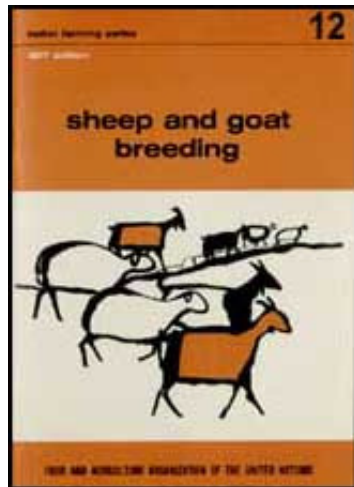


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Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)



(introduction...)



Preface














Traditional sheep and goat breeding













A few words to understand the course



- Breeds of sheep and goats
- How to feed sheep and goats
 - 📄 The digestive system
 - Feeding sheep and goats
 - 📄 *(introduction...)*
 - 📄 Balanced rations for animals
 - 📄 Food Requirements of Sheep and Goats
 - 📄 Sheep and goats need water
- Care and housing of animals
 - Watching over sheep and goats
 - 📄 *(introduction...)*
 - 📄 Why animals need a paddock
 - 📄 How to watch over animals at pasture
- Giving the animals good housing

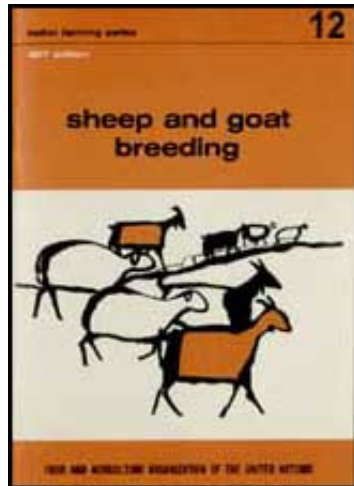
-  *(introduction...)* Where to put the shed
-  How to build the shed
-  Diseases of sheep and goats
 -  How to look after sheep and goats
 -  Parasites
 -  Infectious diseases
-  How sheep and goats reproduce
 -  The reproductive systems
 -  Reproductive system of the she- goat and ewe
 -  Reproductive system of the buck and ram
 -  Pregnancy and birth

-  Looking after the young ones
-  Castrating males
-  Choosing breeding animals
 -  Why choose ?
 -  Age of breeding animals
-  Knowing the flock and maintaining it
 -  How to know your flock
-  How to sell and buy
 -  (*introduction...*)
 -  Organizing sales



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Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)



(introduction...)



Preface



Traditional sheep and goat breeding



A few words to understand the course



Breeds of sheep and goats



How to feed sheep and goats



Care and housing of animals



Giving the animals good housing



Diseases of sheep and goats

- ☐ How sheep and goats reproduce
- ☐ Choosing breeding animals
- ☐ Knowing the flock and maintaining it
- ☐ How to sell and buy

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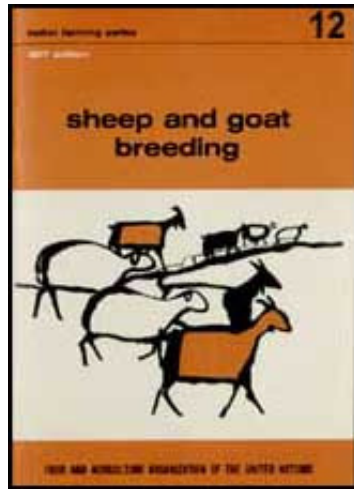
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Better Farming Series 12 - Sheep and



Goat Breeding (FAO - INADES, 1977, 51 p.)

- ➔ ☐ How sheep and goats reproduce
 - ☐ The reproductive systems
 - Reproductive system of the she- goat and ewe
 - Reproductive system of the buck and ram
 - Pregnancy and birth
 - Looking after the young ones
 - Castrating males

Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

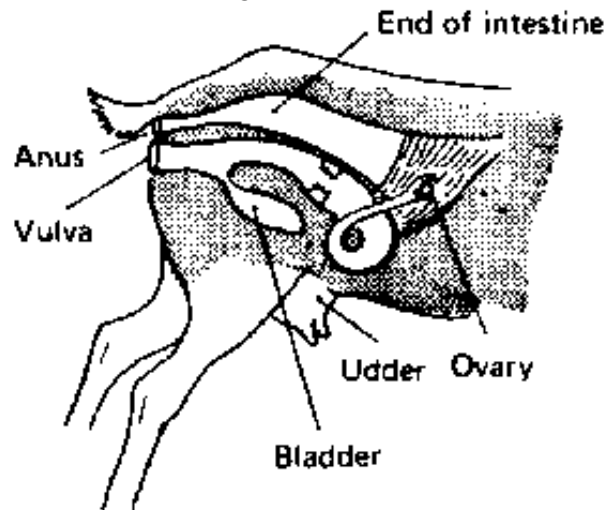
How sheep and goats reproduce

The reproductive systems

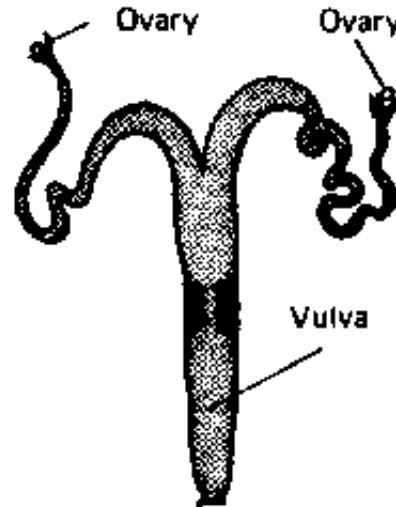
Reproductive system of the she- goat and ewe

The reproductive organs are all inside the she- goat or ewe.

All you can see from the outside is the entry to the system which is called the vulva.



Genital organs of she- goat



Genital organs removed from she- goat

Flowers have ovaries which contain ovules (see Booklet No. 3, page 11).

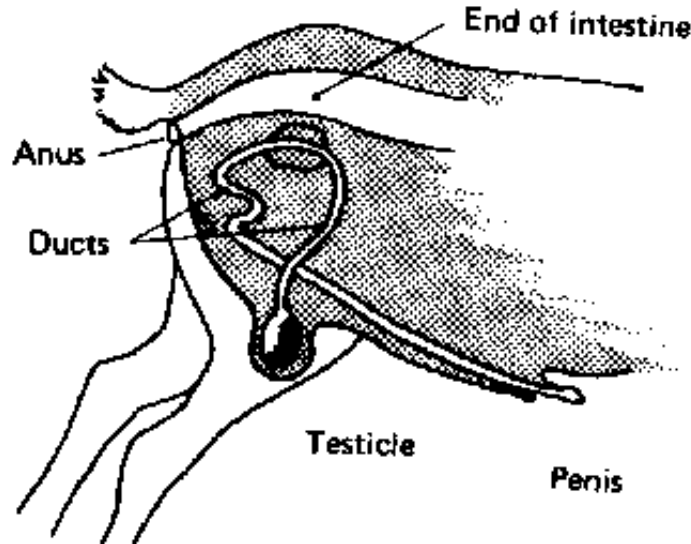
When the ovules are fertilized by pollen, the ovules become seeds.

The female sheep or goat has two ovaries. Every 21 days they produce an ovum. (In speaking of animals we say ovum, plural ova.) If, at this moment, the ewe is served by the ram, and the she- goat by the buck, the ovum is fertilized. It develops and becomes a young one.

Reproductive system of the buck and ram

This system consists of:

- two testicles which hang between the hind legs;
- the penis;
- two ducts which connect the testicles with the penis.



Genital organ of male

Stamens give the pollen that fertilizes the ovule in a flower (see Booklet No. 3, page 10).

Testicles give the semen that fertilizes the ovum.

The fertilized ovum becomes a young one.

Pregnancy and birth

When the female carries a young one in her womb, we say she is pregnant.

Pregnancy begins with fertilization and ends with the birth of the young animal. It takes about 5 months.

The young animals that are born are called the litter.

If the she- goat or ewe has had one litter in the year, she should not have another litter before the following year.

