MANAGING A SUCCESSFUL GOAT BREEDING FARM

By

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Introduction

Goat farming is steadily becoming an attractive livestock enterprise, drawing the attention of most Ugandans irrespective of social class. This is due to several factors. First, a flock of goats grows at a fast rate due to their short generation interval, short kidding interval and a litter size greater than one. Goats can also easily be transported and sold due to their small size and so they always come in handy for domestic needs such as school fees, medical bills and other necessities. Their small size also means that they can utilize limited feed resources, in terms of quantity and quality, which would normally not be sufficient for one adult cattle.

When farmers approach me for advice on how to start goat farming, I tell them to obtain the initial breeding stock from known breeders and not to buy goats from open markets. Goats in the open markets are usually destined for slaughter. This implies that the sellers would have selected the poor goats such as those with reproductive challenges, repeated health issues, notorious ones, old goats, etc. Therefore, when we buy startup flock from the open market, we are essentially inheriting problems which the seller wants to get rid of.

The question is whether whoever is involved in goat breeding is actually a goat breeder. There are some routine basics that ought to be followed for one to qualify as a goat breeder without which the farm becomes a "domestic open market". This issue will touch on the basics for managing a successful goat breeding farm. The focus will be initially on meat goat breeds. As much as the general principles are the same, emphasis will be placed on managing a successful dairy breeding farm in the subsequent issue.

General goat husbandry for a goat-breeding farm

Set the daily routine for the stockmen

It is important for the stockmen to have a routine against which their performance is assessed and appraised. Depending on the location of the farm, the routine of the stockmen should be clearly spelt out right from the point of hire. This will help to minimize losses because the stockmen will

be accountable for all the happenings at the farm. It is important to hire stockmen that can read and/or write because the records that they keep will enable the breeder make important decisions. For efficiency of the breeding farm, one stock man should not take care of more than 100 goats. At the point of hire, the stockmen need to be screened and treated against diseases such as TB or any other important zoonotic diseases.

General Routine for herdsmen

1. Open for the goats by 6 – 7am
2. Ensure that all kids in a particular flock have suckled enough. This also involves finding foster mothers for the rejected kids as well as bottle feeding using cow milk in cases of failure to find foster mothers. One of the leading causes of kid mortality is hypoglycemia which is a result starvation as a result of kids not suckling enough milk.
3. Weigh the kids that may have been produced in the night or that morning and ensure proper disposal of the afterbirth. This is a very important routine for a breeding farm. New mothers need to stay close to their kids for at least 24 – 48 hours. You could have a nearby paddock or cut and carry feed for 3 to 4 days post-kidding to serve this purpose. Some breeding farms have digital weighing scales like the ones in human hospital wards to help determine the weight of kids at birth. Weight at birth is important for a breeding farm as it acts as a basis for selecting future breeding bucks.
4. If the goats are being managed on range, the adult goats should be taken for grazing after the dew has subdued to minimize worm infestation as well as prevent lesions on the muzzle. This could be between 11am to 1pm in most parts of Uganda. About 4 – 6 hours of feeding on shrubs is good for goats per day. The number of hours can be increased if the grazing area is predominantly short grass. Under normal circumstances, goats should browse for at least 60% of the feeding time.
5. When taking animals for grazing, it is important to leave kids in the shelter or in an uncontaminated nearby paddock specifically gazetted for kids. Their immune system is not developed well enough to handle the disease burden associated with contaminated pasture. They can be allowed to nibble on grass at about 3 weeks.
6. Identify the sick animals and follow up on the animals that need attention. Information on the health of the flock should be entered into a herd health book for ease of follow-up.

7. There is need to have a prompt reporting system to capture any events that have potential to deteriorate into grave losses. The stockmen should be able to report in time if there is anything worth reporting about. They also need to be trained on how to populate the various records as these are extremely important for analysis especially when selecting goats for future breeding.

Maintenance of General Hygiene

The goat-house MUST be cleaned daily immediately after the goats are let out into the exercise yard. This is aimed at maintaining a fresh atmosphere in the house. Accumulation of droppings and urine predisposes the goats to respiratory infections.

Disease Identification

Herdsmen must be familiar with signs of ill health in goats and must report as soon as they notice anything unfamiliar. Signs of ill health may include; loss or reduced appetite; not chewing the cud; dullness; loss of body conditions; rough or standing/erect hair coat; unpelleted faecal droppings; uncoordinated gait (walking); sluggishness especially during grazing etc.

Goat Identification and Record Keeping

For any livestock recording to be successful, animal identification is paramount. Record keeping is the backbone or basis for selecting parents of future generations. Selection of parents is based on their own performance and that of their descendants and ancestors. The information obtained from herd recording will generate records of descent of goats. This is envisaged to form the basis for certification of goats as pedigree animals.

I propose printing of ear tags right from the manufacturer using indelible ink in a groove. The system of numbering should be logical. For example, a goat can have the year of birth, sex, order of birth and breed indicated on one tag. For instance, if a male goat is born in 2018 and it is the 23rd kid to be born in the entire flock it can have the number 18123, where “18” is the year of birth, “1” is the code for male kids (the code for female kids could be “0”) and “23” being the order of birth in the entire flock. A breeding farm needs to have codes for the various breeds and breed percentages for ease of traceability.

