Otago Regional Workshop: Feed energy sample surprise

by Tim Fulton, Deer Industry News contributor

A quiz comparing feed samples showed energy value in winter feed crops isn’t as obvious as it seems.

**THE P2P SOUTH** Otago Regional Workshop at the Black Forest Park sale centre at Outram on 27 June asked farmers to estimate the amount of dry matter and metabolisable energy (ME) in several types of feed.

Three samples of silage and a baleage crop were on show as well as fodder beet, swedes, kale and palm kernel.

South Otago Advance Party chair Tony Chittock asked visitors to estimate the daily feed requirements at 10 megajoules/kg dry matter each for an 80kg weaner growing at 100g/day and a 130kg hind at maintenance.

One of the 45 participants attending the regional workshop, DINZ Producer Manager Tony Pearse, said it turned out the feed intake demands for both the hind at maintenance and the 80kg weaner growing at 100g/day was 2.6kg DM/day, as calculated on the deer industry’s feed apps (www.deernz.org/deerapp).

There are three feed-related tools available: Feed cost comparer, Feed intake calculator, and a Feed allocation calculator. (The Feed cost comparer and Feed intake calculator are downloadable to your smart phone.) The growth curve charts are also available online through deernz.org/deer-growth-curves

Facilitator Peter Kalb from Clutha Vets said whereas per-hectare yields for a kale crop could be 20 tonnes, some fodder beet was heading toward 30 tonnes so it was easy to assume the beet produced more ME.

However, swede and fodder beet would normally have about 12% dry matter and 20-21kg of total wet weight to meet these daily feed demands (2.6kg DM/day) and it was the kale in the Outram sample that provided the most energy (ME) by volume.

The comparison “gets people thinking in terms of how much feed is really required” and shows some people have optimistic expectations of how much energy their stock consume from winter crop, Kalb said.

“Based on dairy research, 20-40 percent wastage is not uncommon in some of these crops. A lot of people think they’re getting better usage, but that probably isn’t correct.”

Fodder beet was being touted as a lower nitrogen-leaching crop because it had less protein but it created associated issues like low phosphorous and calcium. It was also recognised that weaners grown on fodder beet alone for more than two months risked a protein imbalance, and that high yields per stock unit could create pugging and soil damage.

All intensive wintering systems could have these issues but fodder beet was probably the most problematic, Kalb said. The

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Participants at the workshop debate the pros and cons of different winter feeding options. Photo: Tim Fulton

A sample of kale used as a workshop prop: It was kale that turned out to provide the most metabolisable energy by volume, to the surprise of some. Photo: Tim Fulton

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workshop heard from South Otago farmers using self-feed silage pits for winter feed. Richard and Sarah Currie from Black Forest have a self-feed pit that can hold up to 90 tonnes of dry matter for about 200 mixed age (MA) hinds for 120 days.

The Curries’ 246 effective hectare farm at Clinton winters 700 MA stags, 550 MA hinds and 240 R1 hinds.

This year, after an unusually dry summer, the Curries fed 50t DM of whole crop barley silage to about 180 MA hinds over 90 days in their self-feed silage pit. The feed mix was also different, with whole crop making up 100 percent of the ration replacing the usual blend of 75 percent whole crop barley silage and 25 percent grass. Feed was allocated at 3kgDM/head/day at a cost of 16c/kgDM (48c/head/day).

The balance of the Curries’ hinds plus all the stags were wintered on crops, mostly fodder beet but also 3 hectares of swedes.

A focus mob of 150 R3 stags would utilise about 80 percent of a 5ha paddock of Brigadier fodder beet yielding 25t DM/ha weighed.

The rations included 3kgDM of fodder beet and 1kgDM of baleage per head per day for the 150 R3 stags shifted daily. The fodder beet cost 10c/kgDM and the baleage 38c/kgDM, based on $100/bale plus $25 transport (88c/head/day).

Currie said some years utilisation was better if was dryer, while in a wet winter the farm could end up with quite poor utilisation. They shifted daily to minimise waste in wet conditions.

Wistaria Co Ltd’s Maurice Judson manages 1,480 deer as part of a 16,500 stock unit sheep, deer and beef breeding and finishing operation at Awamangu, near Balclutha. Kale is used as a winter feed for a large number of the MA hinds, including 7 hectares that goes to 500 hinds from mid-June until early September.

Judson finds the hinds maintain their condition well and that kale is a simple, safe and cheaper winter feed option. The crop yielded 20 tonnes DM/ha at a cost of $895/ha (4.5 cents/kgDM) allowing for cultivation, seed, pre-emerge chemical, DAP and urea. A 75 percent utilisation rate is applied to the crop with a daily allowance of 2.5–3.0kgDM/hind. The kale is block grazed and baleage added when the hinds are down to the last day or two on the stalks. The cost including baleage worked out at 20.6c/hind/day.

Willowpark’s Henny and Maria Korevaar run just under 700 head on 90 hectares and have been farming deer for the past six years. They are breeders and finishers and have been breeding replacement hinds for the past couple of years. The Korevaars feed 215 weaners on kale and swedes, keeping 100 weaners on grass with baleage. Hinds in the hill block feed through a 26-metre feed rack, while the R2s are on grass. The 96t of silage costs 20c/kgDM (10c for the grass and 10c for a contractor, including inoculant and cover).

About 60t has been fed to the hinds in the wintering area, costing $60 per hind. The Korevaars were not able to make enough silage due to last summer’s drought so they are feeding additional baleage. This has increased the cost of wintering per hind to 25c/kgDM, based on 10c/kg for grass and 15c/kgDM for a contractor.

Tony and Debi Chittock have 80 hectares of deer-fenced country on a 180-hectare breeding and finishing farm near Balclutha. They run 300 hybrid hinds, 260 weaners and 25 stags on the rolling, summer-dry property and winter MA hinds from a self-feed grass silage pit. The weaners are being wintered on swedes for the first time this year after being previously wintered on grass and baleage. The yearling hinds are still being wintered on that feed.

Silage cost 17c/kgDM (7c/kgDM to put in the pit, 10c/kgDM to grow the grass). Based on an estimate of 10t DM/ha, the swedes cost 11c/kgDM or $1,089/ha, not including regrassing costs.