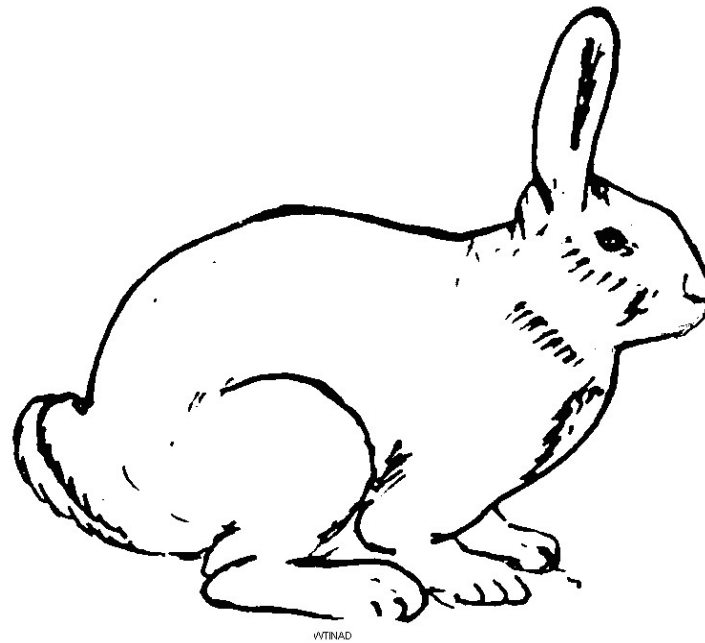


# **Rabbit Keeper's Workbook**

## ***Leader's Guide***

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**Dr. Daniel Graham**



**Christian  
Veterinary Mission**

## ***Biblical Stewardship***

A steward is a person who takes care of something that belongs to someone else.

### **Read: Psalms 50:10-11**

- Who do all animals belong to?

### **Read: Genesis 1:27-28**

- Who are the stewards of God's animals?

### **Read: Psalms 104:10-14**

- What are ways that we see God caring for His animals?
- In what ways are you currently being a good steward of God's animals?
- In what ways can you be a better steward of God's animals?

Other verses about the Biblical standard of caring for animals:

- Exodus 23:4-5
- Luke 15:3-6
- John 10:2-5
- John 10:11-13

## ***Impact of Keeping Rabbits***

*1 Corinthians 10:25-26, Genesis 3:21*

### **Discussion:**

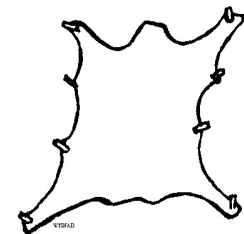
- What are the benefits to raising rabbits?
- In what ways are they better than other animals?

### *Possible Answers:*

- *Small space requirement*
- *Easy to handle*
- *Rapid reproduction*
- *Eats non-human foods*
  - *Doesn't compete with humans for food*
- *Nutritious meat*
  - *Easy to slaughter/butcher at home*
  - *Helps to improve the nutrition of the family, especially children*
- *Feces can be used as fertilizer*
- *Skins and fur can be used for crafts/selling*
- *Can be sold for income*



Meat



Skins and Fur



Manure for Fertilizer

# Housing

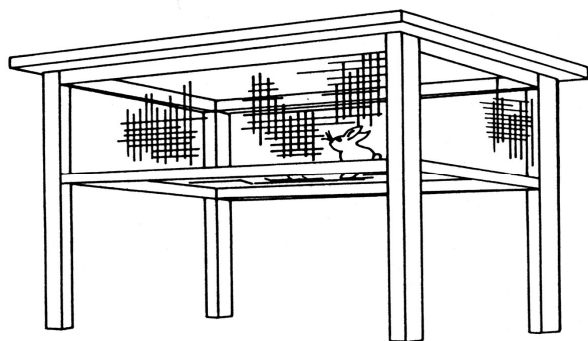
Genesis 33:17

## Discussion:

- What is the benefit to keeping rabbits in raised houses?
- What are the challenges of keeping rabbits in raised houses?

## Possible Answers:

- **Benefits:**
  - Houses provide protection from predators
  - Keeps rabbits out of gardens
  - Raised houses prevent diseases (coccidia, fleas, ticks)
  - Houses prevent theft
  - Houses make rabbits easy to handle
  - Separate houses allow for controlled breeding
- **Challenges:**
  - Houses are more expensive to build
  - Must provide food and water in house every day

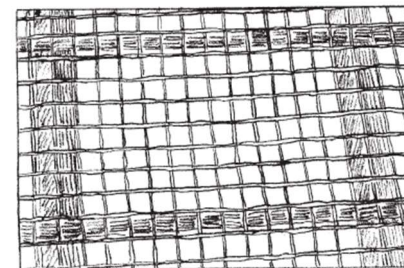


## Discussion:

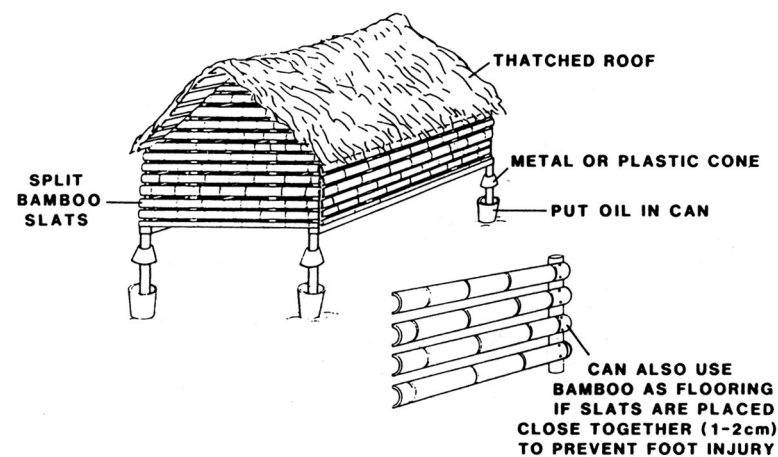
- What materials can be used to build a rabbit house?

