Should we disbud and castrate kids?

W**e** must expect that any surgical procedure that is routinely undertaken in pets and farm animals will be subject to scrutiny from both within the goat keeping community and from outside it, and it is only right that we should all consider the reasons for conducting these procedures in animals that we own to determine if they are in the interest of the animals themselves or, if not, if they can be justified by other legitimate reasons, for instance, the safety of humans.

In the past, various mutilations of animals have been common practice in animals. Most of these were of no benefit to the animal and were merely the fashion of the day. These included cropping of horses' ears in the eighteenth century, docking of horses' tails, cropping of dogs' ears and docking of dogs' tails. The UK has been at the forefront of much legislation banning inhumane procedures; cropping of horses' ears was banned in the early nineteenth century, cropping of dogs' ears in 1899 and more recently docking of puppies' tails in 2007. Despite the fact that these procedures are not medically indicated, nor of benefit to the animal and can cause pain and distress, some of these procedures are still routinely carried out in other parts of the world. Disbudding of kids is defined as a mutilation under the law in England, Wales, Scotland and Northern Ireland, but it is recognised as a procedure which can be carried out for non-therapeutic reasons.

Not all goats are disbudded in the UK; many pygmy goats and Boer goats are kept horned, and Angora and Cashmere goats are never disbudded. To justify the routine disbudding of dairy kids, we need to show that there are legitimate reasons for disbudding kids. It is not sufficient to think that a goat without horns looks more attractive in the show ring. In fact, there is nothing in the British Goat Society rules to prevent horned goats being shown.

In the wild, horns may help protect the goat from smaller predators, assist the regulation of body temperature in hot climates and help individual animals establish dominance within the herd hierarchy. It is the latter which causes most problems within a dairy herd kept in fairly close confinement. Horned goats know how to use their horns to best advantage during their regular tussles with other goats and will hook with a goring action, which often damages udders, particularly, and, occasionally, other parts of the body, such as the eyes and eyelids.

Goats are generally friendly animals, so intentional injuries to humans from goats are uncommon, but their friendliness leads to close contact between animal and human with the risk of accidental damage from the horns if the goat brings its head up suddenly or turns unexpectedly whilst being milked. Children's faces and eyes are especially at risk. The RSPCA in their leaflet "Introduction to Welfare and Ownership of Goats" recommends that novice owners keep hornless rather than horned goats, particularly in the case of the larger breeds, as horns can make goats more difficult to handle and may be less suitable if children are helping to care for them *(https://www.rspca.org.uk/ImageLocator/LocateAsset?asset=document&assetId...).*

Disbudding can also prevent goats harming themselves. Horned goats regularly get stuck in fences and hedges - as most dairy goats' horns point backwards, they are able to get their heads through relatively small gaps, but then cannot withdraw their heads because the horns get stuck. Ingrowing horns can dig into the animal, sometimes making it necessary to dehorn an adult goat, which is a much more serious surgical procedure than disbudding.

Disbudding goats as kids does not alter their behaviour, except possibly by making them less aggressive to other goats. They will still fight to establish dominance, bashing heads using the thick boney plates of the forehead and engaging in jostling matches as they establish the pecking order within the herd. However, disbudded goats are at a distinct disadvantage if challenged by a horned goat, so goats without horns should never be kept with horned goats.

In some cattle breeds, for instance Herefords, it is possible to breed hornless animals and so avoid the need for disbudding. Unfortunately, this is not possible in goats. After the Second World War, the British Goat Society tried to encourage the breeding of hornless (polled) goats, by only allowing the registration of polled males. This led to many more hornless goats in the country and it soon became apparent that the genes for hornlessness were associated with a recessive gene for intersex. An intersex is an animal which shows both male and female characteristics and is generally a polled goat with two polled parents. A mating between a homozygous (PP) polled male and a heterozygous (Pp) polled female will produce 50% intersexes; a mating between a heterozygous (Pp) polled male and a heterozygous (Pp) polled female will produce 25% intersexes. In theory, mating two homozygous (PP) polled animals should produce 100% intersexes, but this level is never reached as the gene has incomplete penetrance.

