



Only Heptavac-P **plus**® protects  
against Pasteurella\* and Clostridia\*\*

Vaccinate lambs  
NOW before  
weaning

## Heptavac-P Plus

- Combined protection against:
  - Most important clostridial diseases
  - *M. haemolytica* infections
  - *B. trehalosi* infections
- IRP technology
  - Right protection
  - Cross-protection
- Ensures highly protective antibody levels in the colostrum
- Single yearly booster
- Proven under field conditions



## Heptavac-P Plus

### Product Information

Suspension for injection containing as active substances per ml: *Clostridium perfringens* beta toxoid inducing  $\geq 10$  IU; *Clostridium perfringens* epsilon toxoid inducing  $\geq 5$  IU; *Clostridium septicum* toxoid inducing  $\geq 2.5$  IU; *Clostridium tetani* toxoid inducing  $\geq 2.5$  IU; *Clostridium novyi* toxoid inducing  $\geq 3.5$  IU; *Clostridium chauvoei* cells and equivalent toxoid of strains 655,656,657,658,1048 inducing  $\geq 0.5$  guinea pig PD<sub>90</sub>. Formalin killed cells of *Mannheimia haemolytica* serotypes: A1, A2, A6, A7 and A9 –  $5 \times 10^8$  cells per serotype. Formalin killed cells of *Pasteurella trehalosi* serotypes: T3, T4, T10, T15 –  $5 \times 10^8$  cells. Adjuvant: Aluminium hydroxide gel 400 mg.

**Indications:** For the active immunisation of sheep and lambs from 3 weeks of age, to reduce mortality and clinical signs of lamb dysentery, pulpy kidney, struck, tetanus, braxy, blackleg and black disease, caused by *Clostridium perfringens* types B, C and D, *Cl.septicum*, *Cl.novyi*, *Cl.chauvoei* and *Cl.tetani*. The vaccine may also be used for the active immunisation of sheep to reduce mortality and clinical signs of pneumonic and systemic pasteurellosis. The vaccine may be used in pregnant ewes to provide passive immunisation of their lambs to reduce mortality and clinical signs of lamb dysentery, pulpy kidney, tetanus and pasteurellosis in their lambs provided that the lambs receive sufficient colostrum during the first 1-2 days of life. Significant levels of immunity cannot be expected until two weeks after the second dose of vaccine in the primary vaccination course. There are reports that active immunity will last for up to 12 months and that passive immunity will persist for up to 4 weeks after birth in lambs from ewes vaccinated with conventional Pasteurella vaccines. Active immunity to the clostridial diseases is expected to persist for up to one year, with passive immunity being present up to approximately 3 weeks after birth in lambs from ewes vaccinated with Heptavac-P Plus. Heptavac-P Plus has been developed following research and development which resulted in the application of Plus 'IRP' technology for the manufacture of the pasteurella components of this vaccine. The inclusion of these IRP components should provide enhanced efficacy, and cross protection e.g. protection against serotype A12, which is not included in the vaccine, has been demonstrated.

**Dosage and administration:** Heptavac-P Plus is the recommended vaccine for breeding stock since it provides optimal aid in the control of the predominant clostridial diseases in adult sheep by active immunisation and in young lambs by passive immunisation.

**Dose:** 2 ml by subcutaneous injection in the lateral side of the upper neck observing aseptic precautions.

**Basic immunisation: Breeding sheep:** All breeding sheep must receive two injections, each of 2 ml, separated by an interval of 4-6 weeks. In adult breeding ewes, the second 2 ml dose should be administered 4-6 weeks prior to lambing.

**Lambs:** Lambs being retained for fattening or subsequent breeding will require a full course of vaccination. At a minimum age of 3 weeks these lambs should receive two injections, each of 2 ml, separated by an interval of 4-6 weeks.

**Re-vaccination scheme:** A 2 ml booster injection at intervals of not more than 12 months. In adult breeding ewes these yearly booster injections should be given 4-6 weeks prior to lambing. On farms where the incidence of pasteurellosis is high, a supplementary 2 ml booster injection using Ovipast Plus may be required 2-3 weeks prior to expected seasonal outbreaks. The vaccine bottle must be shaken

well before use. The vaccine may be administered using a sterile needle and syringe, providing a fresh sterile needle is used each time the rubber cap is punctured, to avoid contamination of the remaining contents. Syringes and needles must be from gamma-irradiated packs or freshly sterilised by boiling for at least 20 minutes. No alcohol or other disinfectants should be used for sterilisation. The use of an automatic vaccinator is recommended. Since the bottle is non-collapsible, a vaccinator with a vented draw-off spike or similar device must be used. The instructions supplied with such syringes should be noted and care should be taken to ensure the delivery of the full dose, particularly with the final few doses from the bottle. Because sheep are very sensitive to contamination of the injection site (which may result in non-product related tissue reactions and even in abscesses), it is advised to follow strict aseptic injection techniques.

