

High Grain Prices – are there other options?

Jo Gorman
Department of Agriculture & Fisheries, Dairy



Starch based grains have continued to rapidly increase in price with no ceiling seemingly reached. With landed prices for grain over \$400 per tonne, dairy ration costs have exceeded all expectations. In the immediate short term, the options are limited, however, the C4 Milk team have demonstrated that there are alternative forages that may act as economically viable starch replacements to processed grain.

Wheat, barley and sorghum headlages and corn earlage are starch-based forages that have been evaluated and incorporated into dairy rations for the last couple of years. The forages have contributed starch and other nutrients to the diet and enabled a reduction in processed grain

inputs without sacrificing milk production. Feed analysis of these alternative starch sources are outlined in Table 1 (page 3).

Before ensiling headlages and earlage, the herd's forage base should firstly be accounted for. If the farm has large

grain storage facilities taking the crop through to grain could be the preference. Headlage and earlage forages may not suit all systems, however, they do present additional options for farmers. The products are generally harvested at approximately 55% dry matter, roughly two

The C4 Milk team have demonstrated that there are alternative forages that may act as economically viable starch replacements to processed grain

continued ►

▶ continued

weeks after silage, but before dry grain. They are successfully stored in buns or pits, making them a ready-to-feed product. This is particularly attractive for farmers with no on-farm milling and grain storage facilities. Headlages and earlage are extremely palatable and easy to incorporate into feed wagons and feed troughs. They additionally present a better transport option than silage, given their higher dry matter content.

An added feature of headlages and earlage is the increase in rumen starch availability as they are stored over time. In a commercial trial conducted by the C4 Milk team, whole grain corn starch had a seven hour rumen starch digestibility of 54%, with no improvement after storage. In comparison, storing

corn earlage for three months caused an increase in digestibility from 59% to 71%. Other trials have indicated this digestibility improves further to 90% after six months ensiling. This improvement in quality due to storage time makes these feeds particularly interesting.

When making headlage or earlage, the ensiling process is critical. Cut corners and this high-value product will spoil. Being dryer than silage, particular attention needs to be paid to compaction and inoculants. Inoculants need to be applied at rates 1.5 times higher than silage. Seek appropriate advice from silage advisers/contractors and farmers before undertaking the ensiling process.

In the current commodity market where whole corn grain delivered

Darling Downs is trading at \$451 per tonne dry matter (DM), other starch containing feeds need to be considered. Commercially grown irrigated wheat headlage has yielded 7.5t DM per ha at a cost of \$115 per tonne DM while commercially irrigated corn earlage yielded 8.6t DM/ha for \$109/t DM. The comparative starch cost of these forages is attractive.

Grain prices are set to remain high for the foreseeable future. Having the option to ensile high starch forages may alleviate the rising cost of starch. In an unpredictable season, headlage and earlage are valuable commodities for dairy farmers and expand forage options if there is an opportunity to grow these alternative crops. ■■

	Commercial QLD Corn earlage	UQ wheat headlage	Commercial QLD wheat headlage	Commercial NSW triticale headlage
Starch (% DM)	49	32	25	40
CP (% DM)	9	13	11	11
ME (MJ/kg DM)	13	11	10	12
NDF (% DM)	31	36	40	35

Table 1. headlage and earlage feed analysis



When making headlage or earlage, the ensiling process is critical. Cut corners and this high-value product will spoil.