Herd Categorization

For ease of management by the farm workers, the flock needs to be divided into different categories based on age and physiological status. Some farms with enough space and more than one breed go ahead to categorize based on breed and blood percentages. Each of the categories have different needs and so may need specialized attention at that level. Assuming that the farm has only one breed, the various categories may include:

1. **Kids (0 – 4 months)** – this is the most important group of the goat flock for it is from among these that the future breeding goats will be recruited. Housing and nutrition are the most critical needs at this stage. For some breeding farms, this category of goats is assigned a special stockman. Out of experience, when kids are managed by women they tend to thrive better than when they are managed by stockmen who are men. They are given identification tags at this stage against their mothers for ease of pedigree traceability.
2. **Growers (4 – 8 months)** – females are separated from males at this stage. The unwanted males are castrated and fattened for slaughter at a future date.
3. **Nannies (8 – 14 months)** – these are female goats which are mature enough to be mated. By this time the breeders know the type of buck they would like to use for mating which females. The buck is therefore introduced at this stage.
4. **Does (14 months and beyond) –** these are female goats that have at least kidded once. These need to be given special feeding that takes care of the various physiological stages such as lactation, pregnancy, flushing, steaming up, etc.
5. Buck stud
6. Sick bay

Other routine activities for the stockmen

Other activities that must be carried out routinely on a breeding farm include castration of unwanted males; routine culling; tick control practices; disbudding / dehorning; weighing of goats and deworming among others. The stockmen can be trained to perform some of these simple tasks as part of capacity building for the farm employees.

Breeding Calendar and Timing of Activities on the Farm

Most breeding farms in Uganda are currently employing the assortive mating scheme where breeding females are selected at the beginning of the year, flushed and a desired buck is introduced to run with the selected flock for about 45 days. The buck to female ratio should be 1 buck for 25 – 35 females. The ratio can be higher for more experienced mature bucks. By the 45th day one is sure that most females have been served including the repeat breeders. At this point the buck is withdrawn from the females and the pregnant flock is managed separately. While being managed, the care takers are supposed to watch out for complications associated with pregnancy such as early embryonic deaths and abortions. About 4 – 6 weeks prior to delivery, the pregnant does are put on a special supplementary diet (steaming up) and also vaccinated against *clostridium perfringens.* At this stage they can also be dewormed, with particular attention to the kind of dewormer used since some of them are known to cause complications during pregnancy. A veterinarian can guide the breeder on the appropriate dewormer to use.

I advise breeders to hire female stockmen to take care of the heavily pregnant 'does' and the newly-born kids. This is the most critical stage, so if it is not properly managed, the herd will never grow. My experience shows that female stockmen pay attention to detail, an attribute highly desired at this stage of production. When the kidding season starts, a caretaker should be present to weigh the kids, help them suckle the colostrum and offer assistance during difficult births, among other things.

All male kids that weigh below 2kg at birth should not be used for breeding. They are candidates for castration at a later date. The breeding bucks should be weighed every two weeks for the first three months and then monthly for at least one year. From this data the breeder is able to select super bucks based on the average daily weight gain. It is such bucks that will fetch the breeder thousands of dollars because there will be evidence of performance based on the records. NAGRC&DB can also help such farmers to have their goats registered and entered into the national stud book.

General Herd Health Management and Biosecurity Measures

General herd health involves maintaining a set of biosecurity measures and calendar at the farm to prevent losses associated with diseases. Breeders are advised to maintain a robust health calendar in consultation with the area veterinarians. In areas where NAGRC&DB has ranches, the following calendar can be followed:

Vaccinations

- *Clostridium perfringens* – twice every year
- *PPR* once every 2 years
- *FMD* once every 2 years
- *CCPP* – once every 2 years
- *Brucella mellitensis* – all Nannies and bucks before mating

Drenching / Prophylactic treatments

Deworming: this should be carried out every 3 months. NAGRC&DB staff can help in carrying out regular fecal egg counts and efficacy studies to determine the appropriate type of dewormers to use at any one moment.

Coccidiostats: Coccidiosis is the culprit for most of the diarrheas among kids. Coccidiostats should be given to all goats between 1 – 6 months of age. The dose depends on the prescription by the area veterinarian or NAGRC&DB staff for the farmers staying near the government ranches.

Hoof care: This is done by trimming and immersion into copper sulphate or formalin (whichever is accessible)

Ecto parasite control

In order to control tick-borne diseases, it is advisable to spray / dip goats at least once a week using an effective acaricide. Regular analysis of the dip wash will help determine which acaricide to use at any one moment.

Screening of the breeding animals for diseases that might interfere with the cycle

Annual screening of all breeding animals against abortive and reproductive diseases should be included in the annual calendar of activities. In case there are any entries into the herd, they should be screened and isolated before mixing them with other goats in the flock. The area veterinarian will help to plan the course of action after obtaining the screening results.

Safety of stockmen

The herd health program should also include safety precautions for the farm staff especially in preventing zoonotic diseases such as brucellosis and TB.

Subsequent issues will discuss **general goat nutrition**, **kid management**, **managing a dairy goat farm, artificial insemination in goats, economics of goat farming/breeding** aimed at helping farmers reap maximum benefits out of goat breeding.

Goats are given special diet at the time of mating and also prior to kidding

The exercise yard holds the goats while their shelter is being cleaned

Stockmen should ensure that all the kids receive enough quantities of milk for srvival

When the rest of the flock is out for grazing, the kids remain at the shelter until they are about 3 weeks of age when they start nibbling on grass