

## Genetics

# A numbers game

When it comes to genetics, Central Queensland producer Swin Hudson employs the philosophy - 'keep it simple and don't be a softie'.

**S**win believes in the power of numbers, particularly BREEDPLAN and the notion of using the heritability of growth, carcase and fertility traits to improve herd performance.

"Fertility can be improved through management, temperament by selecting quiet cattle but, by using BREEDPLAN as well, we're speeding up our rate of genetic gain," he said.

"When I'm selecting animals, BREEDPLAN figures are my first culling point. If the figures don't stack up, no matter what the animal looks like, I won't keep it.

"Once the animals have satisfied that first criteria, we then select for conformation, tick resistance and temperament and we have a preference for polledness."

Tremere Pastoral is European Union (EU) and Meat Standards Australia registered and aims to turn-off steers at 310kg dressed weight and its heifers between 30-50kg lighter.

Steers are destined for the EU market but those that don't meet the specifications are grown out to Japan ox.

"We join at 15 months and keep only those that pregnancy test in calf," he said.

"If they don't have a live calf at branding, I forgive them once because they're young, still growing and learning to be a mother but after that, there are no concessions."

### Long term trends

The Hudsons have been breeding Belmonts since 1974 and they hold an annual bull sale. Each of the 50 bulls presented is semen morphology tested at 20-24 months and, while the days-to-calving EBV is being developed for Belmonts, Swin publishes the dam breeding history. He also plans to start DNA testing sires for heterozygous and homozygous poll genes.

Tremere started collecting EBV information in 1986 and, since then, Swin has witnessed considerable genetic change.

"Seasonal impacts sometimes muddy the water of what you can see, but the breed society graphs show we're improving," he said.



## Belmonts

Belmonts are a tropically adapted *Bos Taurus* breed - of Sanga (African) origin. In fertility, carcase quality and disposition they are related to the British breeds, yet their resistance to parasites and environmental adaptation ensures they are suited to the tropics.

The Tremere Belmont herd started in 1974, when the first females were released to the industry by CSIRO.

### Breed characteristics:

predominantly red in colour, they are sleek coated, have a small thoracic hump and tight sheath. The ears and dewlap are a moderate size. Belmont can be horned or polled.



Swin Hudson measures testicles as an indication of fertility.

### Snapshot

Swin and Kathy Hudson,  
Moura, Qld.



**Property:**  
10,000ha

**Enterprise:**  
Belmont stud,  
steers and heifers  
produced for MSA,  
EU and Japan ox  
markets

**Livestock:**  
3,300 head  
including 1,000  
breeders

**Pasture:**  
Buffel, green  
panic, kangaroo  
and blue grasses,  
stylos, leucaena

**Soil:**  
Brigalow,  
softwood, black  
soils, open forest  
and downs  
country

**Rainfall:**  
600mm



"Initially we focused solely on growth but that impacted on carcase and fertility traits. We've aimed to progress a broader spectrum of traits and the trend graphs show we're achieving that."

During the past decade, average birth weights of Swin's calves plateaued and are now decreasing, carcase feedback has improved and fertility remains strong with an average of 95% of cows pregnancy-tested in calf after a nine to 12-week joining. Weaning percentages remain above 85%.

Swin puts their success down to not only a strong emphasis on reproduction traits but also an intensive vaccination program that combats Pestivirus, Leptospirosis and Vibriosis which is endemic to the area.

"Most of our losses are caused by disease or animal predation from eagles and dingoes," he said.

"The CashCow project highlighted heat stress and dehydration as significant contributors to calf mortalities but if you're culling any cow that doesn't have a calf at branding, you're addressing all that by ensuring your cows calve at the right time.

"I think the secret is to keep the system simple and do it right."



Lewis, an English backpacker working on the property, with a concerned mum, tagging and mothering up.



**Swin Hudson**

E: tremere@clearmail.com.au

Read more about the findings from CashCow on pages 18-19.

## Animal welfare

# A matter of welfare

Improving the welfare of livestock benefits not only the animals directly, but also the industry through productivity improvements. Importantly, it also responds to community expectations about the way animals should be cared for.

**G**iven the importance of welfare, **MLA funds up to \$5 million worth of projects with relevance for on-farm, livestock exports (with LiveCorp) and feedlots (with the Australian Lot Feeders' Association).**

"Welfare goes hand-in-hand with health and productivity, and this work also demonstrates to the community that we're doing the right thing by the animals," said Dr Jim Rothwell, MLA's Sustainability R&D Program Manager.

MLA is currently funding about 20 core on-farm animal welfare projects while three-quarters of livestock export R&D and a large proportion of feedlot R&D are welfare-related projects.

MLA's investment in animal welfare projects is guided by four objectives:

1. Develop replacements for aversive procedures.
2. Reduce livestock mortality rates on farm.
3. Increase uptake and demonstration of welfare best practices across the whole supply chain.
4. Develop ways to minimise the pain of aversive procedures.

"Those objectives guide our program very well and we have a good portfolio of diverse projects," Jim said.

"We need to do more work on 'on-farm mortality'. At this stage, our investment in that area is our contribution to the Invasive Animal CRC, directed at predator control.

"We want to look further at issues such as potentially avoidable neo-natal mortality and elderly female mortality, and we'll be moving into that area in the next five years."

**Here is a brief overview of recent MLA-funded on-farm animal welfare projects:**

### Poll position: the Australian Poll Gene Marker test

The second-generation poll gene test for cattle has been hailed as a breakthrough, with the dual benefits of improved profitability and animal welfare.

The test was first released in 2010 by the CRC for Beef Genetic Technologies, before CSIRO's Dr John Henshall led an MLA-funded research project to increase its accuracy.

This resulted in the commercially available Australian Poll Gene Marker test, which is up to 99% accurate for Brahman, Brangus, Charolais, Droughtmaster, Hereford, Limousin, Santa Gertrudis, Shorthorn and Simmental breeds.

### Contraceptive control: review of

#### alternatives to castration and spaying

Science consultant Dr Keith Walker recently completed a literature review investigating alternatives to castration and spaying of ruminants.

"This is a pivotal scientific review of the human and medical literature and will be extremely valuable in terms of directing future research," Jim said.

"Keith found potential opportunities for more research and confirmed some of the research we're already conducting.

"He's endorsed looking at vaccination and implant strategies, in particular, as alternatives to surgery."

The review concluded the science is "looking good" for contraceptive reproductive control.