

Case Study: Driving fertility in the north

Achieving higher fertility performance in Santas

By applying selection pressure from every angle, David Greenup is pushing his stud and commercial Santa Gertrudis herds towards ever-higher fertility performance.

In decades past, the Santa's otherwise excellent reputation for performance was somewhat marred by a matching reputation for low fertility.

David recalls that pregnancy rates in his family's herd 20-plus years ago could be back to 70% at times. Today, they are consistently up between 88-92% on his properties at Jandowae, Queensland, where he and wife Sonya, along with their three sons and David's parents Grahame and Peggy, run commercial and stud herds, of about 700 females each across 12,000 hectares.

Getting to this position has meant a single-minded focus on the decisions needed to drive fertility.

In David's Rosevale Santa Gertrudis Stud, which turns off about 300 bulls a year to buyers across the Australian rangelands, all working sires are semen morphology tested annually to ensure semen viability, and scrotal size is assessed in all yearling bulls.

Yearling scrotal size is an indicator of how quickly a bull and his sisters will reach puberty, an important factor in fertility. But size is also dependent on the environment, and can change according to seasons – and big is not necessarily best, David notes.

A too-large scrotum in a mature bull can be a liability, as it is more prone to injury.

To get another angle on likely outcomes for this trait, Rosevale also balances its physical scrotal measurements against estimated breeding values. It looks for genetics on target to produce yearling scrotal sizes in the top 20-30 per cent of the breed, without being overly-large at maturity.

Females come under their own form of stringent

selection pressure.

Seasons permitting, all yearling heifers over 290 kilograms are mated, to bring them into the breeding cycle as early as possible.

"Last year, with a bit better season, we mated about 80% of our yearling heifers; this year we'd be down down to 60%."

"It puts more pressure on them to conceive early. Anything that has calving problems, we cull."

Rosevale has collected "days to calving" records on its stud females for almost a decade. The resulting BREEDPLAN estimated breeding value (EBV) on each female is a measure of the time from when the bull is introduced to the herd to when the cow drops her calf.

"We're finding that those cows with good days to calving EBVs are those that continually calve in the first month of the calving season.

Not many tropical herds are recording the trait, David said, which he thinks is a lost opportunity.

"If we can buy bulls out of cows with strong EBVs for this trait, it's another thing we can use to drive fertility."

Over the past couple of decades, aided by "religious pregnancy testing", David has progressively culled out cows with the thrifty Bos indicus tendency to only have two calves every three years, and selected for those that calve every year.

"Rigid culling on a preg test has not only removed those females of inherent low fertility but also those that lack a strong constitution and find it hard to conceive in a poor season while rearing a calf," David says.

Joining periods have been brought down to three months, compared to five months 20 years ago. David thinks three months is the optimum for his conditions.

"It's long enough to give us some flexibility,



David Greenup

whether or not the season is with us. We're not prepared to feed cows to tighten up the joining. It means that every year we can put bulls in and pull them out on the same dates and still know we've got optimum coverage."

Rosevale's zero-tolerance approach to culling extends through to branding. The Greenup's properties, which border the dingo barrier fence, have the added pressure of wild dogs. "We ran into seven dogs in one pack just the other day," David said.

Although Santa cows are extremely protective mothers, this inevitably means some extra mortalities at times, which add to other commonly experienced reasons for calf losses.

"We're looking at losing 7-8 per cent of calves between preg testing and weaning. At branding time we will have a few cows that have slipped or lost their calf for whatever reason, and we'll cull them then."

"We want to make a return on every female, every year, and that's either by selling her calf, or herself."