Kabulya Commercial Goat
Best Breeding Practice

Introduction

The rules for breeding Kabulya Commercial 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.

These guidelines have been written specifically for groups of smallholder farmers, but larger-scale breeders will also find them useful.

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 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. If the colour of the male is not as good as the next goat in line, use that one instead.

Avoiding in-breeding

If the total number of goats kept by the 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 you have less than 6 stud males in the group, you will need to sometimes get males from elsewhere. The fewer stud males, the more often you need to get unrelated males. If your group has only one stud male, you will need to get a new one from outside after every 12 or 18 months. Take care when 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.

Appearance – Overview

The initial Breed Rules for the KCG do not include any explicit specifications for appearance. However, it will be important to pay some attention to colour.

The starting stock for the KCG in East and Central Uganda will mostly resemble Toggenburgs. It therefore makes sense to choose this as the standard breed appearance. The section below gives guidelines on this.

In southwest Uganda, most of the foundation stock will be white, like Saanen Goats. If this is chosen as the standard colour, there are guidelines below to help to achieve it.

The 75% crosses that are produced by mating 50% females with purebred European males normally resemble the respective European breeds quite closely. (Assuming that pure Toggenburg-type or Saanen-type males were used.) However, when these 75% crosses are mated among themselves, the colour of the offspring can be much more variable. That is entirely normal, and although it can be discouraging, it needs to be accepted. There will still be some males with good colouration, and if these are consistently used for breeding, each generation will be successively closer to the chosen colour, with fewer goats showing big variations.

The European dairy goats that contribute heavily to the KCB stock have a mixture of hair lengths – some short-haired and some long-haired. Long-haired goats have difficulty keeping cool in Uganda, and so long hair is not favoured in the breeding males.

Colour – Toggenburg-Type

The base colour for toggenburg-type goats is brown. This may be dark, or medium. However, it should not be so dark that it could be mistaken for black when viewed from a distance. Similarly, it should not be so pale that the Swiss markings do not stand out prominently.

The brown colour should be the same over the whole goat, with no lighter or darker patches. The exception to this rule is that sometimes a goat may have longer hair along the spine, or in the form of a beard. This hair is normally lighter in colour than the shorter hair, but this is not considered a defect.

The pattern on traditional Toggenburg Goats is known as "Swiss markings". It consists of:

- Prominent white face stripes running from above the eye, down the nose towards the corners of the mouth. Sometimes, especially in males, these stripes may not extend all the way down. That is not a problem.
- White around the mouth.
- White round the edges of the ears.
- White 'escutcheon' – the area below the tail. This white normally extends to the underside of the tail.
- White on all four feet, extending as far as the middle leg-joint.
- If wattles (toggles, *bulege*) are present, there is a white band around the middle of each. If there are no wattles, there is a white spot where the wattle would be.

In British Toggenburg Goats, and even more so in the cross-breeds, the 'white' described above will often be off-white and may be cream-coloured or even light brown. Anything darker than off-white should be discouraged in breeding males.

In cross-bred goats, the white around the edges of the ears may be less prominent than in European Toggenburg stock. This is not a significant problem.

There should be no extra white spots or patches, other than the standard Swiss markings described above. When the patch occurs on the side of a goat, it is very obviously a defect. But a white spot on the forehead should also be avoided.

Good colour is important, but not as important as good milk production or good disease resistance. Females that produce a lot of milk should be kept for breeding whatever their colour. Males can be judged more strictly, but never use a male just because of its colour, especially if a male with a higher Kabulya Grade is available.

Colour – Saanen-Type

Normally all 75% crosses are pure white, if they are born to a 50% Saanen female which has been mated to a purebred Saanen male. This is because the white colour is a dominant trait. However, when the 75% crosses are mated among themselves, other colours can occasionally occur. There should be enough pure white males that it is possible to avoid using any of these coloured ('sable') ones.

Non-white female goats can still be used for breeding, if their milk production is good. But male kids from a non-white mother should not be chosen as a stud male.

Choosing a pure white male is not the end of the selection process. Once the male is used for breeding, it may be seen to sometimes produce non-white offspring, especially when mated to local goats or to 'sable' KCGs. Once identified, such males should no longer be used as KCG stud males, and should be replaced with new, pure white, stud males.

Sometimes the males carrying this recessive colour trait seem to be white, but on comparison with other white goats they are noticeably off-white. That is why 'pure white' is emphasised in this document when choice of male is discussed. But even pure white males can turn out to be carrying the recessive gene for coloured offspring, so the colour of the offspring should always be checked once the male has been active for 6 months or more.