



GENSTOCK NEWS

ANIMAL BREEDING & FLEECE TESTING SERVICES

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Welcome to the Spring edition of the Genstock Newsletter. Time for sheep sales & shows, lamb marking and yes preparing ewes and rams for mating or artificial breeding programmes.

RESULTS COUNT!

FACT FILE

Genstock has always prided itself by achieving consistently high Embryo Transfer and Artificial Insemination results for clients. We are continually striving to improve services to ensure maximum professionalism & productivity. Last season, Genstock achieved the following:

- 1662 ewes were flushed for fresh embryo transfer.
- 11 155 embryos transferred fresh achieved 8311 pregnancies- AVERAGING 75% CONCEPTION RATE.
- 59% conception rate with frozen embryos.
- One client flushed 63 donors and averaged 7 pregnancies per donor programmed. This equated to 7.9 pregnancies per donor flushed.
- 5 ewes programmed for one client produced 51 embryos, resulting in 47 pregnancies, a 92% conception rate.
- Averaged 5.5 pregnancies per maiden ewe flushed.
- Averaged 7 pregnancies per mature ewe flushed.
- 7 month old Dohne ewes averaged 5.2 pregnancies per ewe flushed.
- 38 000 ewes were laparoscopically inseminated.
- One client inseminated 84 ewes, 82 ewes conceived (98%). OVERALL AI CONCEPTION RATE WAS 75%.
- 400 000 ewes were pregnancy scanned for wet/dry & 130 000 ewes were diagnosed for multiple births.



Embryo Transfer Programming Flexibility

We are in the business to keep our clients happy. For Embryo Transfer there are plenty of options with programming – however please remember, when choosing the option that best suits your needs – **your main consideration must be based on results.**

Historically, our most consistent results by far have been when Genstock has full control of all donor and recipient preparation. The client only pays for what they receive.

However for bio-security reasons, this does not suit everybody and therefore, we are more than willing to apply the following options:-

1. Genstock prepares the donors, the client prepares the recipients “on-farm” and the embryos are transported fresh, chilled or frozen depending on distance. **Chilling and freezing embryos reduces embryo viability, resulting in a lower conception rate.**

2. When the client has more than 10 donors, then Genstock can prepare the donors and the client can supply their own recipients “on-centre.
3. The client prepares donors and recipients on farm.

An Embryo Transfer programme requires precision timing and maximum attention to detail. A very high level of donor and recipient management is paramount for success.

Fertility, Fertility !

*In most beef herds, a cow that does not rear a calf is usually culled. With the increasing emphasis on meat production within the sheep industry – **should this be any different?** A beef producer who does not pregnancy test his cows would be a rarity - **should this be any different for a sheep breeder?***

For too long, fertility has been neglected within the sheep industry, so now is the time to start assessing the ewes prior to mating. It is advisable to separate poorer condition ewes (especially twin bearing ewes from the previous year) and give them some preferential treatment. Ewes with a body score of 3 will give a higher conception rate than those with a body score of 2.

Flushing with lupins for 2 weeks prior to mating at 250-300 grams per head per day, will not only increase conception rate but will also increase ovulation rates resulting in a higher lambing percentage.

An extra 15% of lambs weaned would give an increased margin of \$9 per ewe if the lambs are valued at \$60. Through better ewe management and accurate pregnancy diagnosis, these results are easily achievable.

Clients contemplating AI programmes should also be aware not to have their ewes too fat. Body score of 4 or above can prevent the flushing effect of lupins prior to insemination and reduce conception rates. It is also important to acclimatize the ewes to their paddock. Ideally ewes should not have a paddock change from 2 weeks prior to AI until 6 weeks post AI.



GENSTOCK: FOR WHEN RESULTS REALLY COUNT



RAM PREPARATION



Rob Davidson (UWA and WAMMCO International) & Keith Croker (Department of Agriculture)

Rams, like headers, are highly valuable components of farming (in terms of their initial cost) but are only used for short periods of the year. However, with proper preparation both can influence the overall success of your farm enterprise.

Sperm Production - The production of sperm takes approximately 7 weeks from cell initiation to when viable sperm are available in ejaculates. The number of sperm produced per gram of testes per day is constant (approximately 20 million/g/d) regardless of the size of the testes. Thus, the larger the testes at the start of joining, the more sperm are available for fertilising ewes.

Supplementary feeding – As the testes are very responsive to nutrition and because the production of sperm takes 7 weeks, supplementation of rams should start 2 months before the start of joining to ensure the maximum number of fertile sperm. Rams should be fit and in score 3 condition when joined, any fatter they may not be inclined to work in periods of hot weather. Rams joined in spring/early summer may not require any supplementary feeding due to the rams being in good condition because they have been on good paddock feed. However, if late rain affects the paddock feed, or if the season finishes early, then rams will benefit from being fed lupins for 8 weeks at 500g/h/d. For a summer/autumn joining, all rams should be prepared by feeding 500g/h/d of lupins for the 8 weeks before being put with the ewes.

What is the optimum joining percentage? It is reasonable to expect that a well-prepared, healthy mature ram could serve 50 mature ewes. However, if ewes are synchronised or you are joining maiden ewes or using young (2-tooth) or ram lambs then a higher percentage of rams is required. Use 6% rams if ewes are tightly synchronised, or, if joining maiden ewes or using young rams then use 4% rams. In general, to cover the risk of an infertile or inactive ram, use at least 5 rams in each mob of ewes.

Ram health inspection – Ensure all rams used this coming season receive a health check at least 8 weeks prior to joining.

