IS THERE ANY RECENT TRIAL WORK WITH BOIVAC S?
A trial was conducted on eight farms in the UK and the results are demonstrated in the graph below. The percentage of Salmonella positive cultures isolated from different locations on these farms (collecting yards, cubical houses etc.) declined over the months ahead of the period of risk, which is approximately one month prior to drying off. However the vaccine is not licensed for controlling salmonellosis-induced abortions.

SUMMARY OF DATASHEET – BOIVAC S

Aqueous fluid vaccine containing inactivated cells of S. dublin (1 x 10⁹ cells/ml) and S. typhimurium (1 x 10⁹ cells/ml). The vaccine contains aluminium hydroxide as an adjuvant and thiomersal as a preservative.

USES

For the active immunisation of cattle in order to induce serological and cellular immunity against S. dublin and S. typhimurium infections and, in the face of outbreaks, to induce S. typhimurium infections when used under field conditions, as part of an overall herd management strategy. Bovivac S may also contribute to reducing S. typhimurium contamination of the environment.

DOSAGE AND ADMINISTRATION

Dose: Adult cattle, 10ml – calves up to 6 months of age, 5ml. Administration by subcutaneous injection, preferably in the loose skin on the side of the neck, observing aseptic precautions.

Primary vaccination schedule: Before diagnosis of salmonellosis caused by S. dublin and/or S. typhimurium has been confirmed, all adult cattle, including existing cows, dry cows, heifers, foetus cows and contact bulls (but excluding any with overt clinical signs of salmonellosis), should receive two test injections separated by an interval of 14 to 21 days prior to drying off.

For pregnant cows, this primary vaccination course can be given irrespective of the reproduction status. Any pregnant cow that has not calved within 8 weeks of the second dose of vaccine should receive a further test dose of Bovivac S 3-4 weeks pre-calving.

Healthy calves from approximately 3 weeks of age may also be given a further 5ml dose of Bovivac S 3-4 weeks pre-calving. Further information is available from MSD Animal Health, Red Oak North, South County Business Park, Leopardstown, Dublin 18.

WEBSITES

www.msdahealth.com

SIGNIFICANT LEVELS OF IMMUNITY SHOULD BE EXPERTED WITHIN 2 WEEKS OF THE PRIMARY VACCINATION COURSE AND MAINTAINED OVER A PERIOD OF 12 WEEKS. BOIVAC S IS A VACCINE FOR ANIMALS WHICH SHOULD BE IMMUNE ONCE VACCINATED OR THE DEGREE OF PROTECTION FROM COLOSTRAL ANTIBODIES.

PACKAGING

Five 50ml polyethylene multidose bottles.

PRECAUTIONS

Avoid vaccination of animals which have overt clinical salmonellosis, or which have a poor nutritional status. Such animals must be isolated and treated as appropriate and then re-vaccinated.

Some of the outcomes you’d expect from salmonella infection in a herd are:

- **Abortions**
- **Dead calves**
- **Dead cows**
- **Scurr outbreaks**

**WHAT HAPPENS WHEN SALMONELLA GETS INTO A HERD?**

**Salmonella dublin**
- **Clinical signs:**
  - Abortions
  - The most commonly diagnosed cause of infectious abortion in Ireland
  - Diarrhoea less frequent
  - High septicaemias in calves
  - Clinical signs in humans are rare

**Salmonella typhimurium**
- **Clinical signs:**
  - Mostly diarrhoea with dysentery
  - Mostly acute calves
  - Septicaemia and abortions less common
  - Can cause diarrhoea in children and older people

**WHICH TYPE OF SALMONELLA IS THE MOST COMMON?**

In a long-term study carried out over a 10 year period, involving submissions to Cork Regional Veterinary Laboratory, it was found that 85% of salmonella submissions were S. dublin, while 15% involved S. typhimurium. The most common clinical presentation of S. dublin infection is new abortion, while S. typhimurium is less commonly diagnosed in cows, and is more commonly seen in milk from infected animals and that 83% of Irish dairy farm families regularly consume unpasteurised milk.

**WHY IS SALMONELLA BEST DIAGNOSED?**

**ADVICE ON MANAGEMENT LIMITATION WHICH IT DOES GET IN**

**HOW IS SALMONELLA BEST DIAGNOSED?**

Diagnostic medicine submission of relevant material to the local Regional Veterinary Laboratory (RVL). Material should include aborted fetuses, diarrhoea samples, blood samples, etc.

- Isolation from infected material is relatively easy to pick up salmonellae from stomach contents of a foetus or from diarrhoeic faeces.
- Isolation, however, of bacteria does not completely rule it out. Septicaemia and pneumonia caused by this bacterium are somewhat more difficult to diagnose by culture.
- Blood sampling for serology. A random cut-off for positives has been assigned as >1/80 on the serological test. However, this can be somewhat confusing in a herd that has previously vaccinated. A rising titre (one sample taken at time of disease and another taken 2 weeks later) can be useful for diagnosing salmonella as a cause of diarrhoea. However, blood sampling is of limited value in diagnosing abortions, as seroconversion has often happened at the time of foetal resorption rather than the 4-6 weeks later when the foetus is aborted.

**VACCINATE WITH BOVIVAC S – THE MOST IMPORTANT PART OF A SALMONELLA CONTROL PROGRAMME**

**How do we prevent salmonella from entering a herd?**

- **Replacement stock — Covered by a period of risk**
  - Clean breakdown
  - Cattle imported must be pre-quarantined
  - Maintain a closed herd or purchase only from herds of known disease status
  - Maintain isolation;
  - Provide farm clothing for essential farm visitors, coupled with disinfection at entry
  - Prevent access of visitors and visiting vehicles to livestock

**VACCINATION booster shots should not be allowed to lapse as infected herds have a pattern of breaking down every 5–7 years as naïve animals are introduced.**

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But were you aware that salmonella...

- **Is the most common cause of infectious bovine abortion in Ireland?**
- **Causes clinical disease on 14% of Irish farms every year?**
- **Is thought to be much more common in clinically normal animals than in cows affected by clinical disease?**
- **Is shed in faeces and in milk from infected animals and that 83% of Irish dairy farm families regularly consume unpasteurised milk?**

**What makes salmonella such a problem in dairy farms?**

- **Is known to persist in slurry for one month and can survive in soil for nearly one year, allowing infection of endemically infected farms?**
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