Steers at home in wintering shed

The indoor wintering of dairy cows in New Zealand barely registers as interesting any more, but what about the indoor wintering of beef livestock?

Three years ago, South Otago farmers Mike and Liz Elliot built a 630m² Herd Home capable of holding up to 180 rising two-year-old (R2) beef animals. The couple farm Raeburn – 88ha of rolling country at Warepa, 10 minutes south of Balclutha. With 11ha in trees, the property is modest by conventional standards.

The Elliots originate from Scotland and have been in New Zealand for more than 30 years. They spent most of their farming career dairying, selling their 300-cow property at Inch Clutha only four years ago. They had bought and moved on to the Warepa property in 2003, employing a contract milker to take care of the dairy operation.

"Raeburn is not a big farm, so that is one of the driving factors for building the wintering shed," Mike says. "We needed to intensify and make better use of the farm's strengths.

"When it's wet and miserable through winter, the animals are far happier in the shed, where it's warm and dry. It's one of the reasons we decided to put a shed on – animal welfare – and also to look after our farming environment. We need to grow grass and you can't do that if the stock are pushing grass into the dirt."

The Warepa soil type consists of good topsoil, but has a heavy clay base. While there is mole and tile drainage, the soil is still susceptible to pugging.

The Elliots buy in about 130 four-day Friesian and Friesian-beef cross calves from the dairy industry each August and raise them on milk powder. Additional beef-breed steers may be bought in as the season dictates.

Five years ago, the couple bought a Holm and Laue automatic calf feeding system. It uses electronic identification (EID) technology to ensure all calves receive their quota of milk. It also minimises the manpower required to raise calves.

"It turns out terrific calves. They don't move on to grass until they are weaned at 100kg. Red clover hay, pellets and clean water are all available from day one. Once outside, we keep feeding the pellets until we feel the calves are suitably eating grass."

As rising one-year-old (R1) steers, the animals are set-stocked over winter, at three to five a paddock.

The R2 steers are moved into the Herd Home at the beginning of winter – the exact timing is dependent on the weather. "For the past two seasons that we've had the Home, we've put the steers in earlier than we'd expected, in mid-April."

The steers are fed grass silage made on the property – 5-7kg DM/head/day at the shoulders of winter, and 8.5-10.5kg DM/head/day over June/July, when up to 3.5kg DM/ha of whole-crop silage may also be fed, if available.

The animals generally weigh 400-560kg at the time they move into the shed, and are processed at 560-600kg or heavier, heading straight from the shed to the processing plant.

"The first draft actually goes straight off grass pre-winter. Then the first animals to go from the wintering shed hit their target weight in June, with 95% of the 108 head gone by the end of September last year."

As R2 steers move out of the shed, R1 steers are moved in, starting with the smallest – to give them a better chance.

Each winter, Balclutha beef farmer Mike and Liz Elliot finish about 110 steers in their 630m² Herd Home.

Mike and Liz Elliot's property, Raeburn, is only 77ha effective. This relatively small land parcel, combined with environmental concerns and a desire to see "happier" animals, led the couple to build a wintering shed.

The shed can be divided into two pens of variable sizes, depending on the number of stock in each mob. In this way, the yearlings are separate from the older stock.

The shed floor is slatted concrete, with the animals bedding on straw. Effluent is collected as solids underneath the shed, and liquid, in the pond at the end of the shed. It can be dealt with at the end of winter and this last season the Elliots applied the fertiliser in February after the second cut of silage.

"We estimate it's worth about $20,000 per year in fertiliser. But more importantly, it means we can put the fertiliser on when and where we want it.

"We're considering changing our policy and going out to the weaner sales in autumn to buy in steers and finish them before the second autumn."

The new approach would mean stock were on the property for only one winter, not two, and it would also allow the Elliots to source straight beef stock, which have higher growth rates and killing-out percentages compared with Friesians. They are also eligible for the meat companies' higher-value contracts.

Mike says there is no denying building an indoor wintering shed requires a significant capital investment. Excluding the fertiliser cost savings of about $20,000 annually, he estimates a seven to 10-year payback.

It wasn't all about the cost. "A large part of it was about the environmental benefits. I suspect I'm a closet environmentalist."

Until recently, Mike was a long-standing member of the Otago Ballance Farm Environment Awards committee and he is an active Federated Farmers' man.

Indoor system evaluated

AgResearch Invermay research associate Jane Chrystal has done an evaluation of the Elliots' system as part of the collaborative Pastoral 21 research programme.

The four-year-old programme – supported by Beef + Lamb New Zealand (B+LNZ), DairyNZ, Fonterra and the Foundation for Research, Science and Technology – is designed to boost farm productivity and lessen environmental impacts.

Jane's work demonstrated the potential benefits of an indoor beef wintering included:

- Increased growth rates over winter
- Ability to finish stock to meet winter schedules
- Continuity of supply across the year
- Ability to increase production a hectare
- Capacity to sustain high stocking rates over winter
- Increased feed utilisation
- Early finishing of stock.

Mike and Jane both spoke at a B + LNZ-organised field day at Invermay last year. The day was initiated by the Central South Island Farmer Council. It provided sheep and beef farmers with an opportunity to hear from scientists and innovative farmers.

– Supplied by Beef + Lamb New Zealand.