Yersiniosis is a highly infectious bacterial disease of fawns characterised by smelly, watery green or bloody scours and death.

Where does the infection come from?
- The bacteria (*Yersinia pseudotuberculosis*) that causes Yersiniosis are widespread in the environment and are carried in the gut of most wild (birds, rodents, rabbits and hares) and domestic (deer, cattle, sheep, pigs and goats) animals.
- These healthy carrier animals shed small numbers of the bacteria in their faeces. These bacteria can survive well in soil, water and pasture, especially during the winter.
- Animals become infected by eating or drinking faecally contaminated material (e.g. during suckling, eating pasture).
- Most fawns are therefore exposed to Yersinia.

What turns infection into disease?
- Disease is primarily related to age, stress and exposure to large numbers of bacteria.
- Weaners are most at risk.
- Important stressors include: weaning, poor nutrition, sudden change in feed, mixing of deer groups, cold wet windy weather, yarding, transport and heavy parasite burdens.

How is stress involved?
- When stressed fawns stop eating and lose body heat (due to low fat reserves and the poor insulation provided by their coats). This is exacerbated due to the social and feed changes at weaning. This causes their intestinal movements to slow down. This allows Yersinia to multiply enormously. Animals also shed huge numbers of the bacteria into the environment. This leads to significantly greater exposure to other animals.
- The bacteria produce toxins which damage the intestines, leading to rapid fluid loss, bleeding, and dehydration. This frequently leads to death if untreated.
- If fawns are not subjected to excessive stress, the infection will probably be mild and go unnoticed.

What can you do?
- Aim to reduce the effects of stressors.
- Wean before the rut when it is warmer and more feed is available.
- Vaccinate with Yersiniavax to prevent clinical disease.

**Yersiniavax**

Yersiniavax contains inactivated *Yersina pseudotuberculosis* and is indicated for the immunisation of deer against Yersiniosis. The aim of vaccination is to prevent a serious epidemic by reducing the spread of disease through a mob, unfortunately it will not protect every individual. Yersiniavax therefore enhances, rather than is a substitute for, good management.

**Dosage:**
Inject a 2mL dose subcutaneously in the anterior (front) half of the neck.

**Pack Size:**
50 doses (100mL).

**Storage:**
Store away from light at 2–8°C. Do not freeze.

**Withholding Times:**
Deer should not be submitted for slaughter prior to lesions subsiding.
Importantly:

- It is too late to vaccinate once an outbreak of Yersiniosis has started.
- There are a number of precautions and potential side effects that must be considered before vaccination; discuss these with your vet and read the label prior to use.

Side Effects:
An abscess or thickening of the skin may develop at the site of injection. This should resolve after a few weeks. Rarely animals may be lethargic following vaccination. These effects are usually mild and short-lived. If severe or prolonged, discuss with your vet.

Precautions:
Accidental injection in humans may cause a serious reaction. **Immediate** medical attention should be sought if the vaccinator needle scratches or penetrates the skin.

Timing:
Two doses of Yersiniavax 3 to 6 weeks apart are required to stimulate immunity, the timing of vaccination of the first dose is critical in determining the effectiveness of the programme.

Weaners should be vaccinated as early as possible after they reach 12 weeks of age. Why?

- Antibodies from their dam, while likely to protect the weaner, may prevent a proper immune response if vaccination occurs too early.
- Vaccination just after 12 weeks ensures they have time to develop an immune response before the onset of unavoidable weather stresses and before they are mobbed together, when crowding encourages the spread of the bacteria and increases the chance of an outbreak.

Vaccination options:

1. Both injections completed at least a week before weaning.
   - Gives maximum protection over the high risk period of weaning and the changeable weather often seen in late autumn. Especially beneficial if weaners sold and transported soon after weaning.
   - Regardless if weaning is done before or after the rut, the first injection can generally be given between late February and mid March. The second injection is then given 3 to 6 weeks later.
   - If weaning after the rut, an option is to time the second injection to occur during mating, for instance when mating groups are yarded to change the stags.

2. First injection 3 to 6 weeks before weaning, the second injection at weaning.
   - Gives some protection against Yersiniosis triggered by weaning stresses, but the peak immune response is incomplete until a minimum of 7 to 10 days after second injection. Does not fully protect weaners sold and transported at weaning. Reduces risk of disease associated with bad weather after weaning.

3. First injection at weaning, second injection 3 to 6 weeks later.
   - Gives no protection against Yersiniosis triggered by weaning stress or poor weather until 7 to 10 days after the second injection, therefore the least favourable option.

Deciding on the best option involves balancing the logistics of vaccinating early against the risk that later vaccination will mean deer are unprotected. This decision requires discussion between you and your veterinarian with regard to previous history, likely weather, weaning and mating management, feeding, and whether weaners are sold or retained.