The she- goat or ewe cannot both feed the young one(s) in her womb and suckle those already born.

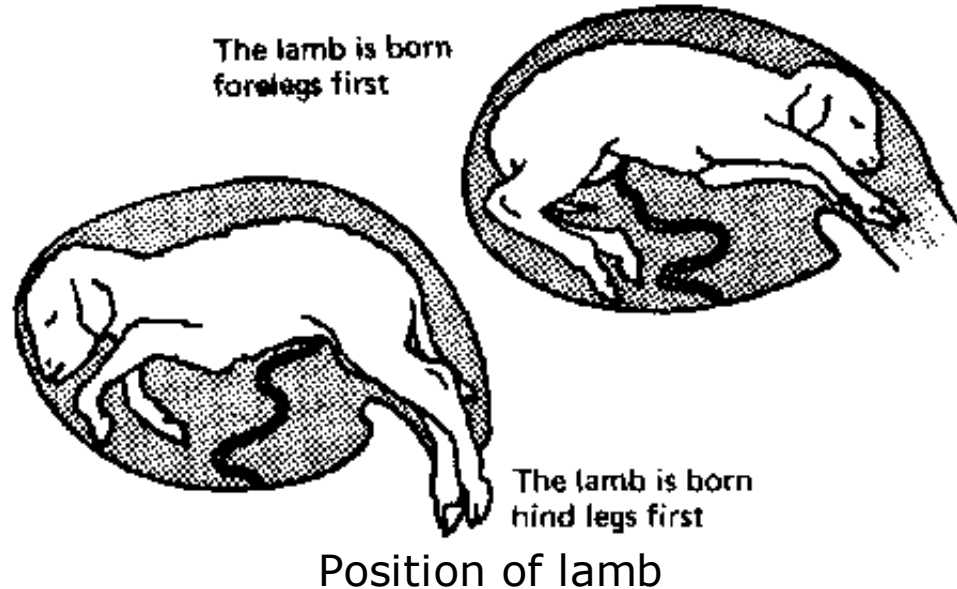
The female which is going to give birth stays in one corner; the udder swells and hardens.

At the birth, part of the membranes which cover the young one(s) comes out; the water in these membranes should flow out.

Next you see the legs of the young animal coming out, either the two forelegs or the two hind legs.

After the young animal has come out, if it is still joined to the mother by the umbilical cord, cut the cord and tie knots at both ends.

Then make sure you clean it well.



After the birth the rest of the membranes come out.

They must all come out. Otherwise they may rot inside the womb and cause the mother to die.

Usually the birth takes place without difficulty; there is

nothing for the farmer to do, except in the case of a female which is giving birth for the first time.

In this case he can help her by pulling downward on the legs of the young one.

When the young animals are born the mother rubs them with her tongue; she licks them.

You must let her do this.

At this time the mother is often thirsty, so give her water to drink.

Looking after the young ones

Take great care of the new- born animals. They are very delicate. They easily catch diseases and parasites.

To protect them, have them vaccinated.

Take good care of the young animals and house them well. Otherwise they may die, and you may lose a lot of money,

A female should have a litter every year.

After birth the mother suckles her offspring for about 4 months. But from the third week the lamb or kid can take other food besides the mother's milk.

At 6 months the lambs or kids no longer suck and they are said to be weaned. If the mother still has milk, she is milked. After 1 or 2 months have her served by a male.

The mother may refuse her young. This often happens when the mother gives birth for the first time, or when she has two young ones. In that case put the mother and young ones together in a stall to get them used to each other.

If the mother is dead, suckle the young one with the milk of another female, or give pure cow's milk in a feeding- bottle. Give 5 to 7 feeds a day in small amounts.

If there are 20 females in a flock there should be 20 litters a year.

If there are only 10 litters a year, the flock is not producing enough.

A farmer will not earn enough money with such a flock.

A female which produces no offspring during the year should be sold or eaten.

If a female has no young 5 months after being served by the male, she is said to be sterile.

But a female can be sterile because she is badly fed; because

she is ill; because she is too old.

Give her plenty to eat for 4 or 5 months to fatten; then you can sell her for a good price.

The females must be served 5 months before the beginning of the rainy season. Then there will be plenty of grass at the time of birth. The mothers will have plenty of milk and their young ones will be well fed.

A male should not serve his daughter; the offspring will be malformed.

Castrating males

A flock of 30 to 40 ewes or she- goats needs 2 rams or bucks. The flock needs good breeding animals.

The other males of the flock are castrated.

Where goats are concerned, the bucks are sold or eaten while they are young and before they can reproduce themselves so there is no need to castrate them.



Castrating instrument

How to castrate the males

Either the testicles are removed, or better, the ducts joining

the testicles to the penis are crushed.

The animal husbandry service has special instruments for this, and the livestock assistants are used to them.

If the males are not properly castrated. their wounds will not heal up well and they may die.

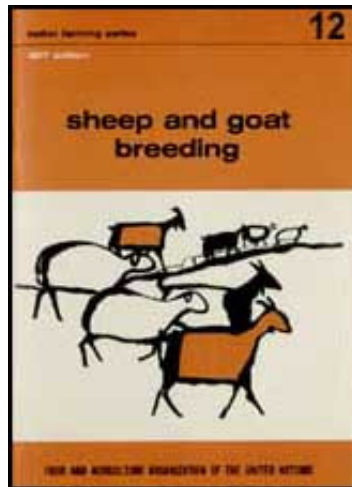
At what age should the males be castrated?

The males which are not wanted for breeding should be castrated at the age of 2 months, at least.

Castrate old rams and old bucks, because then they fatten more quickly, the meat has less taste, and you can sell them better and faster.



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Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)



Choosing breeding animals



Why choose ?



Age of breeding animals

Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

Choosing breeding animals

Why choose ?

If you make a good choice of males, the females they serve will produce fine, big lambs.

If the sire is well built, he will produce well- built offspring.

If the sire is badly developed, he will produce badly developed offspring.

By making a good choice of males you quickly improve the flock.

When you make a good choice of females, they produce fine

offspring, and they have plenty of milk to feed them.

Ewes which have 2 lambs in the first litter almost always have 2 in other litters.

The good qualities of the breeding animals are often passed on to their offspring.

So it is very important to make a good choice of breeding animals.

A farmer who makes a good choice of seeds gets better harvests.

A farmer who makes a good choice of breeding animals gets a better flock.

How to choose

The male

Choose the son of a good female and a good, well- built male, with a mother that gives a lot of milk.

The young male should be well built and in good health.

You can buy a young male at a breeding station; he will improve the flock.

This costs less money than buying several females from the breeding station.

The male should be lively and strong, and should be well fed, especially for two months before service.

The male should have a flat back with broad loins.

Females

Choose daughters of good, well- built milk types and of fine males. They should be well developed and in good health.

Their hind legs should be well spread, but straight and their loins broad.

Their bellies should be well developed and muscular.

Age of breeding animals

Females

The ewe lambs should not be fertilized before the age of 18 months.

Otherwise they will remain small and will produce small lambs and will have little milk to feed their young ones.

Ewes are fattened for sale or eating when they are 5 or 6

years old. After that age they cannot be fattened any more, they produce meat of poor quality and do not fetch a good price.

The female kids should not be fertilized before the age of 1 year.

She goats are fattened for sale or eating after 5 or 6 births, that is, at the age of 6 or 7 years.

Males

Rams do not serve before the age of 15 months.

Otherwise they remain small and do not give the ewes good litters.

Bucks should not serve before the age of 18 months.

After the age of 4 years the males are less strong and produce poor offspring. So you lose money.

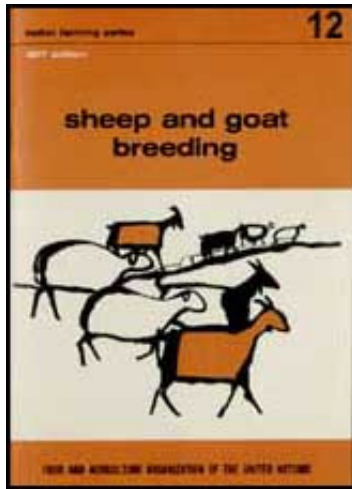
The males should be castrated at the age of 4 years and fattened for sale or eating.





