



WORMING SHEEP

Anthelmintic resistance is a growing problem worldwide and in Australia and New Zealand resistance is heading for 100% to most wormers on the market. This presents an obvious disastrous problem to sheep production! Here in the UK resistance to the benzimidazole drenches has been reported to be as high as 80% in some lowland sheep flocks (lower in hill flocks) and there are rare reports of some worms in the UK being resistant to all three main classes of wormer. It is clear that finding ways of slowing down resistance is crucial, not only to the welfare of the sheep but for our sheep industry as a whole in the UK. There are now 4 classes of anthelmintic (wormer):

- Benzimidazoles (white) e.g. Panacur
- Levamisoles (yellow) e.g. Levacur
- Macrocyclic lactones (clear) e.g. Dectomax, Cydectin
- Monepantel (orange) e.g. Zolvix

Side resistance is common, i.e. once resistance has developed to a particular drug, there will also be resistance to all the other drugs within the same class. There is currently minimal resistance reported with the clear drenches and no resistance to the new drug Monepantel therefore efforts should be made to preserve the efficacy of these classes. Inappropriate and over-use of anthelmintics will promote the development of resistance.

The following are strategies we can employ to slow down the development of resistance:

- Avoid under-dosing - weigh the heaviest sheep and dose to this level and make sure all dosing guns are calibrated correctly.
- **Avoid blanket use of product in lambs over summer - use faecal egg counts (FEC's) routinely throughout the summer to assess worm burdens in the lambs - why worm them if they do not need it? We can carry out FEC's at the practice.**
- Consider leaving 10% of the fittest, biggest lambs/ewes untreated - this will allow maintenance of an *in refugia* population of susceptible worms to dilute out the resistant ones on the pasture.
- Never move treated ewes and lambs immediately onto clean pasture - this encourages the development of an entirely resistant population of worms on the new grazing. Return to the same field for 2-3 days to dilute out the resistant worms and then move to clean pasture.
- Avoid overuse of long acting clear drenches so susceptibility is maintained in these drugs for future use.
- Use narrow spectrum products where possible.

The market today is flooded with adverts for wormers, (many are the same drug made by the different manufacturing companies) and choosing a wormer to use can be confusing. To a certain extent, **the choice of drug is less important than the appropriate and responsible use of any wormer** (although white and yellow drenches should be chosen first line in most cases).



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Note: rotation between classes of wormer is not required once resistance develops, as susceptibility is unlikely to return when that class of drug is reused as was previously thought.

The newest novel anthelmintic is Monepantel which was launched in March 2010, and should be integrated into the annual worm control programme but it is essential it is not overused. The latest advice on its use is that it should be used once a year in lambs, in the mid/late season, when worm counts are high. This is the best time to gain benefit in terms of reducing selection for resistance to the other groups by killing all the worms resistant to the other classes. It is also recommended for use in the quarantine situation, alongside moxidectin to eliminate all resistant worms before they are mixed with the existing flock - **you don't want to buy in someone else's worms that are resistant to everything!**

As a rule, **ewes only need worming around lambing time** when their natural immunity relaxes. This is principally to reduce pasture contamination for the growing lambs as they begin to graze. Thin or old ewes can be wormed pre-tupping if required but it is not necessary to blanket worm all ewes at this time. **Lambs can be wormed over the summer from about 6-8 weeks of age. FEC's can be used not only to assess worm burdens in the lambs but also to assess efficacy of the anthelmintics if this is in question.**