**Contraindications, warnings, storage and disposal advice:** Heptavac-P Plus should not be used in lambs less than 3 weeks of age due to the possible immunological incompetence of the very young lamb and competition from any maternally derived colostral antibodies. Do not vaccinate unhealthy animals. In the case of accidental self injection or ingestion seek medical advice immediately and show the package leaflet or the label to the physician. Immunisation of sheep may result in temporary swellings at the injection site lasting for up to 3-4 months after vaccination. Typically, these swellings may be warm when compared to the surrounding area for up to 14 days after vaccination. Safety studies in lambs have shown that the swellings did not appear to inconvenience the animals or hinder neck movement. Minor temperature increases (approximately 1°C -2°C) lasting for up to 1 week may occur following vaccination of lambs. Occasional hypersensitivity reactions may occur. No information is available on the safety and efficacy of this vaccine when used with any other veterinary medicinal product. A decision to use this vaccine before or after any other veterinary medicinal product therefore needs to be made on a case by case basis. Store in a refrigerator (+2°C to +8°C). Protect from light. Do not freeze. Any unused product or waste materials derived from such veterinary medicinal products should be disposed of in accordance with local requirements.

**Use during pregnancy or lactation:** Can be used during pregnancy. Stress should be avoided when vaccinating pregnant animals, particularly during the later stages of pregnancy.

**Withdrawal Period(s):** Zero days.

**Legal Category:** In ROI [LM] ; In Nth Irl [POM-VP5]

\*M. haemolytica, B. trehalosi  
\*\*7 of the most common strains

Further information is available from: MSD Animal Health, Red Oak North, South County Bus. Pk, Leopardstown, Dublin 18  
Tel: (00353)-(0)1-2970220





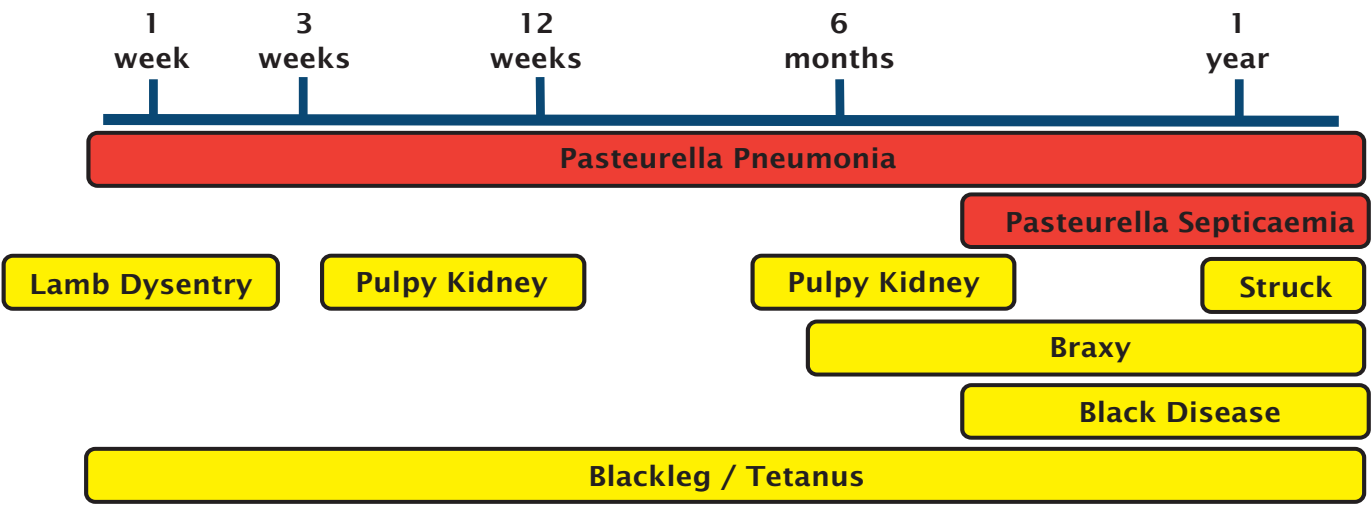
Pasteurellosis and Clostridiosis – the risks

Heptavac-P Plus – complete the primary course in lambs prior to weaning (16 weeks of age)

Pasteurella and Clostridial Diseases – The Big Killers

Pasteurella and clostridial diseases are the most common causes of deaths in lambs and sheep. In unprotected flocks, the risk of attack from either pasteurella or clostridial pathogens is present all year round.