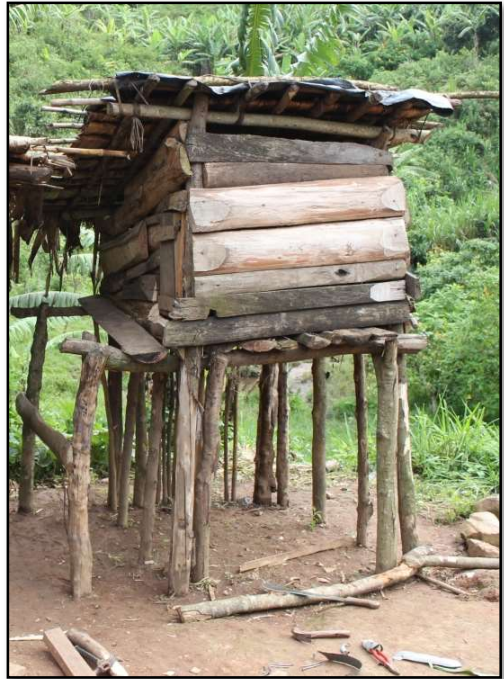
## Possible Answers:

- *Timbers*
- *Off-cuts*
- *Wire mesh (coffee tray)*
- *Bamboo*
- *Grass thatch*
- *Iron sheets*
- *Binding materials:*
  - *Rope*
  - *Banana fiber*
  - *Rubber (tire)*
  - *Nails*



Coffee Tray Flooring





#### Discussion:

- Where should rabbit houses be placed?

#### Possible Answers:

- *Should have enough shade*
  - *Rabbits are very susceptible to over-heating*
- *Protected from rain*



#### Discussion:

- How will you keep the rabbit house clean?

#### Possible Answers:

- *Good ventilation – windows on at least 2 sides*
- *Removal of food waste daily*
- *Removal of feces*
  - *Can be placed directly in gardens as fertilizer*
- *Urine can be collected and put on garden as fertilizer*
- *Daily cleaning and washing*

For 1 rabbit, a house should be at least this big:

- 60 cm high
- 60 cm wide
- 90-120 cm long

## ***Feeding***

*Genesis 1:30. Psalms 147:8-9*

Rabbits can eat many different foods. God created them to eat food with a lot of fiber (grass and leaves).

### **Discussion:**

- What has God put around your place to feed your rabbits?

### *Possible Answers:*

- *Elephant grass*
- *Guinea grass*
- *Banana leaves*
- *Sweet potato vines*
- *Cabbage*
- *Blackjack*
- *Cowpea and Soybean leaves*
- *Groundnut leaves*
- *Sunflower leaves*
- *Maize plants*
- *Sugar cane stalks*
- *Dry cassava roots*
- *Kitchen waste – carrots, bananas, avocado, mango*
- *Foods that are high in protein:*
  - *Calliandra*
  - *Desmodium*
  - *Sesbania*
  - *Leucaena*
  - *Lablab*

### **Discussion:**

- Which foods are not good to give your rabbits?

### *Possible Answers*

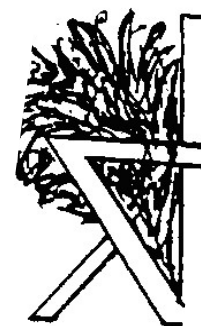
- *Raw cassava*
- *Irish potato leaves*
- *Tomatoes*
- *Eggplants*
- *Onions*
- *Soybeans*
- *Cabbage (in large quantities)*

### **Discussion:**

- Food that becomes dirty can make your rabbit sick. How will you keep your rabbit's food clean?

### *Possible Answers:*

- *Food should not be put on the floor of house*
- *Food can be hung by rope/wire/banana fiber*
- *Food can be placed in a feeder*
  - *Wooden feeder*
  - *Metallic feeder*
  - *Metal or ceramic bowl*
  - *Split bamboo*
  - *Clay or pottery bowl*



Holding Rack for Grass



Grass Hanging in House

## Water

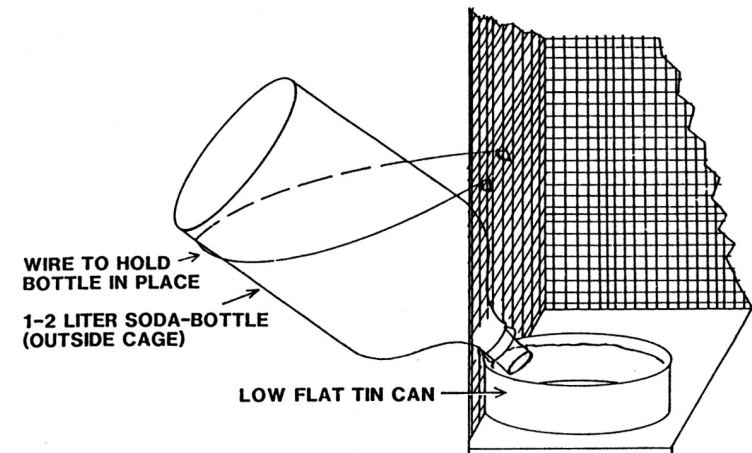
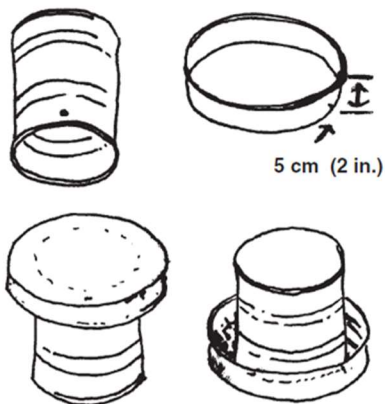
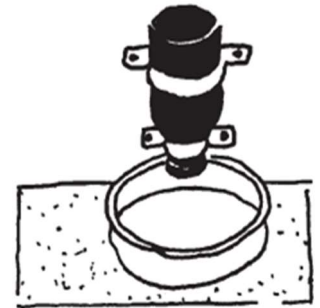
Genesis 29:1-3, 2 Chronicles 26:9-10, Psalms 42:1

