

BYPASS PROTEIN



Borregaard LignoTech is one of the world's leading suppliers of high performance additives and ingredients to the animal feed industry.

High Class Bypass for ruminants

SOYPASS®

SoyPass is a source of rumen bypass protein produced using high protein soybean meal and a sustainable source of wood sugar, registered in the EU as a feed additive.

Borregaard LignoTech is a leader in bypass protein technology, supplying the European, Middle East and American markets for over 30 years. SoyPass provides a high level of rumen undegradable, yet highly digestible protein that is perfect to support today's higher milk and beef production.

Soybean meal is a high value vegetable protein source for all livestock. During digestion, however, a significant proportion of this vegetable protein is degraded in the rumen, far too early in the digestive system for the high yielding dairy cow and growing animals to exploit fully.

Bypass protein products overcome this problem by protecting the protein while in the rumen, but allowing it to be fully digested within the small intestine. Consequently, better utilization of the essential amino acids occurs, resulting in improved milk production and growth.



SoyPass is a rumen bypass protein feed.

- NRC 2001 states a high protein value of 76% UDP (% of cp at 6% outflow)
- NRC 2001 states a high degree of digestibility of 93%
- EU trial shows palatability to be better than that of regular soybean meal
- SoyPass has a pleasant colour and aroma

These properties aid the nutritionist in formulating rations that improve milk production, growth rate and/or reduce cost.



**Borregaard
LignoTech**

www.lignotechfeed.com

SOYPASS NUTRITIONAL VALUES

NRC 2001	
Digestible rumen undegradable protein, g/kg DM	357
Digestible rumen undegradable protein, % of CP	70.7
Digestibility of rumen undegradable protein, %	93
Acid detergent fibre insoluble protein (ADFIP), % of CP	3.16
Neutral detergent fibre insoluble protein (NDFIP), % of CP	53.3
NEI, Mcal/kg	2.215
NEm, Mcal/kg	2.113
NEg, Mcal/kg	1.478

British	
DUP, g/kg DM	340
ERDP, g/kg DM	130
ADIN, g/kg DM	1.2
Metabolisable energy (MJ/kg DM)	13.5

French	
PDIN, g/kg DM	378
PDIE, g/kg DM	353
PDIA, g/kg DM	310
Dégradabilité théorique, % CP	32.8
dsi	0.93
UFL, DM	1.11

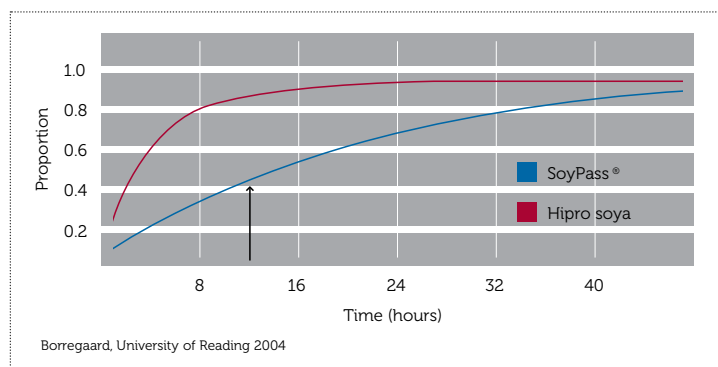
Dutch	
BRE, g/kg DM	331
DVE, g/kg DM	361
OEB, g/kg DM	58
VEM, g/kg DM	980
FOS, g/kg DM	440
DOM, %	94.5
Digestibility of bypass protein, %	98.5

German	
UDP, %	65
nXP, g/kg	385
Ruminale stickstoffbilanz	+10
Milchvieh, MJ Nel/kg	75
Rima, MJ NE/kg	12

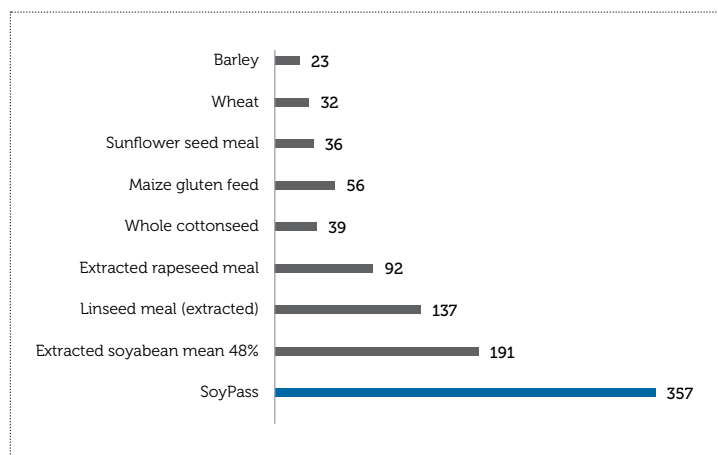
Nordic	
ATT, g/kg DM	300
PBV	90

SoyPass® typical analytical values - g/kg product (fresh)			
Dry matter	870	Ca	4.7
Crude protein	450	P	7.2
Oil	19	Na	0.2
Crude fibre	33	Mg	3.9
Ash	60	K	21.0
Starch	19	Cl	0.3
Sugars	90		

SoyPass protein degradation is 50% of soybean meal protein after 12 hours (typical rumen retention time).



SoyPass has high digestible rumen bypass compared to conventional feeds (figures are g/kg DM).



Source: NRC 2001