Pasteurella and Clostridial age distribution

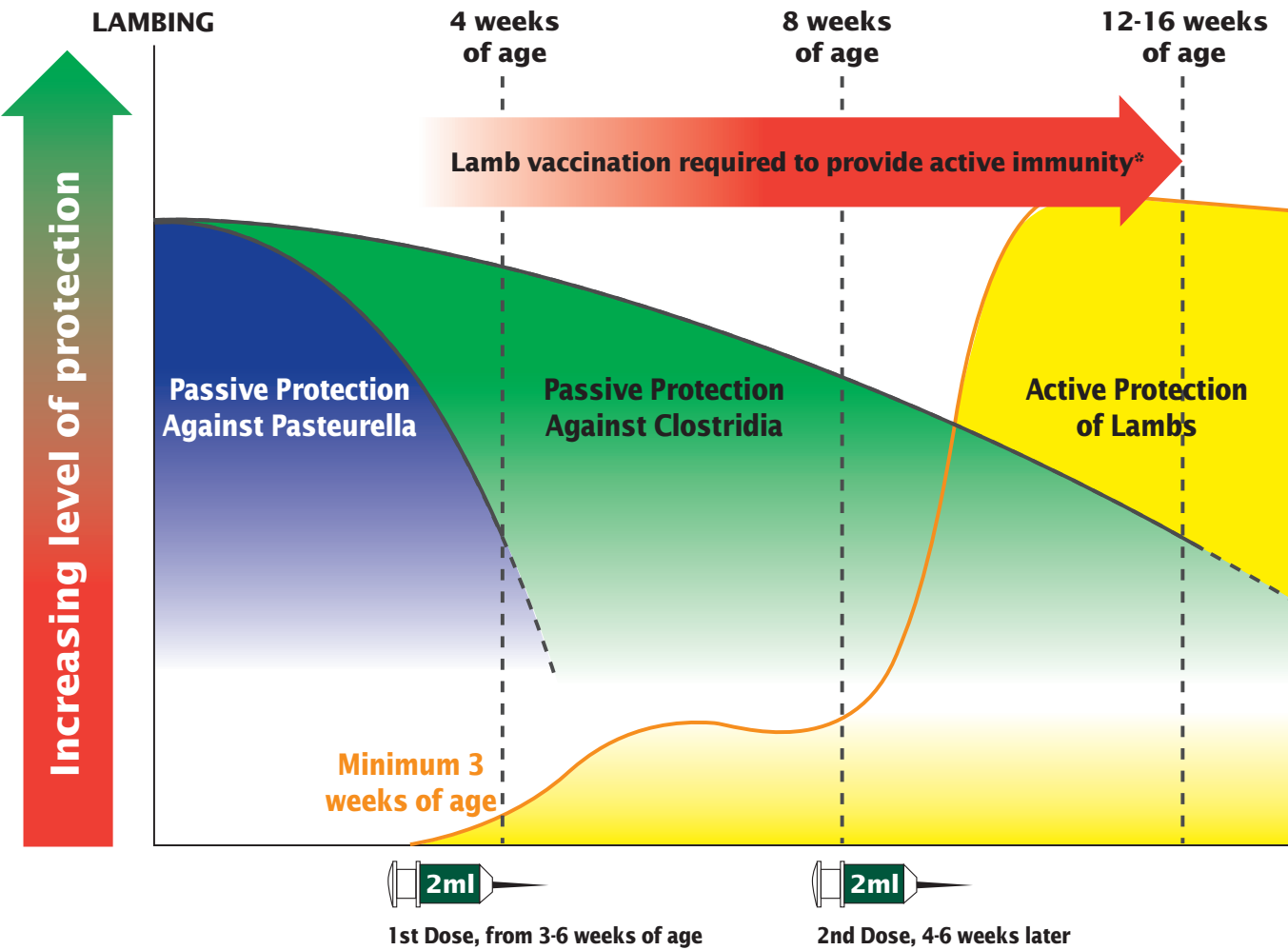


Pasteurellosis

- Pasteurellosis is one of the most common bacterial infections of sheep, and by far the most important respiratory one
- Two common clinical forms of pasteurellosis exist:
  - *Pneumonic caused by M. haemolytica*
  - *Systemic caused by B. trehalosi*

Main clostridial diseases

| Agent                        | Disease                                | Risk group             |
|------------------------------|--|------------------------|
| <i>C. perfringens</i> Type B | Lamb dysentery. Haemorrhagic enteritis | Young lambs            |
| <i>C. perfringens</i> Type C | Struck. Necrotic enteritis             | Adult sheep            |
| <i>C. perfringens</i> Type D | Pulpy kidney                           | All ages               |
| <i>C. septicum</i>           | Braxy. Malignant oedema                | Old lambs. Adult sheep |
| <i>C. novyi</i> Type B       | Black Disease                          | Adult sheep            |
| <i>C. chauvoei</i>           | Blackleg                               | All ages               |
| <i>C. tetani</i>             | Tetanus                                | All ages               |



Vaccinate Before Weaning

Vaccination of ewes with clostridial vaccines prior to lambing gives protection to lambs for up to 12 weeks.

