paraboss

ParaBoss Technical Workshop, 2016

Summary of the notes for each technical topic: Drench resistance management

Subtopic	New information, research and extension opportunities	Comments and Boss URLs (where there is existing information)
• **Role of refugia**	New information	More detail about refugia and if, where, and how to manage is required in WormBoss. Including specific comment on: • Move and drench or drench and move? • Which classes of sheep, species of worms? • Can refugia management be applied with barber's pole worm in Australia? http://www.wormboss.com.au/news/articles/drench-resistance/use-refugia-to-prolong-drench-life.php
		Identifying periods when refugia is high might be an occasion when partially effective drenches are OK to use.
	R&E opportunity	Need to have a model to predict pasture refugia to improve application.
		Need to develop tools to choose individuals or mobs for targeted selective treatment TST.
		Need to conduct a PDS project to train in the application of managing refugia.
• **Rotation of drench actives** • **The importance of prior drench resistance** • **Prediction of drench efficacy**	New information	Consensus that rotation of actives is worthwhile for managing drench resistance (*NOTE: The presentation made clear that drench rotation, where stock are kept in the same paddock, is of no value for delaying resistance. Benefit from rotation for slowing development of drench resistance emerged when stock were rotated among paddocks and the worm populations in the animal and on pasture were exposed to different drench groups.*)
		WormBoss needs to clearly identify the relative importance (i.e. magnitude of benefit) from recommended drench practices and not just the order of priority. http://www.wormboss.com.au/tests-tools/management-tools/choosing-and-using-drenches.php
		There is mistrust that modelling will truly reflect the situation with drench resistance in the field.
	R&E opportunity	Need for a national standard drench test for purchase.
		Need for a reliable *in vitro* test for drench resistance.
		Need to define the importance of factors such as p-glycoprotein (PGP) and ABC transporters in cross resistance.
		Need to gain field evidence to clarify the situation of possible reversion to drench susceptibility.
		Need to confirm the efficacy calculation from single actives to multi-active combinations. http://www.wormboss.com.au/tests-tools/management-tools/combination-drenchesbenefits-and-efficacy.php
		Need to better understand synergism of drench actives/groups.