Kabulya Smallholders' Goat
Best Breeding Practice

Introduction

The rules for breeding Kabulya Smallholders' Goats ensure that the breed is maintained and encourage breed improvement, but in themselves they do not guarantee that fast progress will be made. These recommendations are intended for people who are active in developing the breed.

Unless otherwise indicated the guidelines are appropriate for both large individual breeders and also groups of smallholder farmers.

Best choice of male

Very few males are needed, compared to the number of females. But the males make an equal contribution towards the next generation. That makes it very important to choose the very best male for breeding. There may be many males to choose from that are all registered with the same Kabulya Grade, but they will not all be the same.

The most important factor in choosing the male is the amount of milk that its mother gives. If the milk production of the two grandmothers are also known, or the milk production of any full sisters, then that can also be taken into consideration. Of all the males with the highest available Kabulya Grade, consider the 3, 4 or 5 which come from the best families in terms of milk. The details for doing this comparison mathematically is given later in this document. But if you are not comfortable with the mathematics, still make a judgement on what you know about the milk production of the relatives.

Do not consider a male if the mother's milk is unknown.

Having made a 'short-list' by considering the relatives' milk production, consider the health and growth rate of the males on the short list. Select as the main breeding male the one that is fast growing, visibly healthy and has least history of sickness.

Worm tolerance

One of the main reasons for the development of the Kabulya breeds is the poor worm-tolerance of exotic goats compared to local goats. If you thoroughly deworm all your male goats, you will have no way of finding out which of them is worm-tolerant. For most situations the 50% dairy crosses are tolerant enough of worms that you can avoid using deworming medicine. However, if a particular goat seems to badly affected by worms it can be dewormed. But when it recovers, it should be fattened and sold for meat, not used for breeding.

For the males which never needed deworming, they all have some worm-tolerance, but the fastest-growing and most healthy looking one(s) are likely to be the ones with the best tolerance. Use those for breeding, because they will pass on that tolerance to their offspring.

The signs of a goat needing deworming are: poor growth, thinness, rough fur and anaemia. Anaemia can easily be tested by pulling the lower eyelid down and looking at the back of it. It should be a full red colour, but if it is pale then the goat is anaemic. If you regularly check your goats in this way, you will easily develop skill at this test.

In some parts of Uganda, where many goats share the same grazing area, there may be so many worms that the cross-bred goats all need deworming. In that case, deworm periodically but keep the deworming treatments to a minimum. Again, if any individual goat seems to be seriously affected, deworm that one more intensively and do not use it for breeding. The remaining goats can be compared in just the same way as if they were not being treated.

Avoiding in-breeding

If the total number of goats that you own – whether as an individual or a group – is more than 200 breeding females, you should be able to avoid in-breeding without getting any males from outside. You need to have 6 or 7 males for breeding. Each male has its own group of females. After the males have been used for a while – no longer than 1½ years – sell off the mature males and replace them with young ones. But place each young male in a different group from the one that it was born in. If one of the older males is particularly good, and you want to keep it for breeding, it should be moved to a different group and only used for one more period, after which it must be sold.

If your total number of goats is 500 breeding females or more, you do not need such very careful division of the goats into groups. But still change the males frequently and try to avoid having males mating with their close relatives.

If your total number of breeding females is less than 200, you will need to sometimes get males from elsewhere. The fewer females, the more often you need to get unrelated males. With 30 or fewer females you only need one male, and you will need to get a new one from outside after every 12 or 18 months. Take care what you buy a goat from outside, or if you exchange one of your young males with another group – that other group should be taking the same care in its breeding programme as you are.

Exact calculation of milk score

"Milk production" is whatever measure of milk production you have. The best would be the total milk produced in the first 6 months of milking. But if the only measure available is the one for the Kabulya assessment – one days' production 4 months after the start of lactation, then use that.

For simplicity we will only consider males where the mother's milk production is known. We will also only include close relatives – that is grandparents, full sisters (same mother, same father) and maternal half-sisters (same mother, different father). We will not consider half sisters where the father is the same but from different mothers – there will be lots of those, but they are likely to be the same for most of the males being considered.

We will make two totals, and then divided one by the other. The first total we will call TotalMilk. The second total we will call TotalGoats. For each male being considered, calculate its milk score as follows.

1. Set TotalMilk to the twice the mother's milk production and set TotalGoats to 2.
2. For ***each*** full sister add twice its milk production to TotalMilk and add 2 to TotalGoats
3. For ***each*** known grandmother, add its milk production to TotalMilk and add 1 to TotalGoats
4. For ***each*** maternal half-sister, add its milk production to TotalMilk and add 1 to TotalGoats
5. Divide TotalMilk by TotalGoats to get the score for that male
6. Check that your answer is sensible – it should be somewhere in the middle of all of the relatives' milk production.

If you are not confident with the maths, or seem to be getting silly answers, don't worry. Just make a wise judgement – simply compare the milk production of the mothers; but if one of the males has very good grandmother(s) or very good full sisters, be a little bit 'biased' towards that one.

Colour

The Breed Rules for the KSG do not include any specifications for appearance. However, in order to create a breed identity, regional groups are encouraged to set their own target appearance.

Selecting for colour will inevitably slow down the selection for milk production and disease resistance. However, if it is done carefully, the impact will not be too great. The following guidelines suggest how this can be achieved

1. Female goats should always be selected on the basis of their milk production.
2. Do not use a male goat with a lower Kabulya Grade just because it has a favoured appearance.
3. Do not use a male that is clearly less healthy or is substantially slower growing, however good its appearance is.
4. If there are two males with the same Kabulya Grade and one has a significantly higher milk score and the other has a much better appearance, mate some females to one and some to the other.