

Mitahato Education and Development Fund



## **RABBIT FARMING MANUAL**



Nurturing the roots of change in rural Kenya

## **Why be a rabbit farmer**

### **Nutrition**

- ❖ Rabbit provides white meat which has less cholesterol than all other white meat.
- ❖ Rabbit meat has the highest level of protein and Vitamin B12.
- ❖ Rabbit meat provides special diets that require low sodium diets and weight reduction diets.

### **Faster Multiplication**

- ❖ Female Rabbits (Doe) give birth (kindles) up to 7 times in a year with 7 to 18 kits (baby rabbits) each time translating to up to 72 kits in 1 year.
- ❖ A doe is ready to mate at 1 to 2 days after kindling but never serve it with a male until 4 weeks are over.

### **Faster maturation**

- ❖ Kits are weaned (removed from dependence on the mother) 5-6 weeks after birth.
- ❖ They are big enough for slaughter at 3 months or 12 weeks.
- ❖ Does are ready for mating 4-6 months after birth depending on the breed and feeding discipline.
- ❖ Bucks (male rabbits) are ready for mating 4-6 months after birth.

### **Efficiency in use of Feed and Water**

- ❖ For a given quantity of feed and water, rabbit will produce six times more meat than a cow on average.

### **Ease of Feeding**

- ❖ Rabbits are easy to feed since they do eat a broad variety of feeds, some of which grow as weeds. Common Cultivated plants and weeds preferred by Rabbits are shown on page 3.

### **Land Requirement**

- ❖ A farmer can raise 10 rabbits in a space of 5.6m by 2m thus a farmer keeping a breed such as Flemish Giant can produce about 5 tonnes of meat on quarter of acre within only 4-5 months.

### **Rabbit Manure**

- ❖ Rabbit Manure is superior to cow manure as it has 2.3 percent nitrogen (N), 1.4 percent phosphorous (P) and 0.6 percent potassium (K) whereas cow manure has only 0.3 percent of nitrogen (N), 0.2 percent of phosphorous (P) and 0.1 percent of potassium (K).

## Mitahato Education and Development Fund

- ❖ Rabbits grow fast especially if fed well reaching maturity at 5 months and slaughter weight at 3 months.
- ❖ They require less land (space) with diminishing land size; therefore can be kept at the backyard.
- ❖ They can derive their feed requirement entirely on greens only.
- ❖ They are prolific each doe capable of reproducing 4 times a year an average of 8 kits per kindling.
- ❖ They have one of the highest feed conversion ratios at 4:1.
- ❖ Rabbit meat is white meat of high quality, easily digestible with low fat, low cholesterol and high protein compared to most other meats
- ❖ The unsaturated fats (good fats) in rabbit meat make 63% of the total fatty acids
- ❖ Rabbit meat is lower in percentage fat than chicken, turkey, beef and pork
- ❖ Rabbit meat provides the lowest calories per kilogram of meat consumed compared to other sources of meat.
- ❖ Rabbit meat is one of the cleanest meat as it is raised off the ground
- ❖ Other important products from rabbits include manure, skins and fur.
- ❖ They can also be produced as lab animals

### **Breeds:**

- New Zealand White
- Californian white
- Chinchilla
- French lop
- Dutch
- Checkered Giant
- Giant Flemish
- Angora
- Rex.
- Giant Flemish
- French Lop

### **New Zealand White**

#### **Characteristic**

- Has a good growth characteristic
- Capable of attaining slaughter weight of 3kg live weight within 12-14 weeks depending on feeding regime



- It is one of the best commercial breeds that grows to a weight of about 5kg
- All white in color making its fur marketable
- Has a good mothering ability

---

### **Californian White**

#### **Characteristic**

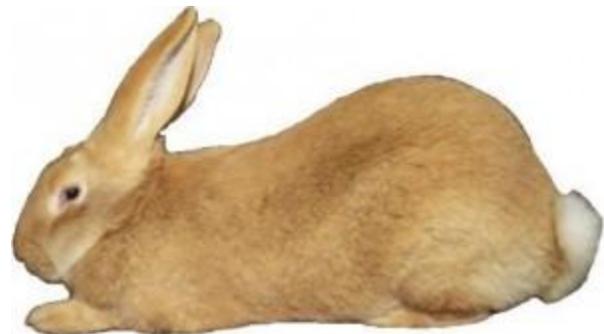
- Has good meat dressing percentage
- Its shorter and stockier and is white except for its ears, nose, feet and tail which are either dark grey or black.
- It is an ideal sire breed for interbreeding with other rabbit breed for interbreeding with other rabbit breeds for the meat production.



