

Drench test workshop

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Drench resistance testing

Best class of sheep to use are undrenched weaners with counts greater than 200 average eggs per gram (epg) (10 individual counts).

Why undrenched weaners? Low resistance to worms, tend to have highest egg counts and no previous drenches to skew resistance pattern.

2nd choice: weaners that have been drenched but are now reinfected and have more than 200 epg.

The most basic test of drench efficacy is the post treatment monitoring

At weaning take 10 samples for an egg count and drench the whole mob with the drench of choice. If there were greater than 200 epg, producers should:

1. Request species identified.
2. Take another 10 samples 10 -14 days after drenching and get the counts plus species done.

What's the advantage? Quick, easy, producers know if the drench was effective or not, and there is no need to try and find multiple drenches.

What's the disadvantage? Only gives information about the one drench used, so there is no information as to which drench group should be used in the next rotation.

Full drench test

Best class of sheep to use are undrenched weaners.

A few days to a week before the drench test is likely to be done, 10 faecal samples should be collected and the egg counts done. Allow enough time to get the results back. At least 200 epg are needed (preferably more) to make doing the test worthwhile. It's a fair bit of work doing the drench test, so make sure the counts are sufficiently high before starting. There will be no further sampling until 10-14 days after the drenches are given (i.e. no need to sample when drenching).

Draft off a line off say 60 (three treatment groups plus a control group) similar weight lambs so they are all going to get the correct dose (if there is a lot of weight variation producers will have to dose to individual body weight or lighter lambs will get a double dose). The more treatments planned, the more lambs needed.

Tag or Siromark brand so they are **randomised** (e.g. drop the tags in bucket and pick them out randomly or brand every 4th lamb green, then every 4th one blue etc). The randomisation is important; often the lambs at the head of the race have different counts to those at the tail of the race. Take care if branding on the head, Siromark spray can rub off the head in two weeks on long feed. It is preferable to mark on the rump.

Each group needs at least 12 lambs, preferably 15 (makes faecal sampling on 10 much easier). Once they are randomised, they can be drafted off into treatment groups. There are 15 lambs left as undrenched controls.

With 15 lambs in each group that leaves the choice of three drenches. The choice could depend on; 1) Previous results (if available), 2) Historical patterns of use, 3) Knowledge that on most farms whites, clears and ivermectin have a very high probability of resistance, 4) Trying some new actives or combinations or 5) What the local friendly sales rep is offering in the way of drench tests.

What would be some of the common logical choices?

1. White /clear combinations.
2. White /clear combinations + naphthalophos.
3. White + abamectin + Rametin (Napfix).
4. Ivermectin.
5. Abamectin/white/clear combinations.
6. Moxidectin where abamectin or ivermectin resistance is confirmed.
7. Zolvix and when it's released Startect.

For this field day we are using:

1. White + clear combination.
2. Ivermectin.
3. Triple (white/clear/abamectin).
4. Untreated control group.

Use a clean drench gun for each group or a 10ml syringe. the first person it's happened to.

After each group has been drenched they can all be run together and it doesn't matter where they run for the next 10-14 days.

10-14 days after they have been drenched, run the trial sheep into the yards, draft them into groups, run them up the race, put a disposable glove on and take faecal samples from the rectum of 10 lambs in each group. This is where it's handy to have 15 lambs in each group, because if a few are impossible to get faeces from we have enough spare lambs to sample. Use a fresh glove for each group. Make sure when submitting its clear the samples are for a drenchtest and clearly identify the worm species results are wanted for.