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Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977,



51 p.)

- ➔  Knowing the flock and maintaining it
-  How to know your flock

Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

Knowing the flock and maintaining it

How to know your flock

We have seen how important it is to choose good breeding

animals.

The good qualities of the parents and grandparents are passed on to the offspring.

In modern animal husbandry you choose good breeding animals. By knowing the parents, you select.

Modern farmers put a mark on each animal in the flock. Give each animal a number - this is its name.

Mark the number on the back of the animal by cutting the wool with a pair of shears.

For example, mark A on the male. On the females mark 1, 2, 3, etc.

On the young animals mark A1, if, for example, the sire is A and the dam is 1.

You can tell from which litter of dam 1 the offspring comes by marking a second number. For example, if A1 is from the third litter, it is marked A13, and so on.

Keep a herd book

Keep a herd book, as modern farmers do. Take a double page for each animal. Write on it all you need to know about each animal in the flock.

Example of herd book pa. for a ram

Name of ram: A

Month and year of birth: mid- July 1964

Son of.....: and of:

Date of service	Name of ewe	Number of offspring	Remarks
			Vaccination Oct

			Vaccination Oct. 1964,
6 Oct. 1965	3	2	Eat. more before service.
10 Oct. 1965	2	1	Lambs well
17 Oct. 1965	1	2	formed.

Example of herd book page for a ewe

Name of ewe: A1

Month and year of birth: March 1966

Daughter of: A and of: 1

Data of service	Name of ram	Dates of birth	Number of offspring per litter	Remarks
--------------------	-------------------	----------------------	--------------------------------------	---------

5 Sep. 1967	Hira	3.2.68	2	Lambs vaccinated for enterotoxaemia.
				2 lambs died before weaning.
28 Aug. 1868	Mou	20..69	2	Lambs vaccinated.
				Weaned beginning July 1969.

Example of herd book page for lambs

Name of animal: A1

Month and year of birth: March 1966

Date of	Date of	No. of lambs	No. of lambs dead before	Remarks
------------	------------	-----------------	-----------------------------	---------

service	births	per litter	weaning	
5 Sep. 1967	3.2.68	2	2	A1 vaccinated 15.5.66.
				Lambs vaccinated for enterotoxaemia.
20 Aug. 1868	20.1.69	2	0	Lambs vaccinated.
				Weaned beginning July 1969.

You know more or less the date of birth of any animal you have bought.

The fourth column shows the deaths among the stock; you can see if each dam has many deaths among her offspring.

If the dam has deaths in each litter, she should be fattened and sold.

With the book a farmer knows at any time the state of his flock.

The veterinary assistant writes in the herd book what he has done, and what the farmer. is to do.

The farmer writes down roughly how much food is given per day, without counting grass.

He knows what each animal has eaten before it is sold.

So he knows how much food is needed in a year for his flock.

He also makes notes on the animals.

He has a record of each breeding animal and can tell which are

the best animals.

He fattens and eats or sells those which are not earning.

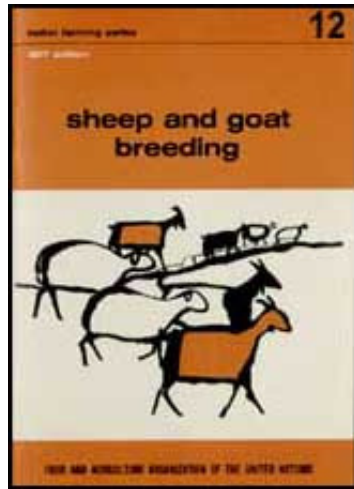
This is what is meant by selection. He knows his flock and knows what it earns.






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Better Farming Series 12 - Sheep and



Goat Breeding (FAO - INADES, 1977, 51 p.)

- ➔  How to sell and buy
 -  *(introduction...)*
 -  Organizing sales

Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

How to sell and buy

Choose the animals to be sold or bought.

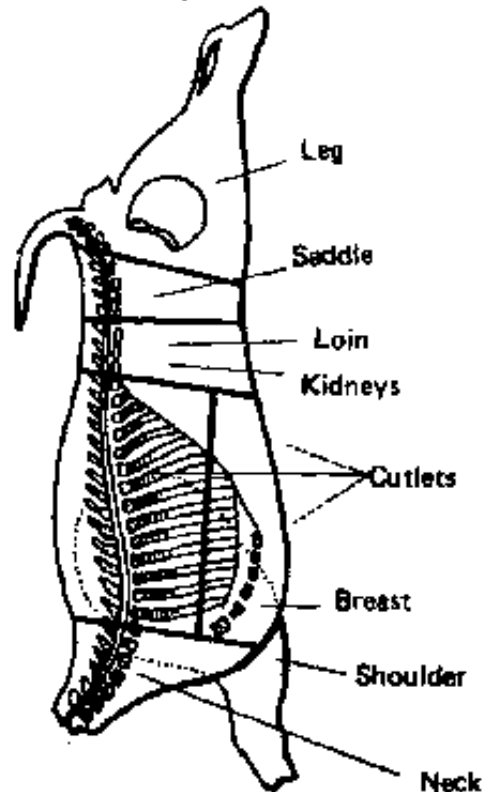
- All you have to do is pass your hand over the animal's loins

sad pinch its ribs.

If you can feel the bones, the animal has not got much meat, it is not fat.

If you do not feel the bones, if you feel the meat, the animal is good for selling or buying.

- But you must also look at the age.
- Animals are often sold alive at the time of important festivals.
- So you must always have fine animals for the chief festivals. At that time you can also sell old animals that have been fattened
- You must plan to fatten animals so that they will be ready for sale at a time when the price is high.



Sheep cut lengthwise (butcher's cuts)

Organizing sales

To earn more, it is not enough to work better. You must also sell better.

A farmer must think about the date when he will sell his animals.

You know that sheep and goats are sold at a high price at the time of certain traditional festivals. So organize your stock raising in order to have animals for sale at the festivals.

You may perhaps sell some animals at the beginning of the dry season, if you have not stored enough fodder for the dry season.

You know what animals to sell at that time: sterile ewes, old she- goats and old breeding animals.

Suggested question paper

FILL IN THE MISSING WORDS

The.....way of breeding does not take much but does not.....

The female of the ram is called the..... and their Young ones are called.....

The female goat is called the..... The young ones of goats are called.....

In Africa there is only one breed of wool sheep, the.....

When sheep and goats swallow grass it goes into.....

They bring back the grass to chew it. They are.....

They must be given food end all the year especially in the..... season.

Sheep and goats are kept by a and a or in a.....

The animals are vaccinated before.....

For fertilization the ewe is.....by the ram..... and the she goat bye the buck.

Young ones born at the same time are called a.....

The female suckles her young for about.....months.

From the.....week the lamb or kid can take other food.

Ewes can be fertilized from the age of.....months.

The ram should be at least.....months before serving.

Give a.....to each animal - it is the animal's name.

Making a good choice of breeding animals is called.....

ANSWER THE FOLLOWING QUESTIONS

Explain how ruminants use grass.

How can you tell if a sheep and a goat are fat?

Where are parasites found in an animal?

How can you see that a ewe is going to have Young?

Explain what took place when a ewe gave birth.

How are males castrated?

Why must a paddock and a shelter be made for sheep and goats?

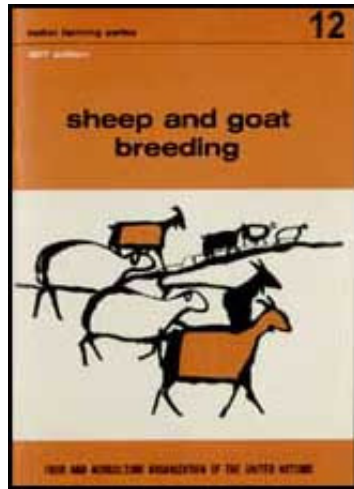
Why must breeding animals be chosen?



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Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977,




51 p.)

 (introduction...)