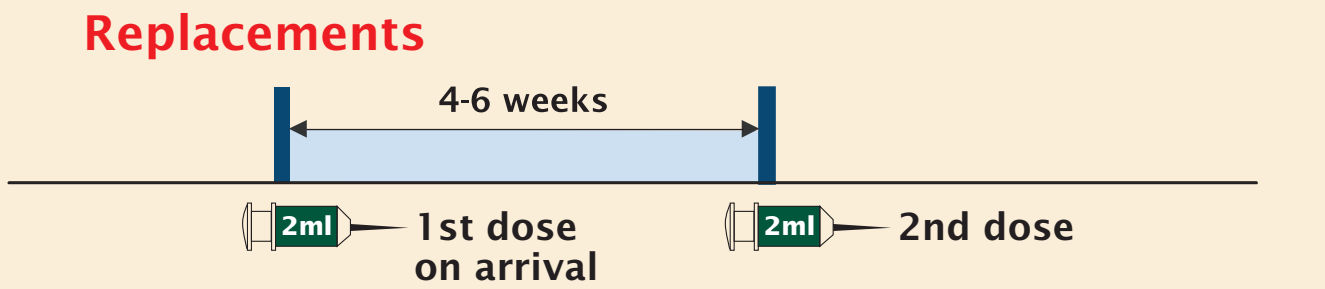
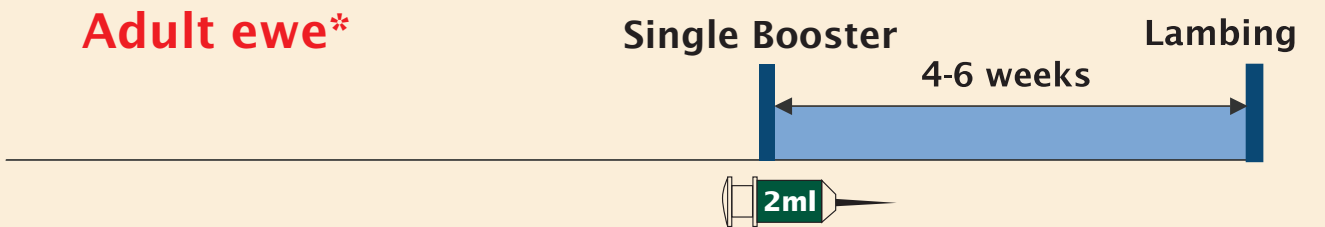
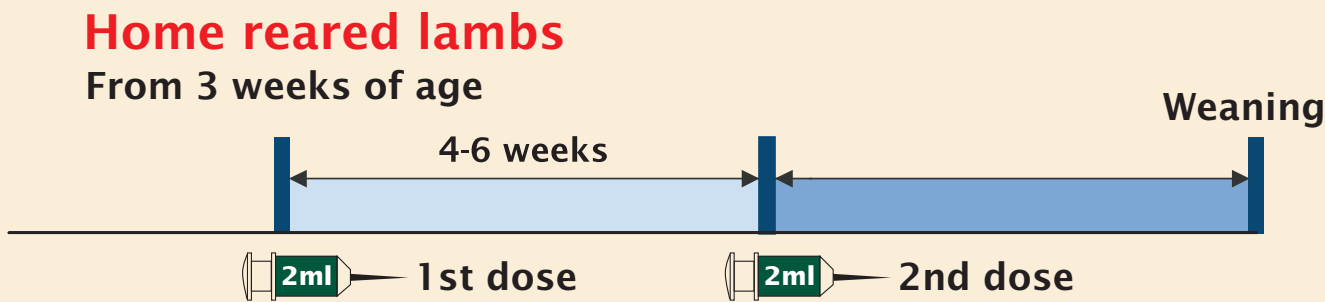
After that, lambs are at severe risk of pasteurella and clostridial attack, particularly pulpy kidney. The stress of weaning and change in diet increases the risk.

Give the primary course (two doses spaced 4-6 weeks apart) of Heptavac-P Plus before weaning.

Postponing vaccination until Autumn, as happens on many farms, is a risk too far.

# Heptavac-P *plus*®

Vaccination Schedules



Vaccination with Heptavac-P Plus delivers:

- **Protection of the vaccinated animal against clostridiosis and pasteurellosis**
- **In pregnant ewes, vaccination 4-6 weeks prior to lambing will ensure high maternally derived antibodies (MDA) that will protect the lamb**

\*Previously vaccinated

