



# THYROPROTEIN

## IODINATED CASEIN

### **DESCRIPTION**

Quite some time ago it was discovered in the United States that suppression of the thyroid gland in dairy cows produced a considerable decrease in milk production - around 30% or more. On the other hand, cows fed on desiccated thyroid glands, or those injected with thyroxine, show that milk production not only returned to normal, but in many cases increased by around 20 or 30 %. Normal dairy cows were then treated with thyroid hormone and their milk production increased by different amounts. It was deduced that the increased milk production was due to the fact that the cows normally segregated less than the optimum amount of thyroxine and when the latter was given to them, the milk production increased in proportion to their deficiency. However, the use of desiccated thyroid glands carries with it the inconvenience of the irregular thyroxine contents, they are difficult to acquire and are also expensive. Owing to these difficulties it was decided to synthesize **Thyroprotein** using a process of iodization of the milk proteins with a uniform content of thyroxine of around 1%, which, results three times more active than desiccated thyroid glands which only contain 0.3%. **Thyroprotein** is a powder which contains 9-10 % of organic iodine and without traces of free iodine. Organic iodine is combined with thyroid hormones, and so forming iodine thyroxine and di-iodinethyroxine. **Thyroprotein** has the same action as thyroid hormones :

- a) activates the milk secretion;
- b) activates the metabolism of the carbon-hydrates and fats, thus increasing the organ's energy sources.

### **SPECIFICATIONS**

- \* **Appearance:** Powder with a yellowish-orange or yellow-ochre colour and with a characteristic smell and taste.
- \* **Remark:** As **Thyroprotein** is a product from biological origin, it is very difficult to obtain a uniform appearance. Nevertheless this does not have any influence on the activity of the product.

### **ADVANTAGES**

- \* **Greater Economy :** The first experiences of lactation stimulation in cows practised the use of pure thyroid hormones (thyroxine) or desiccated thyroid glands, but the price of these products hardly compensated the results obtained, it was therefore necessary to look for more economic sources in order to be able to generalize treatments and achieve good results.
- \* **Constant value :** Desiccated thyroid glands have a widely variable thyroxine content which ranges from 0.3 to 1 %. The manufacture of **Thyroprotein** has achieved a standardisation of the thyroxine content at 1% which gives dosage security and practicality.
- \* **Good results:**
  - A lactation increase of 20 to 30 %, if the animals have a thyroxine segregation deficiency and are fed on high energy food.
  - An increase in the milk fat content.
  - Stimulates laying in birds avoiding excessive fatness.
  - Stimulates spermatogenic capacity in male destined for reproduction.
  - Growth and exterior aspect of animals improves, hair is shinier, plumage improves.
  - Quality of meat improves- becomes leaner.

### **USE & DOSAGE**

To be mixed in feeds.

- **Layers, breeders** : 150 - 200 g/ton of feed to improve egg production and eggshell texture.
- **Broilers** : 100 - 200 g/ton of feed to improve growth and feathering.
- **Turkeys** : 100 - 800 g/ton of feed to improve growth and feathering.
- **Ducks** : 100 - 200 g/ton of feed to improve growth and feathering and to reduce carcass fat.
- **Sows (lactation)** : 100 - 200 g/ton of feed to improve milk flow: heavier weaning pigs and less piglet mortality.
- **Growing pigs** : 40 - 100 g/ton of feed to improve rate of growth and market finish.
- **Boars** : 100 - 200 g/ton of feed to improve fertility and libido.
- **Sheep & goats** : 1 to 1.5 g/50 kg of live weight and per day to increase milk production and fat content, to improve quality of the meat and to increase fertility and sexual vigour.
- **Beef & cattle** : 1.25 g/day and per 50 kg live weight in winter and 1g in summer, if this is to be added to the feed, the dosage will be 2 kg per ton of feed in winter and 1.6 kg in summer; to increase milk and butterfat production, to improve fertility and libido or to improve rate of growth. Dairy cows which are given Thyroprotein should be fed on high energy feed, a mixture of grains, in order to avoid loss of weight.

**PACKING** 25 kg bags or drums

**STORAGE & HANDLING** Should be stored in dry and cool places.

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