➔  Preface

 Traditional sheep and goat breeding

 A few words to understand the course

 Breeds of sheep and goats

 How to feed sheep and goats

 Care and housing of animals

 Giving the animals good housing

 Diseases of sheep and goats

 How sheep and goats reproduce

 Choosing breeding animals

 Knowing the flock and maintaining it



How to sell and buy

Preface

This manual is a translation and adaptation of "L'elevage des moutons et des chevres", published by the Agri- Service-Afrique of the Institut africain pour le developpement economique et social (INADES), and forms part of a series. Grateful acknowledgement is made to the publishers for making available this text, which it is hoped will find widespread use at the intermediate level of agricultural education and training in English- speaking countries.

The original texts were prepared for an African environment and this is naturally reflected in the English version. However, it is expected that many of the manuals of the series - a list of which will be found on the inside front cover - will also be of value for training in many other parts of the world.

Adaptations can be made to the text where necessary owing to

different climatic and ecological conditions.

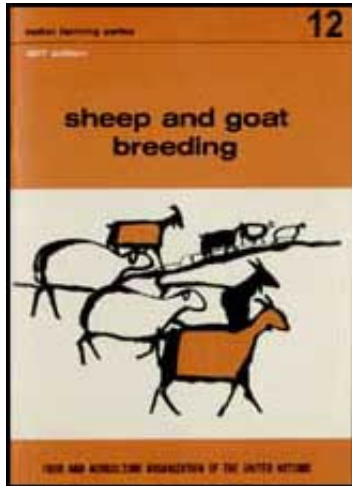
Applications for permission to issue this manual in other languages are welcomed. Such applications should be addressed to: Director, Publications Division, Food and Agriculture Organization of the United Nations. Via delle Terme di Caracalla, 00100 Rome, Italy.

The author of this English version is Mr. A.J. Henderson, former Chief of the FAO Editorial Branch.



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Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)



(introduction...)



Preface



Traditional sheep and goat breeding



A few words to understand the course



Breeds of sheep and goats



How to feed sheep and goats







Care and housing of animals



Giving the animals good housing



Diseases of sheep and goats

-  How sheep and goats reproduce
-  Choosing breeding animals
-  Knowing the flock and maintaining it
-  How to sell and buy

Traditional sheep and goat breeding

The traditional way of breeding sheep and goats does not take much work, but it also does not produce much.

It takes little work because the animals are not looked after; they are not fed, they are not given water to drink, they are not given any shelter.

But this way of breeding produces little; the animals are small, they are often ill, and their young ones often die.

The flock produces little meat for the family, the village and the country.

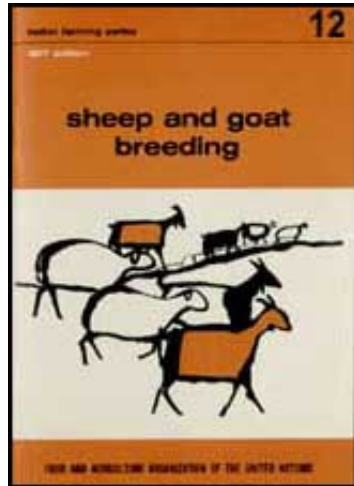
The flock produces little money.

The farmer spends little on them, but he also earns little.

If a farmer breeds sheep and goats in the modern way he can earn more money than before.



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Traditional sheep and goat breeding



A few words to understand the course



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How sheep and goats reproduce



Choosing breeding animals

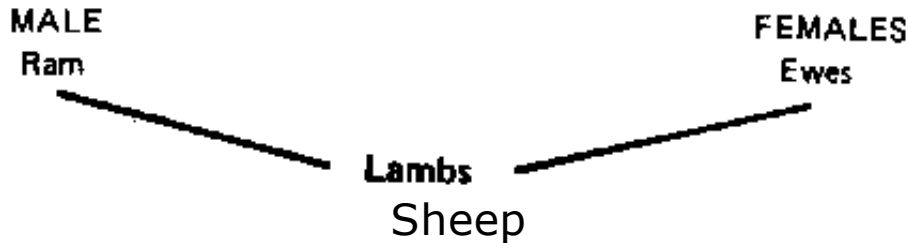
- ☐ Knowing the flock and maintaining it
- ☐ How to sell and buy

A few words to understand the course

A flock of sheep consists of:

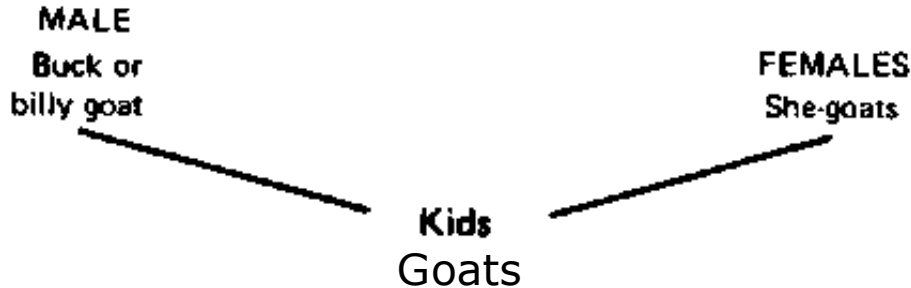
- 1 male: the male is called the ram;
- 20 females which have had young ones: the mothers are called ewes;
- young ones which are with their mothers: the young ones are called lambs.

SHEEP

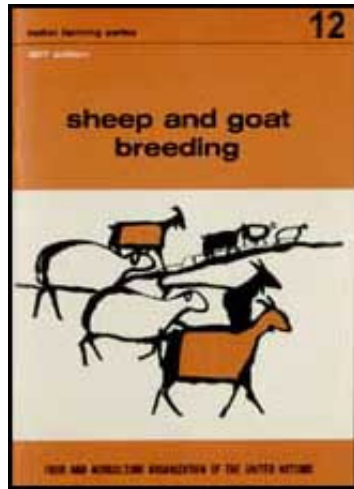


A flock or herd of goats consists of:

- 1 male: the male is called the buck or billy goat;
- 30 females which have had young ones: the mothers are called she- goats;
- young ones which are with their mothers: the young ones are called kids.

GOATS

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Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)



(introduction...)



Preface



Traditional sheep and goat breeding



A few words to understand the course



Breeds of sheep and goats



How to feed sheep and goats



Care and housing of animals



Giving the animals good housing



Diseases of sheep and goats



How sheep and goats reproduce



Choosing breeding animals



Knowing the flock and maintaining

it
 How to sell and buy

Breeds of sheep and goats

SHEEP

In Africa there are many well- adapted breeds of sheep.

Among them are:

- **A BREED OF WOOL SHEEP**

the Macina (Mali)

These are rather big sheep weighing 30 to 40 kilogrammes.

It is a breed that produces little meat and milk.

These sheep are raised for their coarse wool.

The wool is made into blankets.

- THREE BREEDS OF COARSE- HAIR SHEEP

- Moorish sheep

Nar variety These are big sheep that produce little meat. They are used for crossing with Astrakhan sheep to produce fur.

Touabir variety These are very big black and white sheep that produce a lot of meat.

- Peulh sheep

This is the commonest breed in west Africa.

Djallonquee variety

These are small black and white sheep that weigh 20 to 25 kilogrammes. They have short legs and are good meat producers.

Toronquee variety

These are bigger sheep, weighing 40 to 50 kilogrammes, white and brown in colour. They produce a lot of meat and the ewes give a lot of milk.

- Targui sheep

These have long legs, and can walk a long time in search of grass.

The big Targui sheep have mottled white hair.

The small Targui sheep have longer hair, brownish grey in colour.

The Targui are good mutton sheep because they produce a great deal of meat.

Attempts are now being made to cross them with European breeds, but foreign sheep adapt very badly.

GOATS

There are many breeds very well adapted to the climate of their regions.

The chief breeds are: Northern goats of the savanna country and Southern goats of the wetter, forested regions in the south.

