

Over feeding rams

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Over feeding rams

My personal interest:

Specialise in sheep AI / ET

- See the adverse effects of over feeding

Sell 200+ rams per year in Australia

- Don't want my customers complaining

Why do breeders over feed rams?

- The impression that it returns most £
Enters the ram into the “ram lottery” ie the possibility of achieving a large price at auction
- Many rams sold at auction
Size sells

Pre sale ram management

Breeders want rams to be big and therefore often fat at the point of sale / show.

- Ad lib creep feeding of ram lambs
- Housing rams and ram lambs pre sale
- Over feeding rams and ram lambs pre sale.

Adverse effects

Short term

- Infertility (usually transient for 2-3 months)
- Poor mating performance - over fat rams are unable to serve sufficient ewes with the mating period
- Rams “melt” soon after purchase – ie rapidly lose weight and become unsound for breeding

Adverse effects

Long term

- Breeding rams that cannot survive / thrive on grass alone.

Survive in commercial flocks for only 1-2 breeding seasons before dying or being culled for lameness or poor body condition.

- Breeding rams with a poor serving capacity

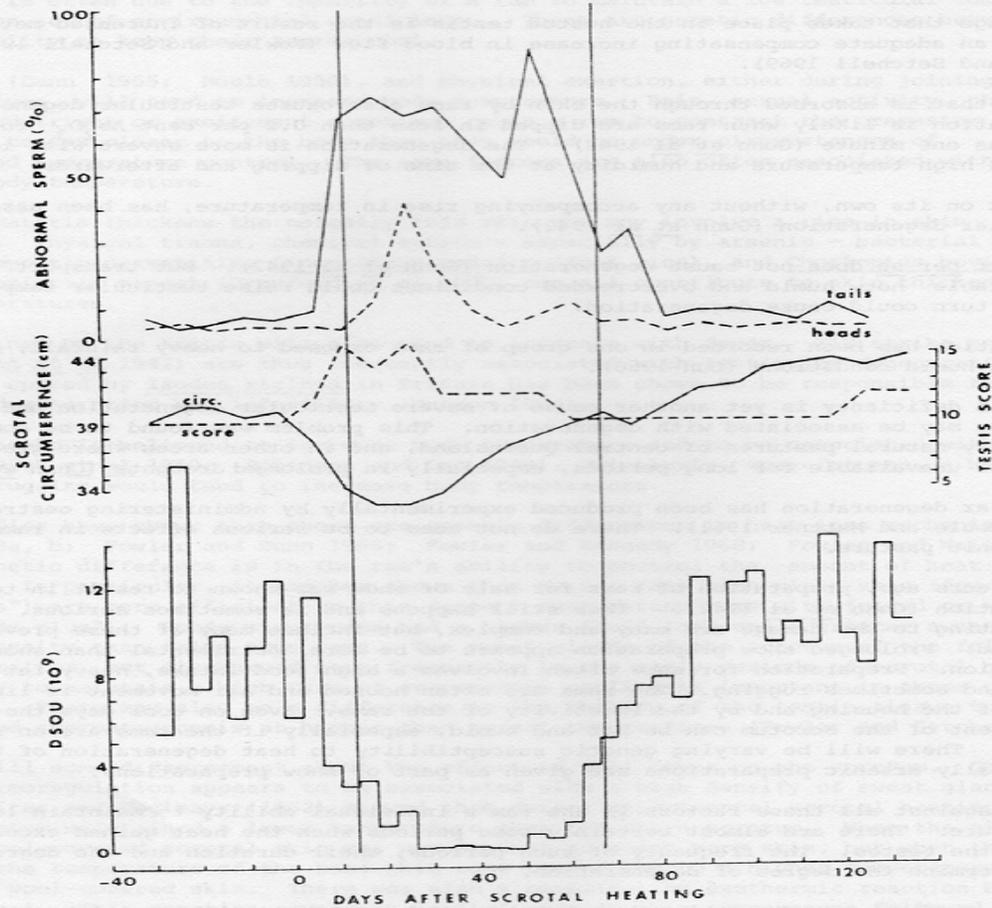
Incapable of serving 100+ ewes in 3 weeks due to lack of fitness, being over weight, poor limb and foot conformation, possible cartilage defects.

Short term adverse effects

Infertility

- Testicles need to be kept 4-5° C cooler than the ram's core body temp.
- Over heating destroys semen producing cells in the testicles, testicles become soft and small.
- The temperature of the testicles does not have to be raised very much nor for long, for significant damage to semen production and semen quality to occur.

