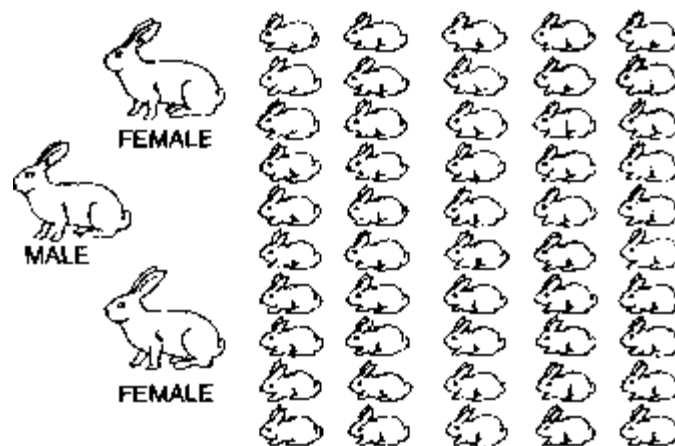
- Very costly
- Depends on the feed miller (in terms of availability and quality)



Semi-intensive system: The use of forages supplemented with prepared concentrate foods. It falls between the extensive and intensive system in terms of advantage and disadvantages. It is also the system that is most suitable for the small-scale producer.

SEXING OF RABBIT

- **Determining the sex of rabbits is not difficult with a little practice**
- **It can be carried out shortly after weaning at six to eight weeks. This is the time when the males and females should be separated**



One year's worth of rabbits.

REPRODUCTION

The male

- The proper age for the first mating depends on the breed and individual development. For small breeds it is 4-5 months, for large breeds 9-12 months.
- One male can easily handle up to 8 - 10 does. It is good practice to keep the male hutch at some distance from the females so they will not get accustomed to each other's smell.

The female

- The does require more care and attention. Like the males, the proper age of first mating depends on the breed and individual development.
- Mate does when they reach maturity (4-5 months for the lighter breed, 7-9 months for the heavy breeds).

BUYING BREEDER STOCK

Once buildings are built or renovated and equipment purchased, you should purchase a good breeding stock – for good offspring and profits.

The price a breeder asks for stock may not reflect the quality of the rabbits. Only time, records, and results can prove the worth of breeding stock and the reputation of the breeder.

Look at the records of the breeder's rabbitry to see the quality of the stock. Here are a few things you should look for:

- Good health
- Average litter size (8 or more)
- Death rate (not over 5%)
- Percent conception (90% or better)
- Dressing percentage (55-60% including heart, liver and kidneys)
- Select rabbit based on the feeding style/system.

All of this information may not be available, but most of it should be. It pays to deal with a breeder who keeps good, accurate, reliable records.

MATING

Experience suggests that early morning or evening mating is best. It is certainly advisable to avoid the hottest periods of the day for this important operation.

Procedures:

- For mating, always take the doe to the buck's cage. If they fail to mate a few minutes, take her to a different buck.
- If this fails, try again the next day but do not leave the doe with the buck all day or even an hour in an attempt to solve a mating problem.
- If the doe is ready to be mated she will stand still within a few seconds, stretch out and slightly raise her hindquarter so as to allow the buck to mount and mate.
- Successful mating is signaled by the buck thrusting forward and literally falling off the doe. Often the buck makes a characteristic cry of pain or joy. If the buck slides backwards off the doe and does not fall the mating has not taken place.
- If mating was successful put the doe back in her hutch.



PREGNANCY TEST

Palpating

- Palpating is a method used for determining doe pregnancy at 14 days after mating. Non-pregnant does are re-bred immediately.

Late pregnancy test

- Inexperience keepers should practice detecting pregnancy on does that are 20 days pregnant at which stage the fetuses are easy to identify. By around 28 days the mammary gland will have developed significantly and this can be regarded as final confirmation of pregnancy. At around 29 days, the doe will begin to remove fur from her abdomen to make a nest.

Pseudo-Pregnancy Test

- False pregnancy occurs as a result of sterile mating or more commonly from stimulation of one doe riding another. It happens more frequently with does that have not kindled their first litter. Always separate does at least a month prior to breeding.
- Does must be separated at least 18-20 days before mating. The doe may pull fur and attempt to make a nest but she will not keep it clean.

CANNIBALISM & ABORTION

Cannibalism and abortion are common problems. The causes are many and mostly undependable. These are some of the causes:

1. First-litter does are extremely nervous. Give them one more chance and then cull if cannibalism recurs.
2. Unbalanced diet
3. Lack of water
4. Predators can cause the doe to stamp her feet and mash the young
5. Unusual noise can cause the doe to injure the young and can result in cannibalism.
6. Moving nest box after young are kindled.
7. Shallow nest box makes the does feel insecure and she is easily disturbed.

KINDLING & MOTHERING

- **Kindling = giving birth**
- When the doe is almost ready for kindling (about 4 weeks after mating) you can put a nest box in the cage (hutch).
- Kindling can take place in this nest box at any time of the day, but early morning seems to be the most popular time.
- After kindling - all she needs now is rest and feed.