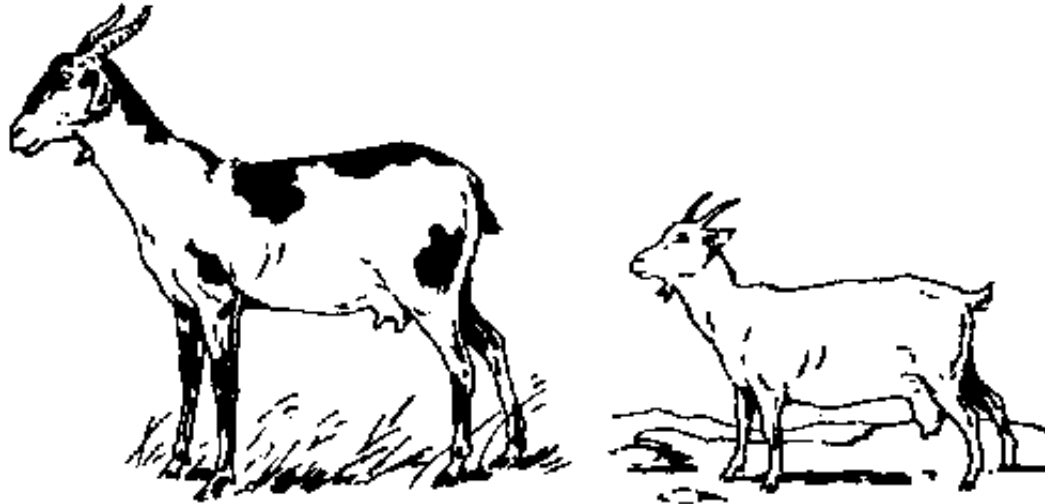
- Northern or Savanna goats

These are very big goats weighing between 25 and 30 kilogrammes. The buck has very big horns. The she- goats are

white with black spots. They can produce two kids in a litter, and produce a lot of meat and milk.

- Southern or Forest goats

These are small animals weighing 18 to 20 kilogrammes. The body is short and fat. They are brown in colour, with the tip of the tail and of the legs black or white. They are bred for their meat. They are resistant to sleeping sickness in the very wet regions.



Northern goat

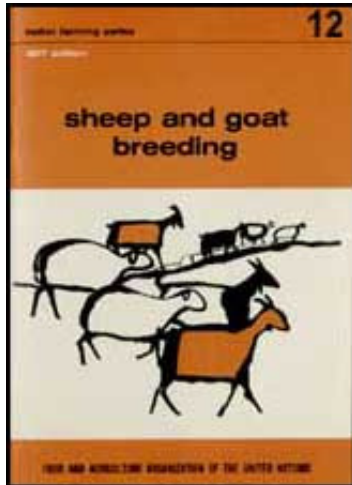
Forest goat


Northern goat; forest goat










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 Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

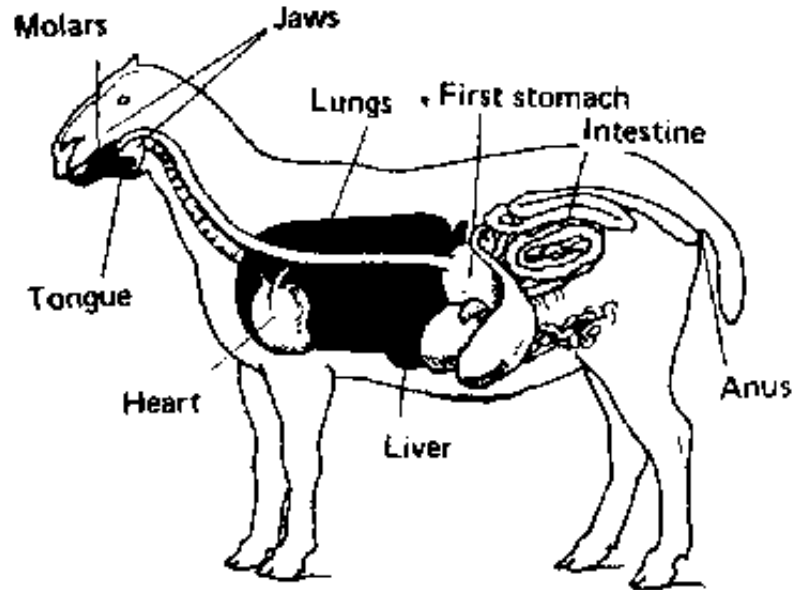
- ➔  How to feed sheep and goats
 -  The digestive system
 -  Feeding sheep and goats
 -  (*introduction...*)
 -  Balanced rations for animals
 -  Food Requirements of Sheep and Goats
 -  Sheep and goats need water

Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

How to feed sheep and goats

The digestive system

In order to understand how sheep and goats use grass we shall study their digestive system.



Digestive system of a sheep

The mouth

Open the mouth of a sheep or goat. You see two jaws and a tongue.

Toward the back of the mouth you can see large teeth with which the animal chews grass. These are called molars.

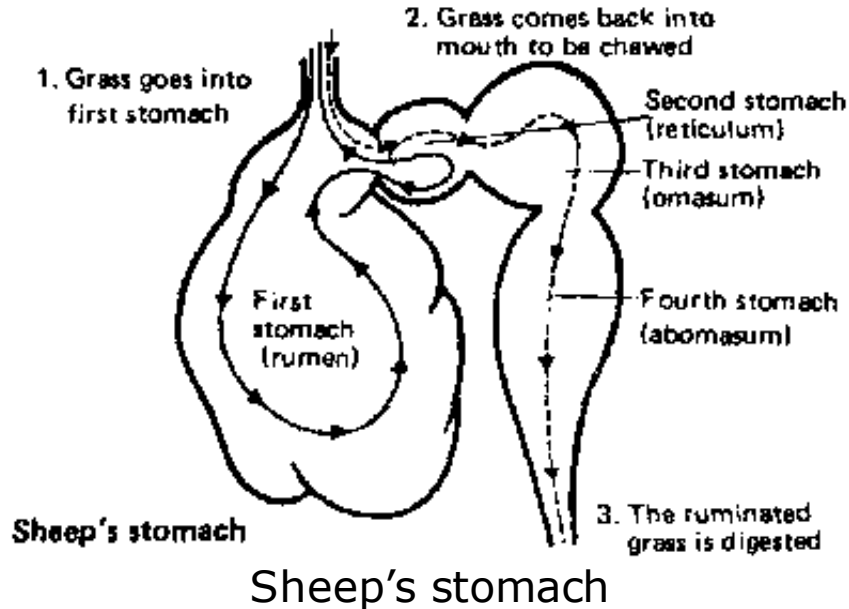
The upper jaw has no front teeth. The lower jaw has 8 front teeth. The older the animal is, the more these teeth are worn.

You can tell the age of a sheep or goat by looking at its front teeth.

The first stomach

Let us watch a sheep or a goat feeding.

To feed, a sheep or a goat grips the grass between the upper jaw and the teeth of the lower jaw. It jerks its head to pull off the grass. It does not chew the grass, but swallows it at once. The grass goes into the first stomach (or rumen)



Sheep and goats ruminate.

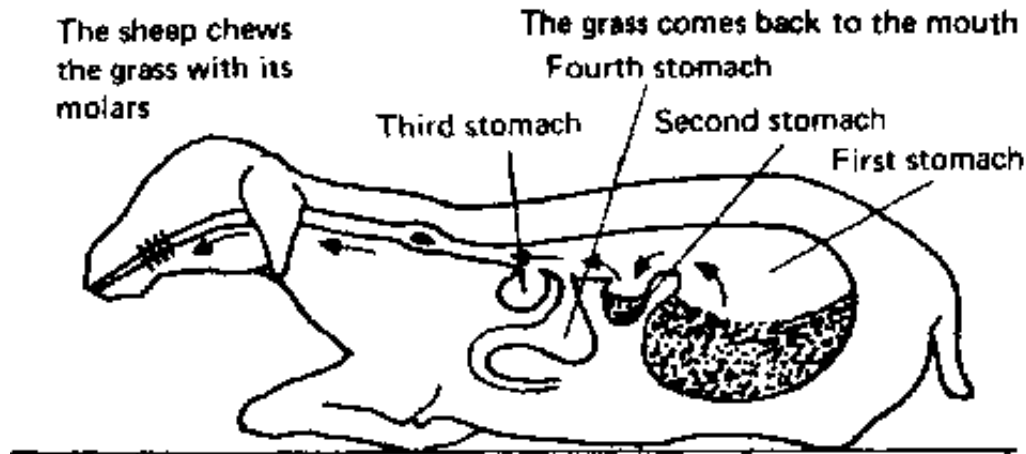
When sheep and goats have filled the first stomach, they often lie down.

