Nobilis Salenvac

Unique vaccine against *S. enteritidis*

**Description**
Nobilis Salenvac contains formalin inactivated *S. enteritidis* phage type 4 grown under conditions of iron restriction. The vaccine contains aluminium hydroxide as an adjuvant.

**Indication**
Nobilis Salenvac is indicated for the vaccination of breeders and laying type chickens against *S. enteritidis* infections.

**Vaccination schedule**
The recommended vaccination schedule is:
- 0.5 ml at 10-12 weeks of age and a booster dose of 0.5 ml at 14 to 18 weeks of age with an interval of 4-6 weeks between the two vaccinations.
- High risk of early infection:
  - 0.1 ml at day old, followed by 0.5 ml at 4 weeks of age and a booster dose of 0.5 ml at 14 to 18 weeks of age with an interval of 4-6 weeks between the second and third vaccination.

**Administration**
Administration is by intramuscular injection into the leg or breast muscle under aseptic conditions. The breast muscle is the recommended site of injection for broiler breeders, to avoid the risk of leg injuries, due to incorrect vaccination technique.

**Presentation**
Nobilis Salenvac is available in 250ml and 500ml polyethylene bottles.

**References**
1. British Health Laboratory Services, London 7/2001
5. International Hatchery Practice 7/1995

Nobilis Salenvac represents an advance in vaccine technology. One vaccine, developed for both breeders and layers with an excellent safety profile and proven efficacy.
Salmonella enteritidis, a major threat

Since the early 1990's, S. enteritidis has emerged worldwide as the most common type of Salmonella isolated from poultry. Public awareness of the health risks associated with food-borne pathogens is at an all time high. The focus is on S. enteritidis. Poultry meat and egg products are often singled out as the sources of infection.

Salmonella is the most frequently reported zoonotic disease in European countries. The severity of the disease varies, but can it be potentially fatal especially in immune compromised individuals, the elderly and children. The disease in European countries. The severity of the disease in European countries. The severity of the disease in European countries. The severity of the disease in European countries.

To reduce Salmonella infections in humans, massive public health campaigns were published. In 1997, 37 400 cases of human Salmonellosis were reported. In 2000, this number had decreased to 17 000, a reduction of more than 50%. The vaccine used in this successful mass programme was Nobilis Salenvac.

General control measures such as improved hygiene, disinfection, biosecurity and antibiotics have not resulted in the desired levels of S. enteritidis reduction.

Reducing vertical and horizontal spread

By vaccinating against S. enteritidis, the poultry producer is satisfying the needs of both the retailer and consumer and avoids the potential financial losses associated with the treatment or culling of a Salmonella positive flock.

Vaccination is proving to be a valuable tool in the control of S. enteritidis.

Barrier Effect

One infected breeder or chick may cause an outbreak in a flock. However, in a vaccinated flock the surrounding birds act as a barrier, isolating the infected bird, preventing escalation of the infection.

Nobilis Salenvac is an inactivated S. enteritidis vaccine, inducing protective levels of antibodies in vaccinated poultry. Chicks originating from vaccinated breeders have natural antibodies providing immunity against S. enteritidis during the first 21 days. The protective levels of antibodies induced by Nobilis Salenvac act as a transmission barrier to both the vertical and horizontal spread of S. enteritidis.

Vaccination reduces the risk

To reduce Salmonella infections in humans, massive immunisation of commercial layers against S. enteritidis was implemented in the United Kingdom starting in 1997. By October of that year the results of this vaccination programme were published. In 1997, 37 400 cases of salmonellosis infections were reported. In 2000, this number had decreased to 17 000, a reduction of more than 50%. The vaccine used in this successful mass campaign was Nobilis Salenvac.

In the environment of the chicken's intestine, iron is bound to proteins, decreasing its availability. Bacteria such as Salmonella and E. coli, form iron-transfer mechanisms on their surface, so-called IRP's (Iron Regulated Outer Membrane Proteins), which enable an active resorption of iron from the intestine. These IRP's are recognised antigens to which antibodies are formed.

Nobilis Salenvac is produced under conditions of iron restriction. Produced under conditions of iron restriction. Produced under conditions of iron restriction. Produced under conditions of iron restriction. Produced under conditions of iron restriction. Produced under conditions of iron restriction. Produced under conditions of iron restriction.

Abatement Hydrolabile Gel Adjuvant

The traditional water-in-oil adjuvants used with bacterins often result in severe local reactions at the site of injection. Nobilis Salenvac contains an Alumina Hydrolysable Gel Adjuvant which causes no salivary reactions at the injection site. The result is better flock uniformity with a potential improvement in egg production. In case of accidental self injection, AluGel is also safe for the operator.

These properties make Nobilis Salenvac a truly universal and safe vaccine suitable for Salmonella control in both the egg and broiler industries.

The vaccine with an excellent track record

Extensive field experience in the Netherlands, Belgium, and United Kingdom with millions of birds show that Nobilis Salenvac can dramatically reduce S. enteritidis infections.

Nobilis Salenvac

- A vaccine with an excellent track record

- 44 700 eggs, all free of S. enteritidis

- 1.2 million free range egg layers vaccinated in the UK in 1997. 44 700 eggs from these layers as bought in the supermarket were bacteriologically sampled. No contaminated eggs were found. In contrast, 19 of 42 642 eggs from a non-vaccinated control group were found to be contaminated. Based on these results the British Egg Quality Control (BEQC) decided to implement vaccination as a condition of participation in their Code of Practice for Quality Eggs.

- These results were confirmed in the field by a large UK broiler integration. They started vaccinating their broiler breeders with Nobilis Salenvac in 1996. As a result of this vaccination, the incidence of S. enteritidis infections was reduced by more than 90% on the breeder farms.

- In conclusion reduced risk of early Salmonella infection in this critical period of life. This improvement was due to the positive effect of artificially Derived Antibodies protecting the day old chicks during the crucial first weeks of life.

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