

Soybean meal

Product description

Soybeans (Glycine max) are a high protein legume and are the most commonly used protein supplement in dairy diets throughout the world.

Soybean meal is palatable, nutrient dense, high in digestibility, and a relatively consistent source of protein. It has an excellent amino acid profile and is a concentrated source of protein and energy. Soybean meal accounts for nearly 65% of the world's protein feed demand.

There are several anti-nutritional factors (ANFs) associated with soybean meal (trypsin inhibitors), which are partially inactivated or minimised during the toasting process.

These ANFs have the greatest effect on monogastric animals, such as poultry and swine. It has a lesser effect on ruminant animals, because of the transformation that occurs in the rumen.

Use and application

There is no maximum for the use of soybean meal in dairy rations, and it can be fed to meet protein requirements. Normal feeding rates will be around 0.5-2kg per head per day. Soybean meal can be fed mixed with silage in the paddock or on the feed pad. It can also be fed via the grain feeding system in the dairy shed.

Consult your nutritionist or farm consultant to work out the most optimal inclusion level for your particular situation.

Features and benefits

Protein supplements like soybean meal can be fed to balance out low protein pasture and/or supplements.

Cows in mid-lactation require about 16% dietary crude protein. In summer pasture protein levels can drop under 16%. In these situations deficiencies can become an issue and soybean meal can be used to stimulate production levels.

Soybean meal contains around 50% protein of which 35% is rumen undegradable ("by-pass") and 65% is rumen degradable.

Soybean meal is rich in lysine, and of the common plant proteins used in animal feeds, soybean meal has the highest percentage of essential amino acids (47.6%).

Storage and handling

Like all feedstuffs, soybean meal should be stored dry, in bulk bins or placed on cement slabs (away from vermin and protected from the weather).

Typical analysis

Dry matter (DM)	90%
Crude protein	46%
Metabolisable energy (ME)	12MJ/kg/DM
Crude fibre	4%
Neutral detergent fibre (NDF)	12.3%
Acid detergent fibre (ADF)	45%
Crude fat	1.4%
Calcium	0.3%
Potassium	2.1%
Lysine	2.91%
Theonine	1.79%

note: typical analysis only, not specification.