But they go on moving their jaws. They are ruminating.

The sheep and the goat bring up a little grass from the first stomach into the mouth.

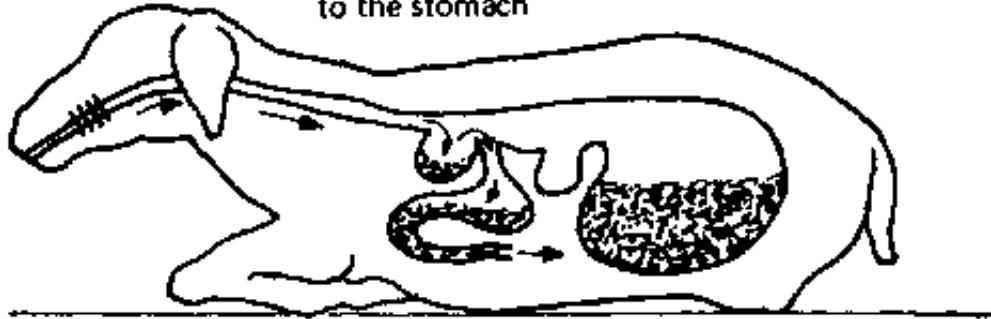
They chew the grass for a long time with their molars.

When the grass is well chewed, they swallow it again; but this time the grass does not go into the first stomach, but into the other parts of the stomach.



A ruminating sheep: the grass comes back to the mouth

The chewed grass goes back
to the stomach



A ruminating sheep: the grass goes back to the stomach to be digested

Sheep and goats can ruminate well when they are quiet and lying down.

Animals that ruminate are called ruminants.

Goats, sheep, cows, deer and camels are ruminants.

Feeding sheep and goats

They must be given enough food.

If an animal does not get enough food, it does not put on weight.

In the dry season there is often not enough food and animals lose weight.

They must be given rich food.

Ruminants eat grass.

In grass they get what is needed to build their bodies.
But they can be given as well certain very rich foods which are called feed supplements.

A sheep or a goat raised for meat should grow quickly. Then it can be sold faster and you earn money faster.

A ewe or a she- goat that is having young ones needs good food (see pregnancy requirements in Booklet No. 8, page 21).

Then she can feed well the young in her womb which will later drink her milk.

If the mothers have plenty of milk, the young ones grow better and faster.

In order to give animals enough food all the year round, the flock is moved from place to place. When there is no more water and grass in one region, the flock is taken to another region where there is still water and grass.

In the dry season sheep and goats can feed more easily than cattle. They make better use of the grass, because the sheep cut the grass closer to the ground, and the goats pull up the grass.

You can feed sheep on pasture where cattle have already fed, because sheep eat short grass. But they leave nothing behind them.

You must not let these animals feed in very wet places, because they catch diseases of the feet and body.

A good shepherd knows how to move the animals; he has a good dog to help him.

Then the flock is well fed, it does not catch diseases; the little ones grow up and do not often die.

During the rainy season it is easy to feed animals well. Grass grows quickly, there is a lot of it, it is young and nourishing.

During the dry season, animals are badly fed. The grass is hard and scarce, the stems are tall, the leaves are dry. The animals won't eat this grass. They are short of food, they get

thin and sometimes die.

During the dry season it is necessary to give the animals a feed supplement.

Balanced rations for animals

Rations for lambs of 5 months and over, and for breeding males.

In the rainy season an animal eats about 2.5 kilogrammes of grass a day.

In the dry season, give:

First ration: 1 kg of hay and 500 grammes of silage. (See Booklet No. 8, page 28).

Second ration: 1 kg of hay and 100 grammes of cooked

cassava.

Third ration: 1 kg of silage and 200 grammes of rice bran.

Fourth ration: 1 kg of hay and 100 grammes of rice bran.

Fifth ration: 1.5 kg of silage and 150 grammes of cooked cassava.

If you want to fatten an animal for sale or for eating, add 350 grammes of oil cake cottonseed, copra or oil palm kernel.

Oil cake is costly, but it makes animals put on weight and fatten quickly.

Do not give the same rations to females and their young ones: their needs are different. Instead, give the following rations.

In the rainy season:

Pregnant ewe or she- goat weighing 30 kg:

2 kg of grass

100 g of rice bran

300 g of oil cake

Ewe or she- goat suckling young of 0 to 4 weeks:

2 kg of grass

400 g of cooked cassava

400 g of rice bran

600 g of oil cake

Ewe or she- goat suckling young of 5 to 10 weeks:

2 kg of grass

200 g of cooked cassava

400 g of rice bran

600 g of oil cake

Ewe or she- goat suckling two young ones of 0 to 4 weeks:

2 kg of grass

900 g of cooked cassava

500 g of rice bran

600 g of oil cake

Ewe or she goat suckling two young ones of 5 to 10 weeks:

2 kg of grass

700 g of cooked cassava

500 g of rice bran

600 g of oil cake

Supplementary note

Food Requirements of Sheep and Goats

Animal	Feed units	Digestible protein (Grammes)
Maintenance requirement		
Sheep, goats		
adults of 20 kg	0.3	10 g
adults of 30 kg	0.3	15 g
Maintenance and production requirements		
Pregnant ewe and she-goats		
of 20 kg	0.6	80 g
of 30 kg	0.6	90 g
Ewe of 30 kg suckling		
1 lamb of 4 weeks	1.6	160 g

1 lamb of 10 weeks	1.4	160 g
2 lamb of 4 weeks	2 3	160 g
2 lambs of 10 weeks	2.1	160 g
She-goat having 1 litre of milk	0 7	75 g
She-goat having 2 litre of milk	0.9	140 g
Maintenance, growth and fattening requirements		
Lamb of 2 months	0.6	60 g
Lamb of 3 months	0.9	80 g
After weaning, beginning of fattening	1.0	40 g
After weaning, cad of fattening	1 2	50 g

Giving a feed supplement and mineral salts

When food is short, when the grass is hard, animals must be given a feed supplement.

When animals are reproducing, when the females are pregnant, when they are giving milk, they must be given a feed supplement.

You can, for instance, buy meal for sheep and goats. It is sold commercially, but it is dear.

You must also give mineral salts, such as a licking stone. One kilogramme contains: 400 g of salt 150 g of calcium, 80 g of phosphorus as well as other mineral salts. Or you can give native soda. Put the salt in the water, in hay and silage.

Mineral salts are needed to form the animals' bones.

Sheep and goats need water

Sheep and goats get thin during the dry season because they are not well fed, but also because they do not drink enough. A sheep can drink 5 to 6 litres of water a day.

If ruminants do not drink enough, they cannot digest grass.

Animals can drink:

- in their shelter: from a hollowed- out tree trunk, from a barrel cut in half, from a concrete trough. Their drinking places must be always very clean.
- at streams or rivers: Make sure that the water is clean and clear;. there must be no mud in it.

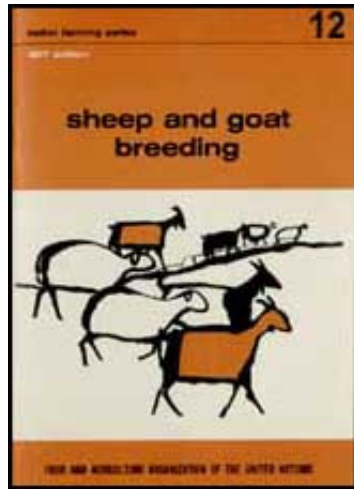
Sheep and goats easily catch diseases from water.

It is important:

- to give the flock every day enough water;
- to give water that is as clean as possible;
- to give this water in a clean place;
- not to let the sheep and goats go into the water. They can catch diseases from it.