### **Flemish giant**

#### **Characteristics**

- Is one of the largest rabbit breeds weighing up to 7kg live weight
- Is not ideal meat breed because of its bone to meat ratio and its slow growth
- Interbreeding it with other breed may help improves its characteristic
- It's always brown in color



### French Lop



- Outstanding characteristic is the large ears that droop around the head.
- They have short and stocky legs but are heavy - they weigh over 5kg.
- Though some Kenyan rabbit keepers have shown interest in this breed because of its size, this breed is more suitable as a pet

### Angora

#### Characteristic

- Is mainly bred for its wool
- More suitable for pet than meat



## **Dutch**

- Fairly small but compact rabbit with shorter forelegs



## **Rabbit Housing and Routine practices**

### **Rabbit Housing Requirements**

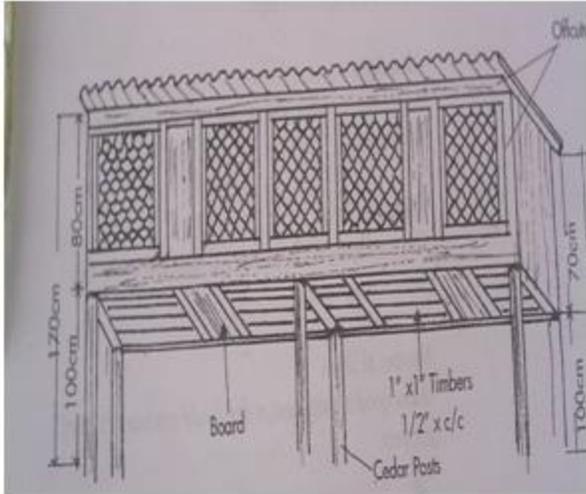
- The house must protect the rabbits and keep them from escaping
- The house must protect the rabbits from predators
- The house must protect the rabbits from adverse weather
- The house should allow easy, comfortable access for the manager
- The house must be self cleaning or easy to clean
- The house should be of reasonable cost, easy to maintain and be durable.
- Ideally, rabbits should be kept in cages either outdoor with extended roofs or indoor where the cages are kept inside buildings on platforms.
- A rabbit unit should be well ventilated, rain-proof and allows some sunlight

### **Rabbit Housing Dimensions**

- Standard cages for rabbits should measure: L=80cm, W=60cm, H=45cm.
- For pregnant does or does with young kits, a provision for a nesting box of 30cm by 30cm.
- Usually weld mesh wire is preferred because of ease in maintaining cleanliness. The quality of available weld mesh wire in Kenya is however poor and does not last long
- Many farmers have thus resorted to using all-wooden cages or wooden plus weld mesh wire cages.
- Multi-tier cages are becoming popular because they save on space. More than two-tier cages are however not recommended because of difficulties in management.

**Some examples of Rabbit Houses:**

**a) Outdoor Cage**



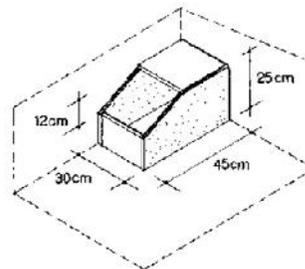
- This structure is made of timber walls, wooden floor, iron sheet wall. The front of the structure is made of weld mesh wire. The structure is on a platform of about 1 meter from the ground



**Indoor housing with stacked cages**

- The cages are stacked in order to save on space. The farmer in this case utilises both timber and weld wire mesh.

**d) Nesting box:**



- Some expectant does require a nesting box with the indicated dimensions attached to their main cages in preparation for kindling. This nesting box is where the doe will farrow and feed its young until they have grown fur

## Handling Rabbits

- The ears alone should never be used as the sole means of holding the rabbit. The best method is to grasp the ears and the skin close to the head with one hand while the other hand takes the full weight of the rabbit at the hips.
- For young rabbits up to about 3-4 months old, a suitable method is to grasp the animal across the loins.

## Sexing

- A part from the sex organs, physically the buck is usually smaller than the doe and often has a broader head. In the buck, a protruding sex organ appears as a rounded tip.
- While in the doe the organ is slit-like or v-shaped, and will slope slightly downwards towards the anus.
- When the bucks are mature the penis and testicles are easily observed.

## Identification

- It is important to properly identify your rabbits in order to help you keep records about them.
- The most common ways of identification for rabbits include tattooing and ear notching.
- Tattooing is the most relevant in rabbits due to their high turnover.
- For exhibition purposes rings with official marks are used.