In many countries, including the USA and Australia, disbudding of kids can be carried out by the goat owner or another goat keeper. This means that the disbudding is often carried out without the kid being anaesthetised or any pain relief given. Although calves are usually disbudded by the farmer or farmworker, using local anaesthetic to anaesthetise the area around the horn buds, using local anaesthetic is not recommended in kids for a number of reasons. Firstly, the buds are relatively much bigger in kids than calves so the recommended age for disbudding kids is 2 to 7 days, rather than 4 weeks as in calves. Secondly the nerve supply to the kid's horn bud is more complicated than that of the calf, so more than one injection is required and, thirdly, the level at which the local anaesthetic is toxic is quite low, so it is relatively easy to overdose the kid. For these reasons, in the UK, disbudding of kids can only be carried out by a veterinary surgeon.

Disbudding is considered veterinary surgery under the provisions of the Veterinary Surgeons Act 1966. The Royal College of Veterinary Surgeons expects disbudding to be carried out by veterinary surgeons in accordance with good practice and in such a way as to minimise pain and suffering caused to the animal, which should include use of an anaesthetic. Most vets will give tetanus antitoxin and antibiotic injections and an injection to help with pain. I generally use general anaesthesia when I am disbudding kids in the surgery. I expect the kids to only be in the surgery for about half an hour in total, to be fully awake, standing up and ready to go home within ten minutes after the end of disbudding and to be ready to suckle the dam or take a bottle as soon as they get home.

The ethical considerations regarding the castration of goats are different to those related to disbudding. It is an unfortunate fact that, except for the very small number of kids being kept for breeding, dairy kids will be euthanised shortly after birth, if they are not to be raised to provide meat or to be kept as pets. Goats are commonly castrated if:

- they are to be kept for meat for longer than 4 months
- they are to be retained as wethers for fibre production
- they are to be kept as pets
- they are to be used as pack animals or harness goats

An uncastrated male goat is totally unsuitable as a pet, a companion animal or for working in harness. Castration renders the animal infertile and prevents the development of male odour and unpleasant secondary sexual behaviour, such as spraying urine, making the animal much more pleasant to deal with.

Uncastrated kids show better growth rate, efficiency of feed utilisation and carcass yield than castrated kids, but, in older kids, the meat is likely to be darker and more strongly flavoured, so unless the kid is to killed and butchered when young, rearers will opt to castrate their kids.

Kids are generally castrated by their owners in the first week of life using a rubber ring as used in lambs or they can be conveniently surgically castrated at the same time as disbdudding. However, early castration may lead to a greater risk of urolithiasis, where mineral deposits in the bladder lead to obstruction of the urinary tract, because the urethra remains relatively small in neutered animals. Therefore it may be better to delay castration in animals which are to be kept for work or as pets, but an uncastrated male should never be sold as a pet, without full discussion with the new owner and arrangements for castration having been made.

In the UK, the law regarding the castration of kids is stricter than that for lambs. Kids over two months of age must be castrated by a veterinary surgeon using anaesthesia, whereas lambs up to three months of age can be castrated surgically by a lay person without anaesthesia. The adjacent table shows the methods of castration that are legally acceptable.

Castration of kids			
Age of animal	**Technique**	**Person who may perform castration**	**Anaesthetic required?**
1st week of life	Rubber ring Burdizzo	Any Any	No No
<2 months	Surgical	Any	No
>2 months	Surgical	Veterinary surgeon only	Yes

It is important that all BGS members, as responsible goat keepers, take time to consider why we undertake the various husbandry tasks, which to us may appear sensible and routine, and to discuss amongst ourselves whether they can be justified with regard to the welfare of our animals. This will help us to ensure that the welfare of our animals is paramount at all times and will also enable us to answer with carefully considered facts any criticisms that may be raised from time to time, sometimes with justification, but often by people who do not have a full understanding of why procedures are carried out.. At the very least, we should always be able to say that we use the best possible practices, only when necessary, and in such a way as to minimise any pain or distress for the animal.

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