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Technical Article

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To crimp or not to crimp?

By **Lizz Clarke - LC Beef Nutrition.**

Having worked independently in beef nutrition for 14 years, I can certainly say that crimping grain has made a huge difference to a number of my customers, and the answer is yes, seriously consider crimping.

The good old British weather, among other reasons, has resulted in an ever-increasing struggle to ensure that quality grass silage, and other forages, are made each year. Crimped grain has proved to be a safe energy boost that can be fed at much higher levels than rolled or ground cereals. It allows a higher overall proportion of grains to be fed in beef diets without the increased risk of acidosis and other rumen issues.

Apart from moisture content, the analysis of crimped grains does not vary significantly from dry cereals. However, when harvested at the correct stage, a lower proportion of the grain dry matter is rumen-degradable (fast fermenting) and a higher proportion bypass (slow fermenting) when compared with dry grain. This has immense benefits, allowing the animal to fully process feeds later in the gut and absorb more of the nutrients from those feeds. As a result more energy is utilised into animal production, rather than being wasted as excrement.

A good mixture of rumen-degradable and bypass feeds is the best option and having rolled, dry cereals (or other rumen-degradable energy feeds) with crimped cereals gives you this mix. Crimping is not limited to just cereal grains; beans, peas and maize are all ideal candidates for the crimping process.

Crimped grains are beneficial in all beef diets from young calves through to finishers if the diet is in need of added energy.

I work individually with farmers, tailoring the rations and mixes to their own 'on-farm feed supply' needs and, of course, and importantly, the requirements of the end processor. I have found that crimp is an asset to nearly all beef-production systems, from a lower energy, higher grass-based finish for extensive systems (those that need to have had a grazing season and need to have a higher percentage of forage within the finishing diet) to higher energy, more potent diets for bull beef systems where crimp is fed from weaning onwards for rosé veal or the processing market.

Knowledge of how all your available feeds work within the animal is hugely beneficial, and ensuring all aspects of the animal's dietary requirements are catered for is critical. Crimping has enormous benefits, but I find that feeding a mix of dry-rolled cereals (supplying rapidly-fermentable energy) and crimped cereals (for slower fermenting and rumen-bypass energy) gives even better results. Ensuring the animal has something to chew on and stimulate the rumen is also vital and must be taken into consideration, ie forage, straw etc.

The two separate farm diets shown were advised originally when a move to crimped cereals was being considered. The objective was to improve performance and outcome. Now, a few years down the road, neither of these farms has returned to their previous systems and they continue to see good economic performance.

When cereal prices are low, it is not unheard of to utilise your maximum recommended amount of dry cereals (for a fully grown 500kg+ animal), let us say 3-4kgs of dry rolled wheat (in a TMR) and then 8-10kgs of crimped wheat, along with the rumen stimulants (fibre) and protein sources. This, in many cases may be the cheapest feed option.

If cereals are in short supply and expensive, then purchased, cheaper products to satisfy the rumen fill can be used allowing crimped grain, maybe at lower levels, to still provide that much needed bypass energy.

With its earlier harvest, one-stop processing and its readiness to be fed after ensiling, crimped grain requires no further treatment of the cereal is required before it can be fed to the animal. No waiting for the mill and mix, or dusty home-milling. Once ensiled in a pit or silo bag for the recommended period of time, it is just a case of mixing with other required feeds and feeding as it is – simple! All you need now is all the other elements of the diet taken care of to ensure it is all balanced to give you the most cost-effective ration with the feeds available.

***Lizz Clarke** of LC Beef Nutrition.*
Email: lcbeefnutrition@gmail.com

Example of actual diet for extensive finishing system, based in Buckinghamshire.

Ingredient	Fresh Weight (kg)	Dry Matter Intake (kg)
Crimped wheat	9	4.8
Baled silage	7.5	5.6
Beans (rolled)	2.5	2.1
Straw	0.35	0.22
Minerals	0.08	0.08
Total DMI	12.9	
ME	12.2m/d	
Protein	13%	
Starch	27%	

Example of actual finishing diet for bull beef system for rosé veal market based in Yorkshire.

Ingredient	Fresh Weight (kg)	Dry Matter Intake (kg)
Crimped maize	5	3.4
Crimped wheat	3	1.9
Potatoes	2	0.7
Haylage	0.8	0.28
Regupro	0.7	0.04
Straw	0.3	0.26
Minerals & limestone flour	0.13	0.13
DMI	7	
ME	13m/d	
Protein	12%	
Starch	51%	