Managing cattle triple drench failure in Northland

Garth Riddle
Bay of Islands Vets

Drench resistance in sheep has been well discussed and documented. The picture for cattle is much less clear.

With the recent rural press article by Dave Leathwick the issue of drench resistance in cattle has become more topical.

The purpose of my article is multiple:

- To show how widespread drench failure is in our area.
- To discuss what appear to be the common risk factors.
- To discuss management strategies that appear to be working.

Resistance was defined as being present when we had vet clinic collected pre and post drench samples from a group of animals, showing < 95% reduction in FEC after weighed animals were individually given product by vet.

The percentage reduction was calculated using the average reduction between individual paired faecal samples; without the use of control animals.

There are arguments for other methods which I am happy to enter into, but this was how it was carried out.

How big is the problem?

Big, but really the answer is that I don't know, as my sample size was small and biased.

To date I have results from five FECRT's and triple drench resistance was diagnosed in every case. Some trials showed just under the 95% level of reduction, some showed much more marked levels of resistance.

The percentage FEC reduction for triple oral drench ranged from 30-93%.

I am investigating another four properties where results of drench check tests show 0-20% reduction in FEC 12-14 days after the farmer has given a triple oral drench.

Only two properties have shown effective drench based on farmer collected samples so far.

Cooperia is the predominant species represented. Usually >90% of larvae present on larval culture pretreatment.

Ostertagia has also met the definition for resistance, but I am unsure how much weight to place on results containing low egg counts and low culture percentage.

Trichostrongylus has shown up in low single figures after being absent in pre cultures. I do not believe this meets the definition of resistance but it is a concern.

“It's mainly just Cooperia, how important is it?” Good question.

I have seen animals with worm burdens of 100epg, 95% Cooperia show a marked lift when given an effective drench compared with an ineffective one. This was a different result from what I was expecting.

What are the common risk factors?

The bulk of the properties investigated are running Friesian bulls from 100kg to about 15 months. December - December.

There are no real surprises, other than the speed that these problems have occurred on properties that have converted from assumed much ‘safer’ systems, i.e. resistance diagnosed within 18 months of system change.

Common features:

- Poor or non-existent quarantine practices.
- Purchasing from large scale calf rearers.
- Formulaic drenching i.e. all animals every 21-28 days.
- Poor cross grazing.
- Poor pasture quality (ME recorded on these properties has been 6.2-10).
- Poor target growth rates.

The typical farmer’s attitude on these properties has often been “Farmer X, Y, Z has been doing this for 15 years and doesn’t have a problem with resistance”

I can now say after much harassment, farmers X, Y and Z have been tested, and none of them have any effective drench available to them other than novels.

What’s working?

For half of the farmers involved this is the first summer where they have farmed with known resistance; the other half have just found out. Questions outnumber answers at this stage. These farmers often had no perceived problem to begin with.

In general, these bulls are being farmed at high stocking rates, with low liveweight gain targets. Per ha animal numbers are seen as the driver of profitability, not growth rates. Seasonal pasture quality and quantity provides so much variation in stock performance that I believe any responses to changes in anthelmintic efficacy are not being noticed.

As such changes in management and the effect on liveweight, if this is even measured, will be difficult to attribute to actions.

So far, the four initially diagnosed farms have all made changes in how they are running their operations to incorporate the Wormwise principles discussed with them. These have included changes in pasture management, stock rotation, drench frequency and procedures, and quarantine procedures. Initial results seem promising but measuring the degree of success is problematical to impossible.

Just as following a recipe got these systems into trouble, offering a recipe to get out of it is equally inappropriate.

How to manage these systems? The easiest answer is to get rid of them, they are high risk.

As most of these clients have not noticed production loss, the motivation for change must come from elsewhere. The challenge on some of these farms is that there is often an extremely low level of veterinary involvement.

What was the process? On some of these farms it took seven years to persuade them to run the initial drench check test. When there were eggs shown to be present after drenching at the initial test the farmers were more receptive to further steps like pre and post drench checking, then full FECRT

These intensive bull beef cell grazing systems are high risk systems and the resistance being seen should not be a surprise. We also have other high-risk systems for example some of our dairy heifer grazing practices.

I would suggest that if we were to wait until poor growth rates are seen and we are asked for advice an opportunity will have been missed. The key is to find that motivating factor from the farmer that gives us the “in” to get started.

The true art of veterinary science.