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☐ Care and housing of animals



Watching over sheep and goats



(introduction...)



Why animals need a paddock



How to watch over animals at pasture

Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

Care and housing of animals

Watching over sheep and goats

To be well fed animals must be watched over.

A farmer who leaves his animals to roam freely, who does not watch over them, has not much work to do. But his animals do not grow quickly. Animals do well, and have good health, if they are watched over.

If animals are left at large, they do not make good use of the grass.

They eat the good grasses and leave the less good ones. The good grasses are always eaten before they make seeds, and so they cannot multiply.

On the other hand, the weeds are not eaten, they grow and make plenty of seed, and they all multiply.

After the animals have finished grazing, the uneaten grass is cut down.

They damage crops.

Animals at large go into plantations and destroy the harvest.
Farmers have to make their fields a long way from the village.

So farmers lose a lot of time going to work.

The animals may hurt themselves or get diseases.

They go to the streams and catch parasites or diseases.

Why animals need a paddock

It protects the animals from wild beasts and thieves, from wind, sun and rain, from diseases.

In the village animals are kept in a traditional enclosure.

There are often too many animals. The ground is dirty and

wet. The animals catch diseases. They cannot lie down to ruminate. They make poor use of their food.

Their wounds heal badly, especially those of the feet. Diseases increase. The little ones are often ill.

You cannot make good manure, though the dung of sheep and goats is good for manure. In a traditional enclosure there is only a mixture of earth and droppings. This mixture is less good for the fields than real manure.

How to watch over animals at pasture

- With a herdsman and dog

It is best for the farmer himself to watch his animals.

He can also ask some member of his family to do it.

Several farmers who know one another well may put their flocks together and jointly pay a herdsman.

The herdsman of a flock of sheep is called a shepherd.

A herdsman who does his work well must know his animals. He can see at once if they are ill. He leads them to good pasture. He does not cheat the farmer.

To help the shepherd, a dog can be trained to lead the animals and prevent them from scattering.

A well- trained dog is very useful to the shepherd.

- In a paddock

Pastures should be fenced, otherwise the animals get into plantations and destroy them.

A field 100 metres on each side is needed to feed about 8 adult animals.

Do not leave the animals too long in the field, or the grass will not grow again.

Divide the field into seven parts.

Every five days, or when you see that the grass has been well eaten, move the flock to another part.

When the last part (the seventh) is finished, go back to the first part where the grass has grown up again.

The animals manure the soil of the field with their droppings.

You can make fences by planting little trees very close together; by planting two rows of sisal or by planting thorns.

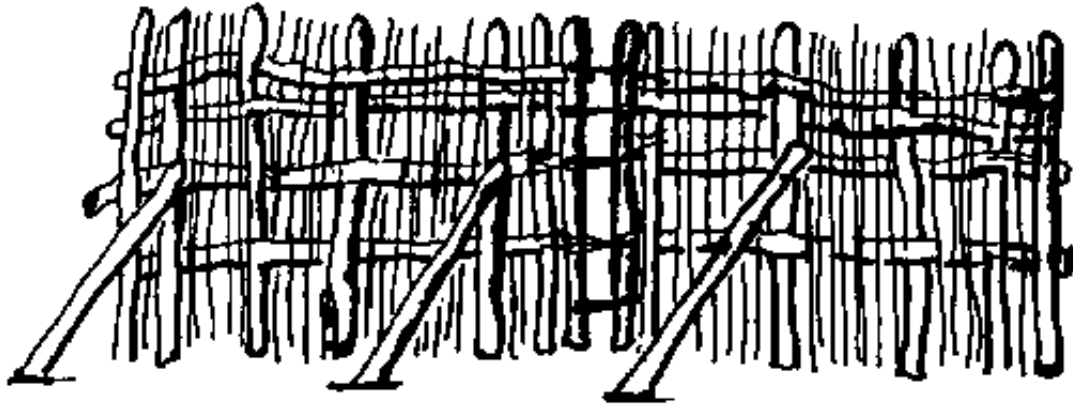
Leave a gate 2 metres wide.

In a paddock it is easier to watch over the animals. They cannot spoil the crops; they use all the grass of the pasture.

Before dividing the field into seven parts, look where the trees are in the field, so as to shelter the animals from rain and sun.

When you have had a good look, divide up the field. Each part should have a tree, and should not be far from the path.

To keep the animals in one part, you need movable fences made of wood. Make them 2 to 3 metres long and 80 centimetres high. Move the fences when you put the animals in another place.



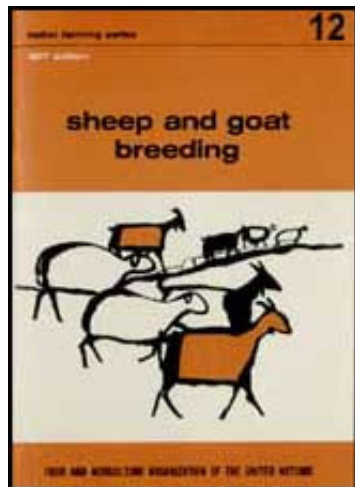
Making these fences requires money and especially work.


It is useless to do a lot of work, and spend money, if you do not at the same time improve the animals' food, the animals' housing, the care of the flock.







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 Better Farming Series 12 - Sheep and Goat Breeding (FAO - INADES, 1977, 51 p.)

- ➔  Giving the animals good housing
 -  (introduction...)
 -  Where to put the shed
 -  How to build the shed

**Better Farming Series 12 - Sheep and Goat Breeding
(FAO - INADES, 1977, 51 p.)**

Giving the animals good housing

Make a building next to the paddock.

A modern building of concrete and sheet iron is too dear.

You can improve the housing of sheep and goats, which is called a sheep shed or goat shed, without spending too much money. Use local materials.

Before spending money, you must reckon what the money will produce.

If the money spent produces little, it is not worth while. Do not do it. You will become poorer, and will be discouraged.

Where to put the shed

Sheep and goats must not be put in a dirty, wet place.

Choose a dry place, on a little rise.

If you build the shed in a low- lying place, rain water and urine cannot flow away.

Put a layer of concrete (cement and gravel) on the ground.

Build the shed where the wind will take the smell away from the house.

How to build the shed

To protect the animals from the wind, build a wall of earth up to the roof on the side where the wind usually blows.

To protect the animals from sun and rain, make a roof of straw or palm leaves.

Put a gutter on the lower side of the roof.

Make the gutter of a bamboo cut in half lengthwise, or of hollow wood.

Slope the gutter so that the rainwater runs into an old drum.

When the shed is finished, make three stalls inside:

- A small stall for the male or males.

The males must not be with the herd, otherwise they will fertilize the ewes when this is not wanted. Leave them with the ewes when you want the males to fertilize them.

- Two large stalls: one for the females which have young ones, the other for females which have no young ones, and for castrated males.

Put straw on the ground This straw, mixed with droppings and urine, rots and makes manure.

When the straw is partly rotted, put clean, dry straw on top of it.

See that the animals are always on clean straw.

When there is a lot of manure in the shed, take it out.

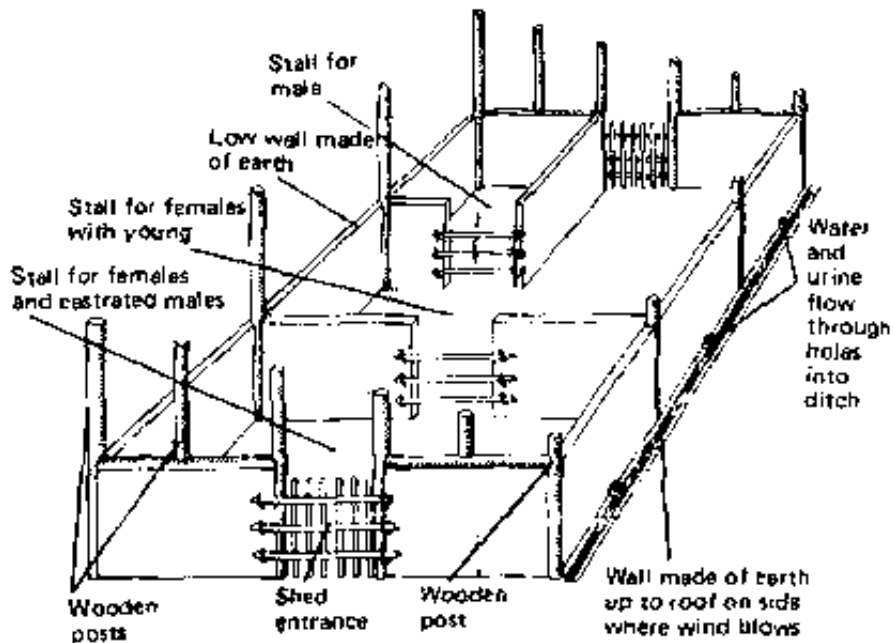
You can take it out to the field and plough it into the ground at once.