FOSTERING

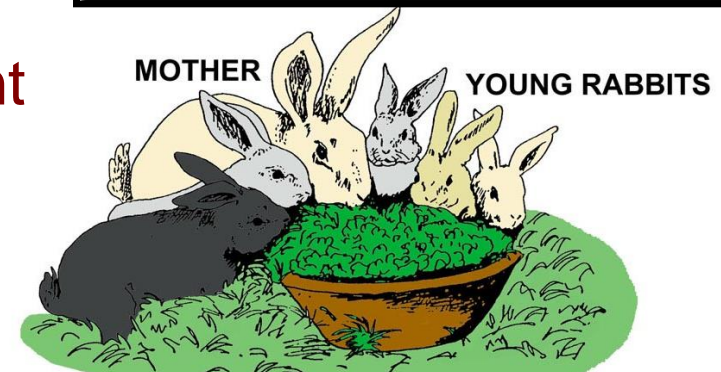
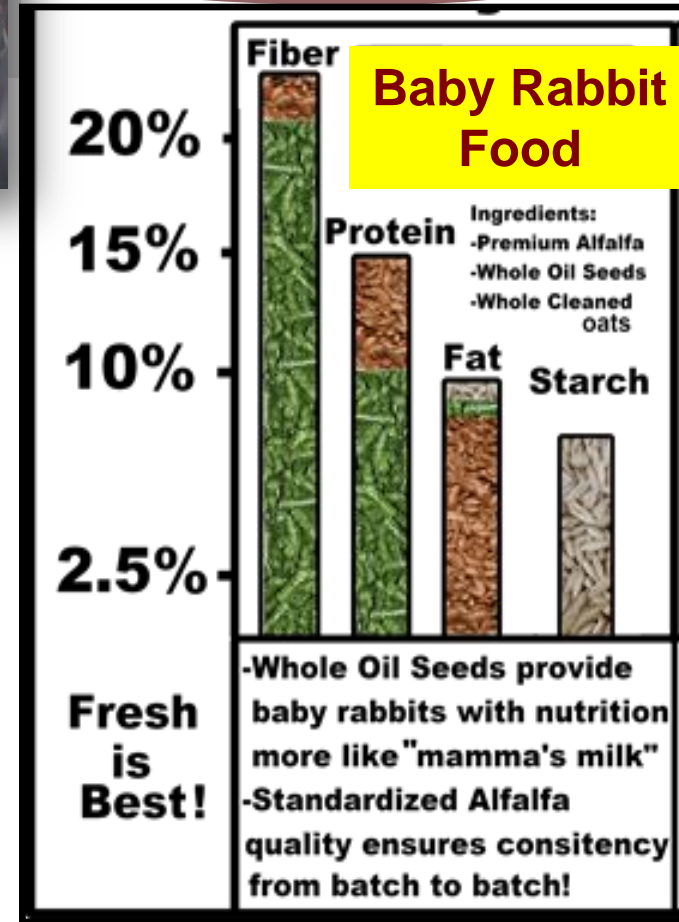
Fostering means getting a doe to accept a rabbit or rabbits from another litter. Guidelines for carrying out fostering are as follows:

- Mate does on the same day
- The litters involved should be born within 3-4 days of each other.
- Only foster rabbits that are less than five days old.
- Remove both the foster doe and the donor doe from their hutches.
- Carefully remove the rabbits to be fostered from their nest with the minimum of disturbance and without touching any of the rabbits that are not being fostered; return the donor doe.
- Introduce the rabbits to be fostered, disturbing the foster nest as little as possible.
- Leave the newly mixed rabbits for a few hours so that they all take on the same smell
- Return the recipient doe to the hutch while at the same time giving her some food which you know she likes.

WEANING



- Weaning is the separation of the doe and the young.
- This usually takes place between 5-6 weeks. After weaning, the doe should be allowed to recover her body condition before re-mating.
- Much will depend on the level of feeding but the doe should normally have rest of at least four weeks.
- Record keeping is very important here.



RABBIT DISEASES

Ear Canker and Skin Mange:

- External parasites such as mites can cause a variety of skin and ear conditions. With ear canker the entire ear may become filled with crusty scabs. Without attention the mange may spread onto and over the face. All rabbits and particularly their ears should be regularly inspected for mange and skin sores. Rabbits with ear canker may shake their heads a great deal and/or attempt to scratch.
- Mange caused by mites can be easily controlled by acaricide drops or solution (dipping).

Coccidiosis:

- This is the most common disease in rabbits. It may be classified as a parasitic disease since the causative organism is a microscopic animal (protozoa). Symptoms in moderate or severe cases include a loss of appetite, “pot belly”, diarrhea and an inability to gain weight.
- Coccidiostats may be bought and added to their drinking water to prevent Coccidiosis or to cure it as required.

RABBIT DISEASES

Mastitis:

This is a bacterial disease is not common but is occasionally seen in rabbit. It occurs when there is an infection and inflammation of the teats, which become hard and sore.

- Antibiotic (75,000-100,000 units of penicillin) will clear up the condition but as it has a tendency to recur; it may be unwise to continue breeding from that doe.

Snuffles (Chronic Rhinitis):

- It is a bacterial infection of the respiratory system similar to cold in humans. The symptoms are sneezing, noisy breathing, a runny nose and wet and matted fur on the face and inside of the front legs as a result of the rabbit using its front legs to wipe its nose and face.
- Antibiotics may appear to be effective but mortality is usually high and those rabbits that recover are often affected again if exposed to some new stress.

RECORD KEEPING

The only way you can know how well you are doing in the rabbit business is to keep good records. If you keep good records then you can make sound management and business decisions. Good records let you know if you are making a profit, and they are necessary for income tax purposes.

Listed below are some basic records you need to keep:

- Breeding records - date bred and buck used
- Kindling dates and number born, dead and alive
- Number and weight of weaned rabbits
- Average weight at market time and age of fryers at that weight
- Expenditures (including utilities)
- Sales



Questions ?



*Thank
You!*



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