### Discussion:

- Why do God's animals need water?
- How will you give your rabbits fresh and clean water every day?

### Possible Answers:

- All animals need water to live, build muscle, and make blood
- Water should always be available
- Water should always be clean and fresh (changed every day)
- Water can be given in many different containers:
  - Metallic or ceramic mugs
  - Homemade glass bottle drinker
  - Small jerricans
  - Gourds
  - Clay pots



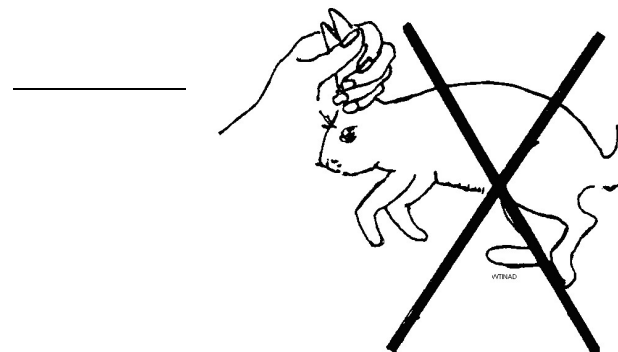
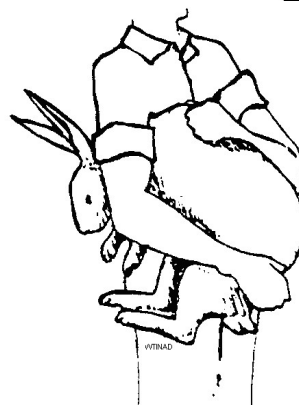
## Handling

### Discussion:

- What are good ways to pick up a rabbit?
- What are bad ways to pick up a rabbit?

### Possible Answers::

- **Good ways:**
  - Rabbits can be picked up by the loose skin on the back of the neck
  - Rabbits can be picked up by placing your hands around its body
  - The feet should always be held to prevent kicking
- **Bad ways:**
  - Rabbits should never be picked up by their ears
    - This is very painful for the rabbit and can lead to injury
  - Rabbits should not be picked up by the loose skin on their neck unless their weight is supported by your other hand (see picture)
    - They should not hang freely from your hand
  - If rabbits are held incorrectly or their feet are not held properly, they may kick and scratch you or they might break the bones in their back



## ***Reproduction/Breeding***

*Genesis 8:17, Genesis 33:13*

A rabbit is ready to produce once it is about 3 kg in size. If the male and female rabbits live in separate cages, it is best to put the female into the males cage for breeding. Breeding should take only 5-10 minutes.

### **Discussion:**

- What should you do if the rabbits don't mate with each other?

### *Possible Answers:*

- *Don't leave them together, they might begin fighting*
- *Wait 3 days and put them together again*

### **Discussion:**

- Sometimes the female does not become pregnant. What are some reasons that might cause this?

### *Possible Answers:*

- *Male or female might have a disease*
- *Rabbits are too thin*
- *Rabbits are receiving poor food*
- *Rabbits are not receiving enough water*
- *High temperatures*

### **Discussion:**

- For how long is a rabbit pregnant?
- How many babies can a rabbit produce?

### *Possible Answers:*

- *Pregnancy can last 30-32 days*
- *Rabbit litters may have 2-10 babies*
- *It is difficult for a female to care for more than 8 babies*



### Discussion:

- Rabbits need a safe place to produce their babies. They will build a soft nest of grass and fur. How will you give your rabbits a place to put their nest?

### Possible Answers:

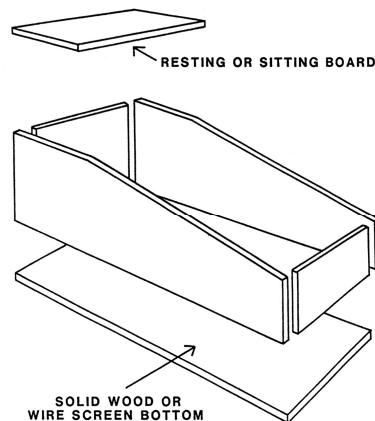
- A nest box should be provided at 25 days of pregnancy (about 5 days before the female produces)
- A nest box can be made from many different things:
  - A jerrican with the bottom cut off
  - A basin
  - A wooden box
  - Constructed from sticks and mud
- The female can build a nest from many different things:
  - The female will pull fur from her abdomen
  - Soft dry grass
  - Shredded newsprint paper



Nest box made from a jerrican



Nest box made from mud



### Discussion:

- Sometimes a rabbit might eat her own babies. What are some reasons that might cause this?

