

# WIN THE FIGHT AGAINST PASTEURELLOSIS



**100**  
years | EXPERIENCE IN  
VACCINE R&D



## CAUSES

\* *Mannheimia haemolytica*  
(type A2, A7, A9, A6) (Old name:  
*Pasteurella haemolytica* type A)

\* *Biberstenia trehalosi*  
(type T15) (Old name:  
*Pasteurella haemolytica* type T)

\* *Pasteurella multocida*

(Listed in order of importance and  
most frequently isolated)<sup>1,2,3</sup>



## THE DANGERS



Transportation



Mixing



Weather



Weaning



Dust



Diseases



Wind



Parasites



Viral  
infections



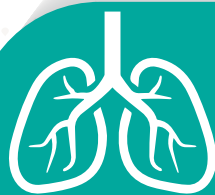
Pneumonia

THE ONE & ONLY VACCINE



**Multivax P  
Plus**

The one and only vaccine with  
IRP patented technology from  
*Mannheimia haemolytica*  
strains A1, A2, A6, A7 & A9  
and *Biberstenia trehalosi*  
T3, T4, T10 & T15



THE **THREAT** OF  
**PASTEURELLOSIS**  
TO YOUR SHEEP IS SIGNIFICANT



- Bacteria need iron to grow and replicate, forcing them to create iron receptors
- **Multivax P Plus** stimulates the immune system to produce antibodies against these iron receptors
- This is the earliest possible form of combating infection



## CLINICAL SIGNS

- Fever
- Nasal and ocular discharges
- Coughing
- Difficulty in breathing
- Lagging behind the flock



## IMPACT

- Poor growth rates
- Lowers feed efficiency
- Lowers immunity to other diseases
- Death



## SPREAD

- Commensal organism of the respiratory tract
- Inhalation of infectious droplets from carrier animals
- Direct contact with infected animals
- Lambs nursing ewes with *Pasteurella* mastitis



## CONTROL

- Minimize stress
- Isolate sick animals
- Vaccination



## VACCINE PROTOCOL

- Boost ewes 4-6 weeks before lambing
- Lambs from unvaccinated ewes: vaccinate from **3 weeks of age. Repeat booster 4 weeks later**
- Lambs from vaccinated ewes: vaccinate from **4-6 weeks of age. Repeat booster 4 weeks later**



- Boost all replacement ewes, rams and any other adults **ANNUALLY**



References  
1. M.O. Odugbo, L.E. Odama, J.U. Umoh, A.G. Lamorde. 2006. *Pasteurella multocida* pneumonic infection in sheep: Prevalence, clinical and pathological studies, *Small Ruminant Research*, 66 (1-3) pp. 273-277.  
2. Paul J. Plummer, Cassandra L. Plummer, Kelly M. Still, Chapter 7 - Diseases of the Respiratory System, Editor(s): D.G. Pugh, A.N. Baird, *Sheep and Goat Medicine* (Second Edition), W.B. Saunders, 2012, Pages 126-149  
3. Odugbo MO, Odama LE, Umoh JU, Lombin LH. 2004 The comparative pathogenicity of strains of eight serovars and untypable strains of *Mannheimia haemolytica* in experimental pneumonia of sheep, *Veterinary Research* 35 (6) pp. 661-669

**MULTIVAX P PLUS**, Reg. No. G3694 (Act 36/1947), Namibia Reg. No. V06/24.4/183. Contains toxoids of *Clostridium perfringens* types B, C & D, *C. septicum*, *C. tetani*, *C. novyi* type B, *C. chauvoei* and iron regulated antigens from the epidemiologically most important serotypes of (*Pasteurella*) *haemolytica* and *Pasteurella trehalosi*. Intervet South Africa (Pty) Ltd, Reg. No. 1991/006580/07  
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