



## *The protein solution for CMR*

Calf milk replacers (CMR) are traditionally based on dairy proteins, since these are considered the best source of protein a young calf can get. Vegetable proteins have typically been viewed as a lower quality. But not all vegetable proteins are the same. With the **HP 100** series, HAMLET PROTEIN offers an optimised, functional soya protein as a cost-efficient alternative to dairy.

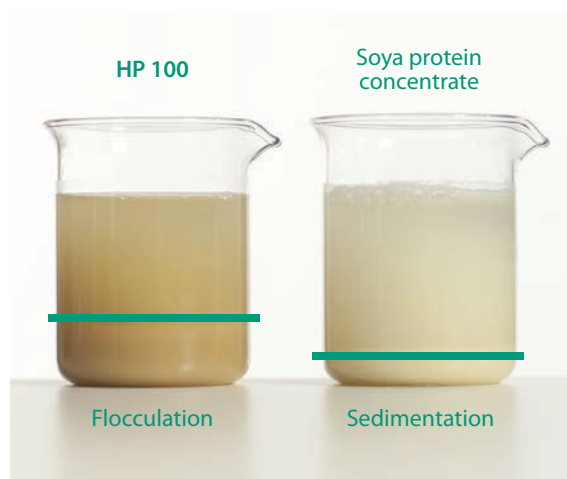
The **HP 100** series products have been used in CMR for years. The products are low in non-protein nitrogen and high in the essential amino acids with an excellent digestibility. Besides the nutritional and economical advantage, they improve palatability and bring a number of functional improvements compared to other alternatives.

### Why is the HP 100 series different?

The **HP 100** series offers a number of advantages over other vegetable proteins marketed for use in CMR. Compared to standard soya protein, our solution is very low in anti-nutritional factors that limit the absorption of feed nutrients. Easy digestibility ensures calves gain full benefit from the products' high content of essential amino acids. Because our special production process removes the typical beany taste of soya, the products in the **HP 100** series all have a palatable flavour and mouthfeel that calves enjoy.

### Superior functionality

Our process improves the wettability and dispersibility of the protein. This means that, instead of forming a more solid sedimentation, the protein is only subject to light flocculation. The result is a homogeneous solution, when fed to the calves and availability of all nutrients for all calves.



## Optimised nutrition

HAMLET PROTEIN employs a patented production process that removes all major anti-nutritional factors from soya. Carbohydrates are pre-digested to provide calves with a valuable energy source that aids the development of the rumen.

	Full fat soya	Soya flour	HP 100/110	HP 130/140	Soya protein concentrate
Trypsin inhibitor (mg/g CP)	10-25	4-8	2-3	2-3	2-3
β-Conglycinin (mg/g)	50-100	10-50	0.002	0.002	0.002
Stachyose (%)	4-4.5	4-4.5	<0.5	<0.5	1-3
Raffinose (%)	0.8-1	1-1.2	<0.1	<0.1	<0.2
Phytic acid (%)	0.6	0.6	0.4	0.1	0.6

### Benefits

- Optimal growth at lower cost
- Low in anti-nutritional factors
- Rich in essential amino acids
- Excellent digestibility
- Improved palatability
- Easily dispersed
- Allows faster rumen development

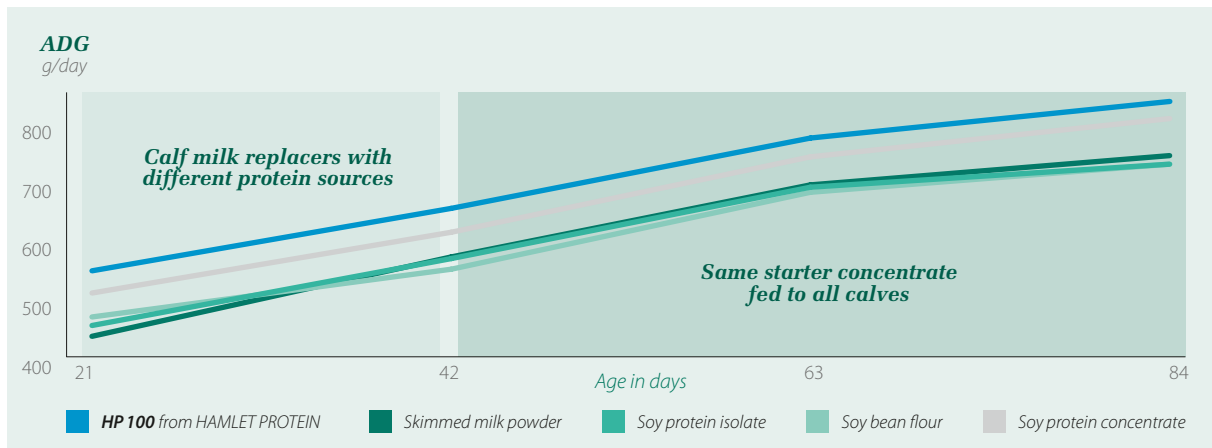
### Product range for CMR

Product features	GMO	Non-GMO
Excellent nutritional and functional properties	HP 100	HP 110
+ reduced phytate level, allowing a better absorption of minerals	HP 130	HP 140

## Long-lasting effect on calf growth

HP 100 was put to the test in a feeding trial at the Grange Research Centre in Ireland. Half the dairy protein in a skimmed milk-based calf milk replacer (CMR) was replaced with either HP 100, soy protein concentrate, soy protein isolate or specially treated soy flour.

The test CMR formulations were given to Friesian calves from the age of 21 to 42 days. CMR was then replaced by a starter feed, comprising a concentrate of rolled barley, traditional soy flour and premix.



Six weeks after the switch to starter feed, the carry-over effect of the CMR diet with HP 100 could still be detected. Due to optimal early rumen development, calves fed HP 100 had a noticeably superior growth rate.

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