### Possible Answers:

- Poor feeding
- Poor sanitation
- Fear
- Stress
- Lack of water
- Poor mothers
- Predators
- Over handling by people/children

At 10 days old, the babies will open their eyes.

At 2-3 weeks old, the babies will begin walking and looking for food.

At 3 weeks old, you can remove the nest box.

### Discussion:

- When should you remove the babies from the mother?

### Possible Answers:

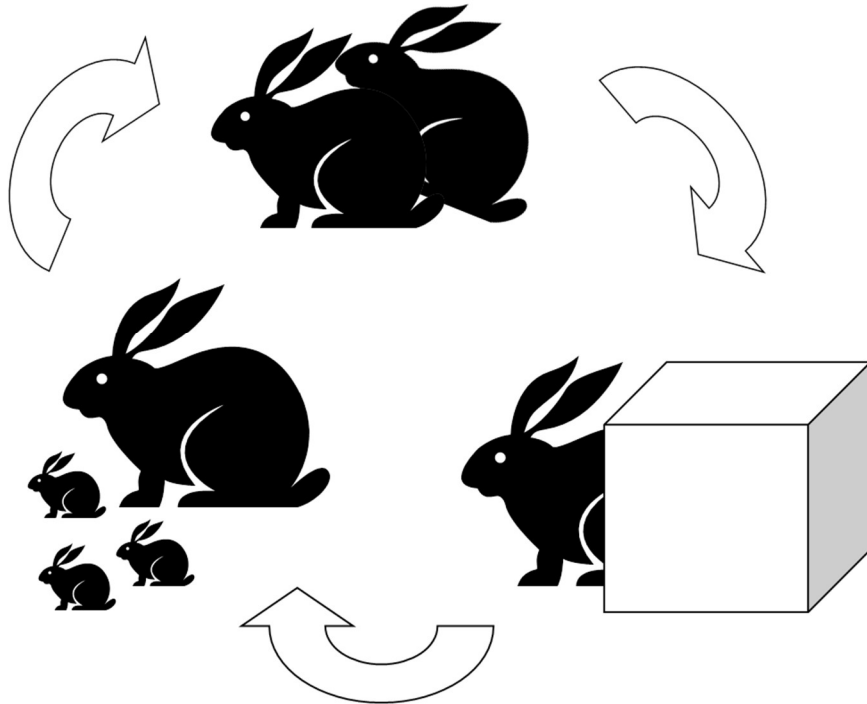
- Babies will grow better if they remain with the mother for 2 months



3 month rabbit breeding cycle:

After a female rabbit is bred, it will take one month before she produces her babies in the nest.

After one month, they will begin moving around with the mother. After staying together for another month (2 months total with mother), they can be removed and then the female is bred again.



## ***Slaughter and Marketing***

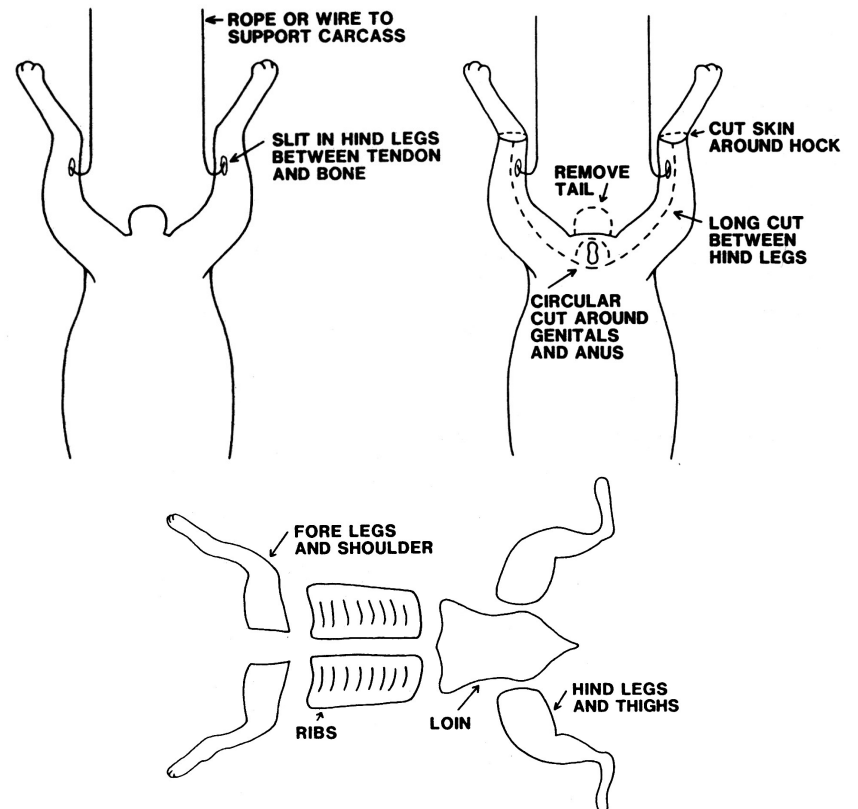
*1 Corinthians 10:25-26, Genesis 3:21*

### **Discussion:**

- Rabbits can be eaten at home by the family or can be sold for money. Which would you like to do?
- What will you do with the rabbit's skin?

### *Possible Answers:*

- Rabbits can grow big enough to eat by 6-8 months
- Rabbits can be sold at any age for income for the family
- A rabbit's skin can be made into leather and used for crafts



## ***Health Management***

*Job 12:10, Proverbs 12:10, Genesis 1:27-28*

### **Discussion:**

- Who gives life to all animals?
- Who is responsible to care for the animals?