Fig. 3 Some reproductive characteristics in a ram subjected to 3 h scrotal heating at 41.0°C. (DSOU = daily sperm output measured in urine). (from Lino 1971). Score = consistency scores added. High scores denote softer, less resilient testis.



Over feeding = Hot testicles

Hot testicles = Infertility

- Fat deposits in the scrotum acts as insulation around the testicles raising testicular temperature.
- Fat rams are unfit (heart and lungs) - any minor physical exertion raises their body temp and exacerbates their inability to maintain a low temperature in their testicles.
- High caloric intake (cereal based diet) is believed to increase body temp and be associated with lower heat tolerance (Riek et al 1950; Robinson and Lee 1949)

Short term adverse effects

Poor mating performance

Over fed rams are often:

- Fat – Condition score 5+
- Not aerobically fit

All the walking grazing involves will ensure that their heart, lungs and limbs are in much better shape.

- May have weak tendons and ligaments

Unfit rams will perform poorly

- Oestrus detection – ie the number of different ewes served within a given period
- Mating dexterity - the ability to mate the ewe properly ie to achieve intromission
- Service frequency - the number of times each ewe is served, ie fit rams will serve one ewe more than once in her oestrus period and this is positively correlated to ewe pregnancy rate and twinning percentage. (Mattner and Braden 1967)
- Poor fertility with ewe lambs = ewe lambs have a shorter standing oestrus period than mature ewes so need to be mated by rams that are very fit and able.
- Getting small ewes in lamb - small light ewes do not want to be mated by a heavy fat ram

Short term adverse effects

Rams that melt

- Lose significant body condition after being turned out to pasture.
- Lose significant amounts of testicular tissue
 - Less semen will be produced
 - Semen will contain a significant % of abnormal sperm
- Will most likely be sub-fertile or infertile.

Why do rams melt?

- When a ram has been consuming mostly cereals the microbes in the rumen have adapted to digest cereals and not grass.

When the ram is abruptly placed onto a grass only diet it will take about 3 weeks for the microbes that can digest grass to predominate in the rumen and during that time the ram is losing weight, lose testicle mass and his fertility will suffer.

- Rams are often placed immediately with ewes following arrival on the farm, this exacerbates the problem because he is also chasing ewes and burning up far more energy than he is consuming.

Long term adverse effects

Breeding rams that must be “over fed” to survive.

- 30-40 years selection for rams that have performed well on an intensive feeding / shedding system = rams that cannot survive off grass alone.
- This phenomenon is common in the British Suffolk where it is common to see rams surviving for only 1-2 years in the ram team before either dying, going chronically lame or being culled because of chronic poor condition.
- These rams do not have the ability to forage or graze aggressively so therefore lose weight when placed at pasture.
- Charollais and Texel breeders appear to be happily trying to breed this problem into their respective breeds as well.....

Other management practices: Housing rams

- Unfit - Get minimal exercise.
- Fat - Likely to be eating a cereal based diet.
- Overheated testicles - Little air movement around the scrotum = high relative humidity = hot testicles.
- Heat stressed - Fat, over fed, unfit rams will “feel the heat” at a lower environmental temperature.
- Testicular degeneration - Heat stressed rams adopt cooling strategies (ie lying on a cool surface and therefore also their testicles) sooner and for longer increasing the incidence of testicular overheating and therefore degeneration.

What are we going to do about it?

- **Change attitudes**

Over fat rams should not win any shows. Breed societies need to re-educate their judges.

- **Raise expectations**

Commercial farmers need to raise their expectations on the number of ewes a ram should be able to mate in 3 weeks. Shearling rams should be able to manage 100 ewes, ram lambs 50.

Lower the cost per lamb sired.

Ram cost; life time lambs sired; lamb cost sired

Cost of ram	£150	£300	£450	£600
150 lambs sired	£1.00	£2.00	£3.00	£4.00
600 lambs sired	£0.25	£0.50	£0.75	£1.00

Grasp the opportunity

- Rams should not require cereals to survive.
- Rams should manage 4+ mating seasons.

Debunk a few myths

- Cabbages cause infertility in rams
Unlikely that the phytoestrogens in cabbages cause infertility as high oestrogenic pastures do not.
- Big rams produce fast growing lambs
Feeding makes rams big. Genes and management determine how fast their progeny will grow.
- Rams are only capable of mating 40 -50 ewes per breeding cycle
Shearling and mature rams should be capable of mating 100-150 ewes per 17 days.

Remember:

You are producing sexual athletes

Grass is Cheap

Less concentrates = Lower costs

Practise cool testicle management

THE END