



# PLAN RIGHT, BREED RIGHT!

## A guide to optimising reproductive success in sheep flocks

This fact sheet is based on industry resources and insights shared by veterinarian Dr Tim Gole and expert stud classer Stuart Murdoch at Leading Sheep field days on preparing rams and ewes for successful joining.

### Ensuring reproductive success

A successful repro rate is the key to profitable sheep production. To achieve this, preparation and planning for an effective joining should begin 10–12 weeks in advance.

This involves:

- Selecting and conducting pre-joining examinations for rams.
- Condition scoring and fitness testing for ewes.

A joining period of at least two cycles (approximately 34 days) is recommended. Early preparation is critical, as sperm production in rams takes about 7 weeks.

Leaving decisions to the last minute can significantly impact the success of the breeding season.

Expert tip: “the question to ask is can this ram convert nutrients into semen?”



### Ram preparation

Several factors influence a ram's reproductive performance:

#### Age

- Young rams (18–24 months): rams in their first joining may have lower mating ability due to inexperience.
- Older rams: may face mobility challenges such as lameness, arthritis, or infections that prevent effective service.

Expert tip: keep young rams separate from older sires until joining to reduce injury risk.

#### Physical and reproductive soundness

Rams should undergo a thorough health check focusing on the '4 Ts':

- Teeth: assess age and ensure a sound mouth.
- Testes: examine for abnormalities and size. Testicular size is closely linked to sperm production. Well-prepared rams scrotal circumference should be >28.5cm and adult rams >32cm.
- Toes: check for lameness or abscesses.
- Tackle: inspect for injuries or abnormalities.

Quick reference: use the handy [RAMping Up Repro Checklist](#) to check steps off as you go!

#### Diseases and parasites

Ovine brucellosis: a bacterial disease causing epididymitis. Ensure sires are accredited as free from this disease at purchase.

Clostridial diseases and cheesy gland: manage with a 6-in-1 vaccination program.

Parasites: blowfly strike and lice infestations can impact fertility. Implement a strategic worm control program, including drenching to keep rams free of internal parasites.

Quick reference: refer to the [Leading Sheep's Vaccination decisions factsheet](#) to learn more about the benefits and timing of each vaccine.



### Heat stress

Prolonged exposure to temperatures above 32°C affects sperm motility, morphology and concentration. It also disrupts the hormonal signals required for sperm production rendering rams temporarily infertile for seven weeks. Shear rams prior to joining to avoid sunburn, cuts, infection and susceptibility to heat at joining. Read more on [managing heat stress in sheep here](#).

**Expert tip:** Last shearing to be done at minimum of eight weeks before joining for optimum performance. Refer to the [AWI guide to shearing rams](#) to read more on sedation and ensuring wellbeing of shearers and rams.

### Nutrition

A high-protein, energy-rich diet is essential in the eight weeks leading up to joining. An 80–90 kg ram requires 30 grams of protein daily for maintenance, with an additional 20 grams to improve body condition.

#### Expert tips:

Make sure rams are fit, not fat. Aim for a [condition score](#) of 3–3.5. Allocate rams to a good paddock that is easy to check.

### Reviewing & replacing your ram team

Make use of every chance you get to review your ram team. When selecting new rams, establish clear breeding objectives. Use a combination of visual assessment and Australian Sheep Breeding Values (ASBVs) to align with your production goals and target market.

#### Expert tips:

- Replace around 20–25% of your sire battery for best performance.
- Remember to book-in your pregnancy scanning when rams go in.

## Ewe assessment

The reproductive success of ewes is heavily influenced by their nutrition and condition score, which drives ovulation. Assess ewes at least one month before joining to determine if supplementary feeding is necessary.

### Condition scoring

Aim for a condition score of 3 or higher during joining.

Cull ewes in poor condition, particularly those with issues such as poor udders, feet, or teeth. Regularly monitor condition score when ewes are in yards. Use the [Lifetime Ewe Management app](#) to record scores, find your mob average and estimate feed on offer.

**Research insight:** heavier maiden ewes have higher fertility, and heavier ewes overall have a higher twinning rate, irrespective of season.

### Udder issues

Assess udder health and structure by palpating the udders as visually assessing udders is not effective. Ewes with unsound udders are unlikely to raise healthy lambs. This can be done while sheep are in the race, handler or on the board.

**Expert tip:** Unfit ewes are more likely to scan empty.

**Quick reference:** use the [MLA Fit to Join](#) pre-joining assessment guide to learn about different kinds of udder irregularities and more.

### Foot health

Check for lameness, which can cause loss of condition and susceptibility to metabolic diseases during late pregnancy. Lameness also reduces ewe fertility and impacts sale value of sheep. [Main conditions](#) include, footrot, foot abscess, strawberry footrot. However, lameness on its own is not always a reason to cull a ewe.

Focus on preparation, timing, genetic improvement with a focus on animal health for the best lambing results.

For more info, scan the QR code to visit the [Leading Sheep website](#), find us on [Facebook](#) or chat with a DPI Extension Officer!