### *Possible Answers:*

- *God gives life to all humans and animals – He creates all of them*
- *God made humans responsible to care for His animals properly*

### **Discussion:**

- It is easier to prevent disease than to treat disease. How can you prevent disease in your rabbits?

### *Possible Answers:*

- *Providing enough food that is good and clean*
- *Providing enough clean water*
- *Providing a good house that is clean and safe*
- *Making sure the rabbits stay cool in the shade*
- *Prevent fighting by giving each rabbit enough space*
- *Handle the rabbits properly and gently*
- *Check them every day for any problems*

### **Discussion:**

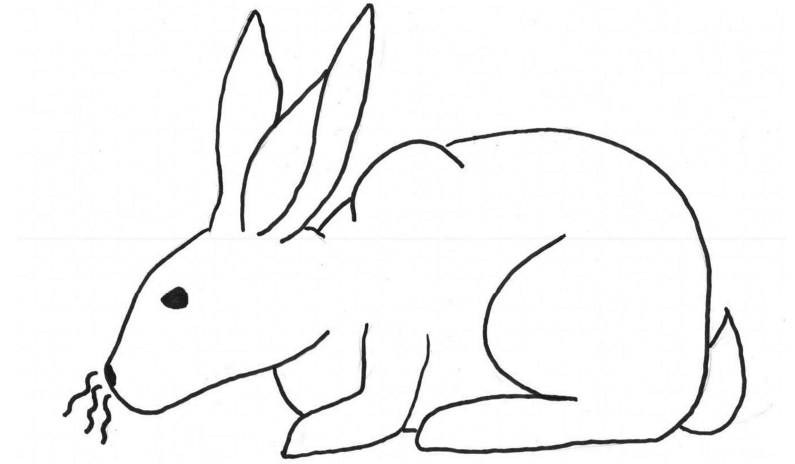
- What are some signs that your rabbits might be sick?

### *Possible Answers:*

- *Not eating well*
- *Not moving around / not active*
- *Losing weight*
- *Fur looks bad*
- *Diarrhea*
- *Abscesses or swellings*
- *Wounds*
- *Sneezing or coughing*
- *Fluid coming from nose*

## Pasteurella (also called Snuffles)

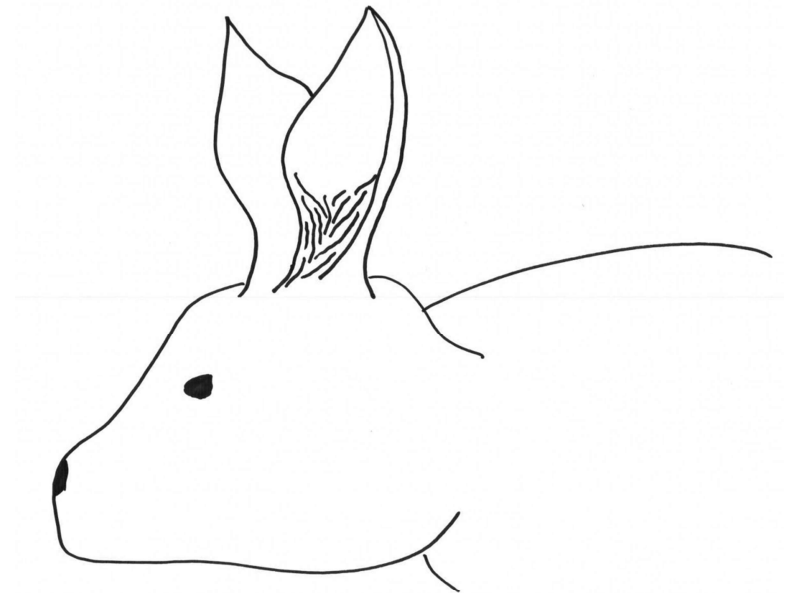
Cause:	Infection of a bacteria called Pasteurella Occurs often with stress, pregnancy, poor hygiene, poor ventilation, or a lot of urine smell
Signs:	Fluid coming from nose Sneezing Breathing trouble Blue lips or ears Abscesses Twisted neck Swollen uterus or testicles
Contagious:	Very contagious to other rabbits
Prevention:	Good hygiene Remove infected animals
Treatment:	No treatment to cure the disease Abscesses: cut open and drain pus, inject 1 dose of LA Penicillin



*Penicillin can be used to treat abscesses, but there is no treatment to cure Pasteurella infection.*

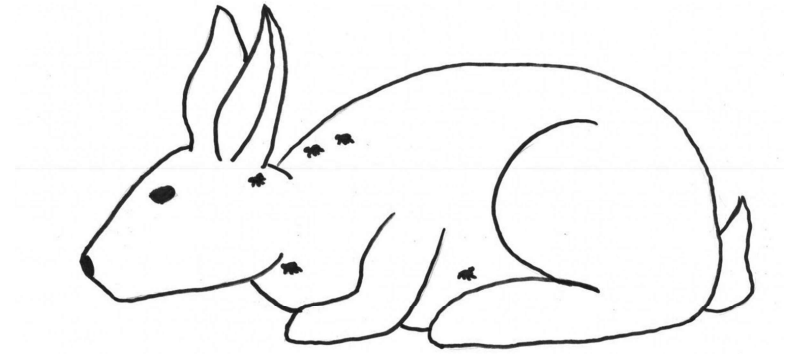
## Skin Parasites – Ear Mites (also called Ear Canker)