- Jet the poll area with a long acting fly treatment and check regularly for fly strike leading up to joining
- Treat for internal and external parasites
- Inspect hooves and trim if necessary
- Rams should be shorn 8 – 10 weeks before joining
- Check the penis, pizzle and testes - testes should feel firm, springy and be free of soft or hard lumps
- Poor teeth will interfere with grazing and overall body condition

For more information, contact Rob Davidson 64881953 or rdavidso@agric.uwa.edu.au

Using Teaser Wethers For Early Breeding

Ewes are referred to as short day breeders. That is, they cycle (come into oestrus) with decreasing day-lengths (January to June). They tend to cycle every 15-17 days. If ewes have been away from sight, sound and smell of rams for 6 weeks then they can be stimulated to display heat and ovulate by being brought into contact with rams. Generally the first heat of the season is a non-fertile heat.

Wethers treated with testosterone are equally as effective as rams at stimulating sexual activity in ewes. The advantages of using teaser wethers in early joined ewe flocks are:

- Most ewes are cycling when the entire rams are joined
- The lamb drop is concentrated
- The mating period can be reduced to 6 weeks without decreasing lambing percentage
- The efficiency of management practices such as lamb marking and mulesing is increased

GENSTOCK recommends 1 injection of 5mls given subcutaneously 7 days before introducing teasers to ewes. In an AI programme it is recommended to inject at sponge insertion and use a higher percent of teasers.

Plan for Using Teasers in a Natural Mating Programme:

DAY 1: Inject selected wethers with 5mls testosterone subcutaneously.

DAY 8: Join teasers with ewes at 0.5 – 1.0%.

DAY 22: Join rams with ewes at 2%. (Teasers can remain with the ewe flock as the ram-like behaviour only lasts 3-4 weeks.

DAY 64: All ewes should have been mated and conceived.

PLEASE NOTE DO NOT SELL TREATED WETHERS FOR SALE. THEY MUST BE SLAUGHTERED ON FARM OR KEPT FOR TEASING IN SUBSEQUENT YEARS.



GENSTOCK: FOR WHEN RESULTS REALLY COUNT

'Ovastim' Trial Results

Keith Croker, DAWA, South Perth, Rob Davidson, UWA, Nedlands and Ken Hart, DAWA, Narrogin

Fecundin, a vaccine developed in the 1980s, altered the balance of hormones in ewes that resulted in an increase in their ovulation rates. The product provided an effective method to increase lambing percentages in ewe flocks, but the manufacturers of Fecundin stopped producing it in the 1990s. A new vaccine, Ovastim, with similar actions is now manufactured and marketed by Virbac (Aust) Pty Ltd.

Over the last two years, the effectiveness of vaccinating mature aged Merino ewes with Ovastim has been evaluated on a Kojonup property.

In 2003, two flocks on the farm were randomly divided in to two equal groups. One group in each flock was subsequently vaccinated (two injections four weeks apart) and the other was not treated. Poll Dorset rams were joined with both flocks in late January for six weeks.

In 2004, some of the treated ewes from 2003 were given a booster vaccination while another group of ewes were treated for the first time and were given two injections. All the ewes were teased and Poll Dorset rams were joined with them for 5 weeks in late January.

The lambing figures for 2003 are shown in Table 1.

Table1. Potential lambing, marking and lamb mortality % in 2003.

	Potential lambing (%)	Lambs marked (%)	Lamb mortality (%)
Flock 1			
Control (C)	108	94	16
Ovastim (O)	121	107	19
Flock 2			
Control (C)	112	99	13
Ovastim (O)	133	105	22

In 2004 the potential lambing percentages for the untreated and the ewes vaccinated for the first time were 94 and 119 percent, respectively. The figures for the second flock with the untreated ewes and those that got a booster dose of Ovastim were 94 and 92 percent. We don't have an explanation for the difference in the response to the vaccination, but in the second flock there were high percentages of dry ewes and this counteracted the increase in the proportion of twins.

In addition to looking at the response to treatment with Ovastim, we have looked at providing a higher level of feed to vaccinated ewes before and at lambing in both years to try to decrease the level of lamb mortality amongst the twin born lambs. Unfortunately these results have been inconclusive.

Overall, the results from this trial show that vaccination of mature aged Merino ewes with Ovastim can increase lambing percentages. The use of this product would allow farmers to either increase the production of prime lambs or to increase their wool producing flocks.

Brad and Terry Cussons are thanked for allowing us to conduct the trial at Tilsdown and for their assistance in the observations. Virbac (Aust) Pty Ltd provided the Ovastim used in 2003. The trial in 2004 is part of a MLA supported project, LambMax WA.

For more information contact Dr Keith Croker (Phone 9368 3512)

JOHNES UPDATE

Since July 1st, 2004, Ovine Johnes Disease has become deregulated and vaccine is freely available.

It is unknown what economic impact Johnes Disease will have on the Western Australian sheep flock. One fact that is known is the disease will keep spreading due to its insidious nature and the time it takes to detect its presence in a flock.

Trading of sheep through Australia is now under a risk based trading scheme. Purchasers of sheep can request an 'Animal Health Statement' from the vendor which will assess the risk of Johnes disease based on the 'A, B, C' credit points scheme.

Numerous sheep breeders throughout W.A. have elected to vaccinate against Johnes Disease. This is mainly a 'perception' issue as the majority of these breeders have not been diagnosed with Johnes. It is a proactive approach that is taken to protect any clients who may purchase sheep from these flocks.

Genstock has become accredited to sell the Gudair® vaccine and has competitively priced the product to assist breeders wishing to vaccinate. Please contact Genstock for more information regarding the Gudair® vaccine or any OJD issues.



Vaccinating lambs with Gudair® on the mulesing cradle

Conception Rates

If you AI'd with GENSTOCK last season, you should have received a conception results form in the mail. To enable us to continue offering the highest standard of service, please complete this form and return it as soon as possible. If you would like to discuss your results, please feel free to contact us.



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