



Options for harvesting cereals for beef cattle feed

Aside from the traditional harvesting of cereals as dry grain and straw there are a range of different harvesting options that can bring potential benefits to beef producers. Most of the techniques apply to all cereals (wheat, barley, oats, triticale) and the majority of legume crops, (peas, beans, lupins).

There are many advantages associated with harvesting cereals for livestock. Feed value is better than with crops harvested later, and the dry matter yield is also higher. This is because once the plant has dried out it cannot photosynthesise and so energy from the grain is used to continue respiration. In addition, there is more leaf (protein) present earlier in the year, which is more digestible than the stem. Also, as the crop dries, grain shedding and leaf shatter losses increase.

The harvesting process can be much quicker due to the sieves in the combine being opened up to allow chaff into the grain tank, this feed is therefore not lost either.

In contrast to conventional harvesting of dry grain, the crop can be combined in damp, therefore, the crop can be combined in damp conditions, meaning that harvesting can start earlier in the day. In most cases the cereals can be stored in pits with no production of effluent. Straw should not be used to weigh down the top sheet as it provides an ideal home for rodents. In systems which require pits to be rolled for consolidation it is essential that the walls and retaining rails are structurally sound.

Crops preserved by ammonia (urea additives) have a high pH (pH 8-9) which makes them relatively rumen friendly feeds (low acidosis risk).

The risk of pneumonia in cattle is reduced when a damp feed is fed because it is less dusty. Producers must remember that rations containing significant levels of moist grain will require supplementation with higher levels of vitamin E and selenium.

In terms of practicality, the earlier harvest means that the workload is spread and fields are cleared in time for early sowing of the next crop.

When undersown crops are grown, an early harvest allows better growth and ground cover of the sward. When the undersown crop has grown well, there is the opportunity to bale and wrap the green straw/forage for stock feed.

Options for harvesting cereals before the conventional 'dry grain' stage

System	Days early	Machinery	Grain MC (%)	Crop stage	Store	Additive
Drier crimped grain	1-4	Combine & crimper	18-22	Mature	Pit or heap	Propionic acid
Moist crimped grain	21-28	Combine & crimper	30-45	Soft dough	Pit	Urea or proprietary additives/preservatives
Urea treated grain	21	Combine	30-40 (minimum)	Soft dough	Pit	Urea
Fermented wholecrop	40-60	Forage harvester	50-60	Late milk, soft cheese	Pit	Inoculants
Cracked wholecrop	14-21	Forage harvester with grain cracker	20-35	Hard dough	Pit	Inoculants or urea

Take a look at the [BRP Cereals Directory](#) for more information