Cause:	Mites in ear
Signs:	Itchiness Crusts or scabs on the ear
Contagious:	Very contagious to other rabbits
Prevention:	None
Treatment:	Place a few drops of cooking oil in ear and rub down into ear Repeat once every week until ears are clean If needed, inject 0.1 ml of Ivermectin under the skin



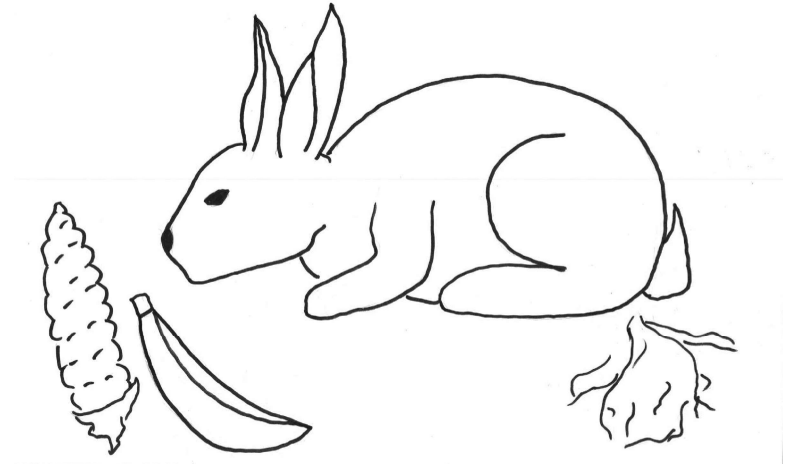
## Skin Parasites – Fleas

Cause:	Fleas on skin Can only infect rabbits if they are on the ground
Signs:	Itchiness Fleas on skin
Contagious:	Very contagious to other rabbits
Prevention:	Don't keep rabbits on the ground
Treatment:	Don't keep rabbits on the ground Dudu dust – apply a small amount to fur once a week until fleas are gone



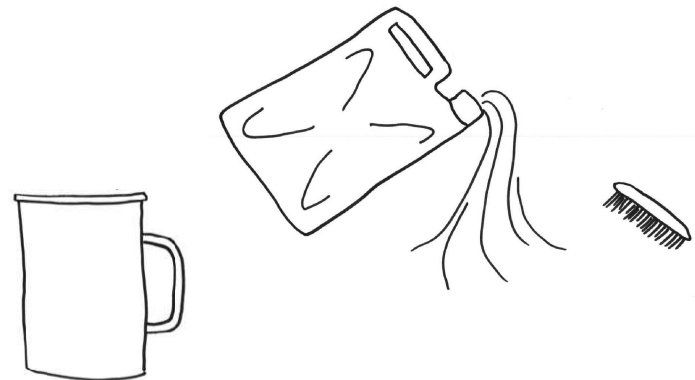
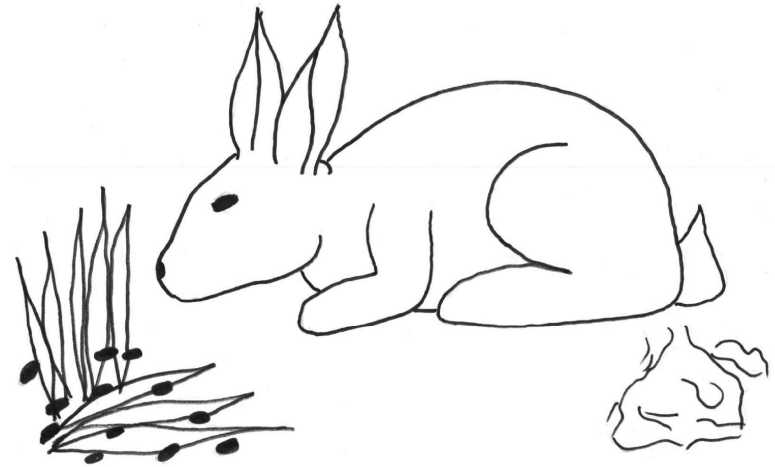
## Diarrhea

Cause:	Diet problems Eating too much energy (maize, sorghum, posho, rice) and not enough fiber (grass and leaves)
Signs:	Diarrhea Losing weight Low appetite
Contagious:	No
Prevention:	Feed correct diet with a lot of fiber
Treatment:	Feed correct diet with a lot of fiber Give extra water



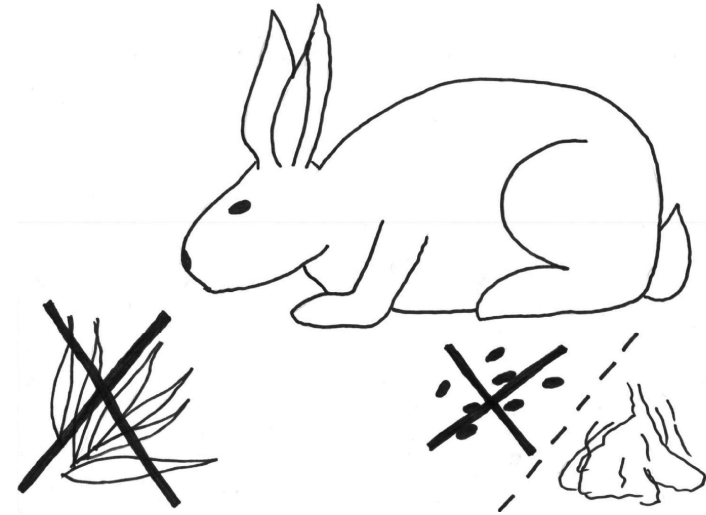
## Diarrhea – Coccidia

Cause:	Infection by a parasite called Coccidia Poor hygiene – feces stay for more than 1 day
Signs:	Diarrhea Losing weight Low appetite White spots on the liver
Contagious:	Yes, passed through feces
Prevention:	Good hygiene – remove feces every day
Treatment:	Clean cage – remove feces Give extra water Amprolium



