

Tackling wormer resistance in dairy youngstock

A Ceredigion dairy farm is revising worming protocols for its replacement heifers after a parasite control research project detected early stage resistance to clear wormers.

The Jenkins family, who milk 400 New Zealand Friesians at Pentrefelin Farm, Talsarn, outwinter 210 R1 and R2 heifers on deferred grazing; this system increases vulnerability to roundworms because it limits opportunities for clean grazing in the spring.

They were routinely worming youngstock but were concerned this could lead to treatment resistance so they embarked on a project funded by the European Innovation Programme (EIP) to examine ways of improving the diagnosis and treatment of worms in cattle.

The project will run for three years and involves two other dairy farms in the same region.

At Pentrefelin, two wormers - benzimidazole oral, a white wormer, and ivermectin injectable, a clear wormer - were tested on 15 calves; faecal egg counts (FECs) were recorded before and after treatment.

Resistance testing using full Faecal Egg Count Reduction Tests (FECRT) was carried out by the farm's vet practice, Steffan Vets, Lampeter, using Techion UK's FECPAK^{G2} system.

If a wormer is fully effective, egg counts should drop by a minimum of 95%, says Eurion Thomas, of Techion UK, who is working with the farmers on the EIP project.

Although egg counts had reduced by 100% in calves treated with benzimidazole oral, they reduced by only 81% in the group given the ivermectin injectable.

Mr Thomas says that at this stage the results point to a failure in treatment efficacy rather than true wormer resistance.

Irfon Jenkins, who farms with his brother, Eurig, and their parents, Aeron and Glenys, admits the findings were a surprise, not least because heifers were growing.

The worms present in the pre-treatment samples were the two most common species, ostertagia and cooperia oncophora.

The species that survived was cooperia oncophora, which is less pathogenic and impacts less on performance.

This is likely to be why heifer growth rates were not affected too badly when the wormer didn't fully work - heifers at Pentrefelin achieve an average daily liveweight gain of 0.7kg from birth to calving at 24 months; the project will now examine if better control on worms can further improve this performance.

In the trial, white and yellow wormers were shown to be fully effective.

Mr Jenkins says he will now be far more selective in the use of the clear group of wormers and he may make some changes to heifer grazing policy, with clean grazing provided on reseeds in the spring.

He is also more proactive with dung sampling. "We had been FEC testing before this project but not regularly enough," he admits.

In future, heifers won't be dosed routinely, only when egg counts show treatment is needed, with the exception of a routine lungworm treatment in late summer or early autumn.

Mr Jenkins says it is important that dairy farmers learn lessons from the sheep industry and the progress it is making on addressing anthelmintic resistance.

During the course of the project, disease modelling will be used to estimate relative pasture contamination levels at the end of the grazing season to inform grazing plans for the following year, such as fields that can be safely grazed and those that should be cut for silage.