## Records

Keep proper records of all your rabbit unit activities:

- Breeding records
- Growth
- Sales and expenses

## Feeding:

- Rabbits are monogastrics/non ruminants (have single stomach) and feed on plant materials.
- Require nutrients such as proteins, energy, minerals, vitamins and fats in specific measures to help rabbits grow well.
- You can feed your rabbits by providing the following
  - a) On a variety of green plants including
    - Grasses
    - Weeds
    - sweet potato vines
    - desmodium
    - vegetables such as cabbages and sukuma wiki
  - b) Root crops such as carrots, sweet potatoes and cassava

- c) Grains such as maize, wheat, barley and sorghum
- d) Hay
- e) Protein supplements e.g. soybean meal, peanut meal
  - You can also feed your rabbits on commercially pelleted feed available from different manufacturers. When using commercial pellets, care should be taken to avoid aflatoxin contamination
  - Commercial rabbit feed nutritional content normally vary as follows: Protein - 13-18%, Digestible Energy - 8-13% and fibre - 8-18%
  - Feed requirements for rabbits vary with individual animals. Proper amounts should be fed to keep the animal in good physical condition without allowing it to become too fat.
  - Reduce the amount of feed for the doe to one-half on the day of kindling and gradually but increased gradually from the 3<sup>rd</sup> day to the 7<sup>th</sup> day.
  - After a week, the nursing doe and its litter should be provided with food at all times.
  - Salt can be provided either by mixing into the feed at one percent or in the form of commercial salt cakes.
  - Vitamins: vitamin A is available from root crops and hay, vitamin B in greens and roughage. Rabbits also get their vitamins from re-ingesting their droppings
  - When using pellets, ensure they are fresh and not contaminated. NEVER feed your rabbits on mouldy hay or pellets
  - It is advised that you feed up to 130g of pellets for adult rabbits per day in combination with other feeds. It is however important that amount of pellets is kept low to reduce cost of production
  - Ensure that from the time of weaning, your rabbits are supplied with at least a handful of hay per day for to help rabbits digest better
  - When feeding greens, allow them to wilt before feeding. At the time of weaning, introduce wilted greens a little at a time to avoid diarrhoea
  - Rabbits produce soft and hard droppings. They re-ingest soft droppings which are rich in the B vitamins
  - Rabbits need to be fed on dry matter (forage) and where possible supplementation with concentrates is advisable. Clean water should be available on a daily basis. A new type of feed should be introduced over a period of a few days.

### **Diseases:**

#### Diseases of Rabbits

#### Recognition of health and disease

- Coat should be smooth and shiny
- Eyes should be bright without discharge
- Movement should be easy and free, relaxed breathing evenly and silently
- Appetite should be normal
- Droppings should be normal in amount and appearance
- Body should be well fleshed. If bony or pot bellied it may be an indication of disease
- Weight and growth of adults should be fairly constant.

- Discharge from the eyes, nostrils, mouth, vent, teat and anus are signs of disease.
- Sores and swellings are not normal
- Normal temperature is 39°C and normal pulse ranges from 140-150

### **Prevention of disease**

In a well-managed rabbit unit, diseases should be infrequent. To avoid feed contamination, hutch floors should be made of wire-netting so that the urine and the droppings do not accumulate inside.

- Good management; this entails proper housing and good feeding.
- Buy breeding animals from a reputable breeder
- Have quarantine quarters where sick rabbits are confined or new arrivals to the farm are kept for two weeks before being introduced to their cages

### **Common Diseases**

The commonest diseases in the rabbitry are:

#### **(a) Coccidiosis**

- Most affects the young rabbits.

Symptoms include

- diarrhoea which sometimes may be white in colour or blood stained
- loss of appetite
- dehydration and death if the animals are not treated.
- When pregnant does are affected, there is a risk of passing this disease to the unborn kids, and this usually leads to liver coccidiosis in which there are white spots on the liver.
- It is controlled by use of coccidiostats in feed and drinking water and by isolating all affected stock

#### **(b) Ear Canker (mange)**

This condition is caused by mites, and it affects the inner side the rabbit ears. The disease is mild but disturbs the animals. The earliest signs are:

- Constant head shaking
- scratching of the ears due to irritation
- There is a scab or crust formation on the inner side of the ear.
- Due to heavy infestation, the affected ears may drop downwards.
- Control by avoiding rats in the rabbitry since they are the vectors for these mites.

#### **(c) Other Diseases**

- Pneumonia - common during cold weather and in poorly ventilated hutches.

## Mitahato Education and Development Fund

- Gastro-intestinal complication mainly arising from feeding.
- Internal parasites like ascaris especially when fed on greens. Therefore regular de worming at least 3 months is advisable. It is also important to avoid use of roadside forages to feed your rabbits as they may be infested by worms