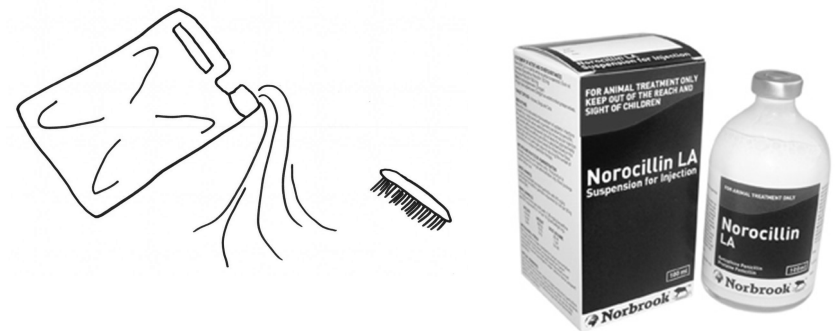
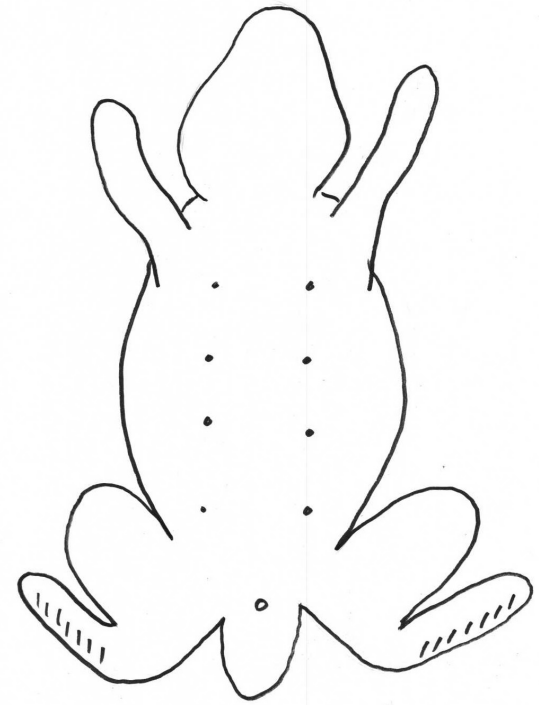
## Blocked stomach

Cause:	Hair or food blocks stomach
Signs:	Bloating Very firm stomach Low appetite Not active Diarrhea or lack of feces
Contagious:	No
Prevention:	Feed correct diet with a lot of fiber
Treatment:	Feed pineapple or pawpaw (or make into juice and let it drink carefully from a syringe) Feed correct diet with a lot of fiber Give extra water



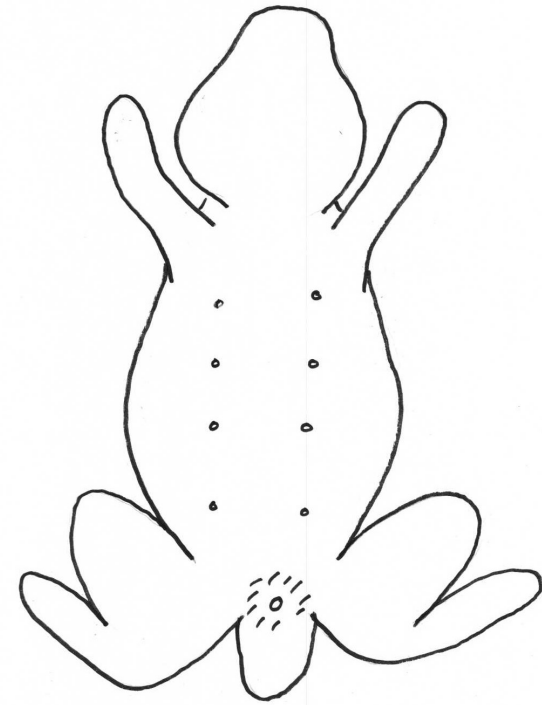
## Sore Hocks

Cause:	Rough or dirty floor (usually wire) cause wounds on the bottom of the feet
Signs:	Wounds on feet Not active Low appetite Losing weight
Contagious:	No
Prevention:	Good hygiene Give a resting board (flat and smooth area in cage to rest on)
Treatment:	Give a resting board (flat and smooth area in cage to rest on) Clean floors Give extra food and water If there is pus in the wound - inject 1 dose of LA Penicillin