Or you can make a heap by the side of the shed, and take the manure to the fields when you are ploughing.

Sheep and goat dung makes good manure. It adds a lot of organic matter and mineral salts to the fields.

Use a cart to carry straw and manure.

To show the inside of the shed better, the roof has been left out of the drawing. It is made of straw or palm leaves. The roof goes beyond the walls so that they will not be damaged by rain.



A sheep shed

The animals must not be crowded in the shed. If they are crowded, they do not have enough room to lie down, they ruminate badly, they hurt themselves, they get ill.

Two adult animals need a space of 1.5 square metres. For example, put 6 adult animals in a shed 3 metres by 3 metres.

The doors of the shed must be wide. Make them 2 metres wide, then the animals will not be crowded in going through, and will not get hurt.

Disinfect the shed every two weeks with water and potassium chloride or water and cresol.

- Alongside the shed make paddocks where the animals can walk about.

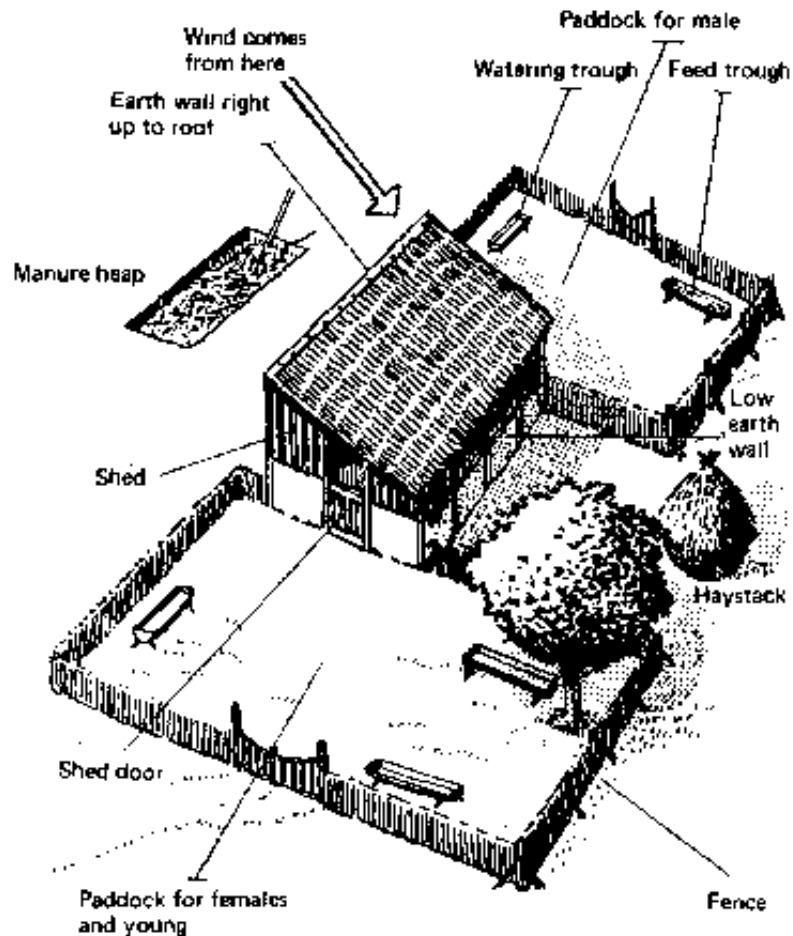
Make:

- A small paddock for the males next to their door; the males must not be with the flock.
- A big paddock for the females and their young; the young ones are left with the rest of the flock when they are between 1 and 2 weeks old.

In the paddocks put:

- Feed troughs to give the animals their feed supplement.
- Watering troughs from which they can drink.

Feed troughs and watering troughs are made of hollowed tree trunks or drums cut in half.



Shed and paddocks



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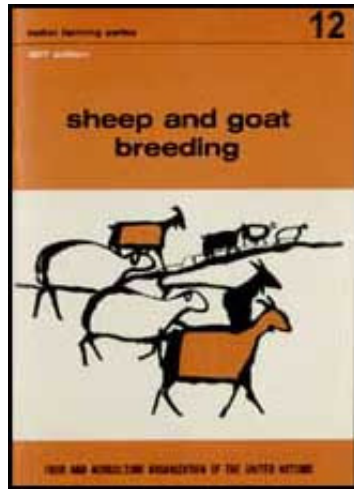
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Diseases of sheep and goats



How to look after sheep and goats



Parasites



Infectious diseases

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Diseases of sheep and goats

How to look after sheep and goats

Vaccinate animals before they are ill.

Vaccination protects a child from disease; you do not wait for the child to be ill.

In the same way, vaccination protects an animal from disease; do not wait for the animal to be ill.

Vaccination tires animals a little, but it is not dangerous if they are well fed and well housed.

There will be fewer diseases if the animals are well fed and kept really clean.

Parasites are the worst problem in sheep and goat breeding.

Protect animals from parasites. Give them clean water to drink. Do not leave the flock near streams. Do not keep more than 20 animals together. Parasites and contagious diseases multiply in big flocks.

A diseased animal gives the disease to all the flock.

Take special care with the young ones and mothers; they are the most delicate.

Parasites

Skin parasites

- Mange or scab

The animal scratches, its hair comes out, scabs form.

Wash the animals with warm water and soap.

Soak a piece of cloth in mineral oil and rub the animal.

Repeat every day.

- Ticks

They stick to the animal's skin and suck the blood.

Wash the animal with water and a pesticide such as toxophene.

Rub the animals regularly every week

Parasites in the body

Usually they live in the digestive system, in the lungs or in the nerves.

The parasite eggs are left by flies in the pasture.

These eggs develop in the grass and are eaten with the grass by the animals. Then they develop in the animal's body.

Parasites living in the lungs, such as lung worms, are controlled by the use of aerosols or with phenothiazine.

Parasites living in the digestive system, such as strongyles, are controlled with phenothiazine before the animal is ill.

Ask the animal husbandry service for advice on treating liver rot (liver fluke infestation), coccidiosis and tapeworm.

Parasites living in the brain cause gid (or sturdy). Animals walk like drunk persons. They must be slaughtered before they die.

When parasites have got into a pasture, do not take animals there for a long time. The parasite eggs hatch out, but as there are no animals, the parasites cannot attack them and have nothing to eat. So they die.

The animals should not feed in wet pastures because that is

where parasites live.

Infectious diseases

Enterotoxaemia

This is a serious disease of lambs.

They should be vaccinated to protect them against it.

Anthrax

This disease infects all animals and man.

Vaccination beforehand is needed, otherwise all the animals die.

Animals that die of this disease must be burned. The blood of the dead animal is black.

People must not eat the meat of animals with anthrax because they can catch the disease and die.

The animal husbandry service must be informed.

Foot- rot

The horny parts of the foot are destroyed and the animals limp.

The animals can be cured in the following way: dig a little ditch at the door of the shed, and fill the ditch with water and an antiseptic such as formally in the correct proportion. Then make the animals walk through the water. Their feet will heal up.

Foot- and- mouth disease and sheep- pox

The animals will not catch these two diseases if they are

vaccinated beforehand.

Do not put the animals in marshy pastures or in dirty sheds. The sheds must be cleaned out. This is where diseases and parasites live.