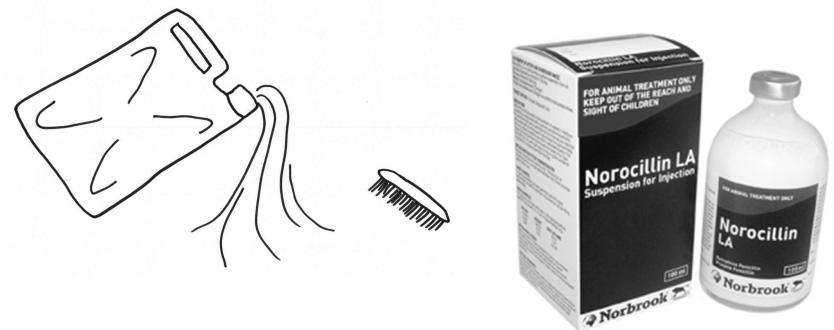
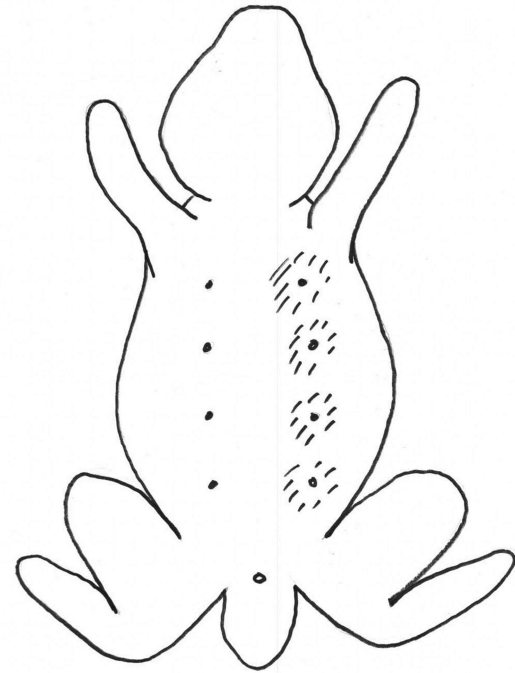
## Syphilis (also called Vent Disease)

Cause:	Infection by a bacteria
Signs:	Redness, scabs, or blisters on genitals Abortions Swollen testicles
Contagious:	Very contagious to other rabbits during mating
Prevention:	Only breed rabbits with no signs of disease
Treatment:	Inject 1 dose of LA Penicillin



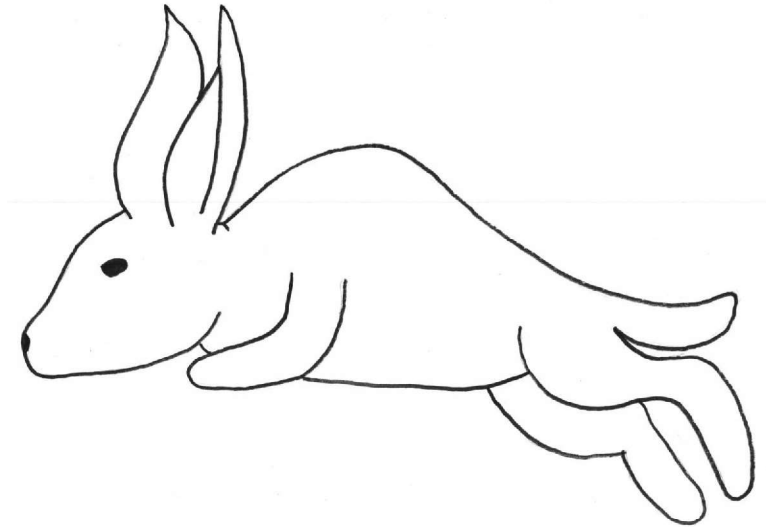
## Mastitis

Cause:	Infection of the udder Caused by poor hygiene – dirty floor or dirty nest box
Signs:	Swollen, hot, or painful udder Pus coming from udder Low appetite Losing weight
Contagious:	No
Prevention:	Good hygiene
Treatment:	Good hygiene – clean cage and nest box Inject 1 dose of LA Penicillin – give another dose in 3 days if there is still a problem



## Broken Back

Cause:	Broken spine from falling or poor handling (uncontrolled kicking)
Signs:	Unable to walk or move back legs
Contagious:	No
Prevention:	Good handling Don't lift by the ears, hold the back legs well
Treatment:	No treatment, should be killed immediately



### LA Penicillin:

- “LA” means Long-Acting
- Penicillin is a type of antibiotic
- This is a long-acting antibiotic that usually only needs one dose
- Sold in Uganda as Norocillin LA

### Which diseases can be treated with LA Penicillin?

- Pasteurella abscesses
- Sore Hocks if infected
- Syphilis
- Mastitis

### LA Penicillin doses:

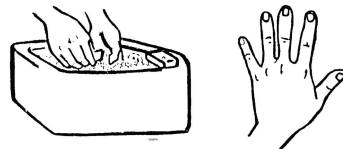
- 1 kg rabbit → 0.15 ml
- 2 kg rabbit → 0.3 ml
- 3 kg rabbit → 0.4 ml
- 4 kg rabbit → 0.5 ml
- 5 kg rabbit → 0.7 ml
- 6 kg rabbit → 0.8 ml
- 7 kg rabbit → 1.0 ml

Only one dose of LA Penicillin should be injected. A second dose can be given after 3 days if needed.

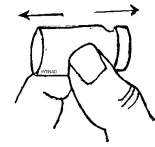
### How to give an injection under the skin:

1. Calculate the amount of medicine needed

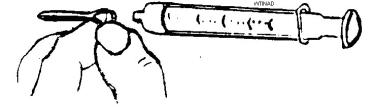
2. Wash your hands thoroughly



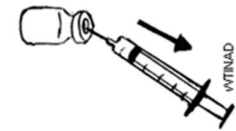
3. Shake the bottle of medicine



4. Place the needle on the syringe



5. Place the needle into the bottle of medicine and fill it to the correct amount



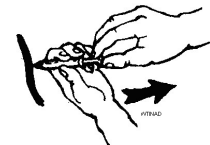
6. Remove any air from the syringe



7. Lift the skin over the shoulders and push the needle through the skin



8. Pull back on the syringe to check for air – if air enters inside, remove the needle and start over



9. Push on the syringe to inject the medicine



10. For safety, throw the needle down the pit latrine

