I have to drench my ewes pre-lambing: Yeah Right!

Dave Leathwick, AgResearch, Palmerston North





The challenge - AgInnovation

Something to make you all think;

- Something old!
 - Wairarapa anthelmintic trial
- Something very new!
 - Illthrift (skinny) ewes the relationship with worms



Everyone knows...

- When ewes are under stress their immune systems are compromised and they get worms
- Worms make the ewes lose condition and get daggy
- Drenching ewes removes the worms and their condition improves
- Drenching ewes is the first step to dealing with illthrift (skinny or low BCS)



Well actually?



Wairarapa Anthelmintic Trial

- By farmers, for farmers
- What are the cost benefits of different ewe treatment options?
- What is the best option for my farm?
- How do I balance this against the increased risk
 of developing resistance?



Wairarapa Anthelmintic Trial

- 14 trials on 8 farms over 2 years
- Three treatments;
 - 1. Bionic capsule pre-lambing
 - 2. Se/Co supplementation to match those in bolus
 - 3. untreated







Ewes tended to be heavier at mating but not by as much





mean	range	Farms sign
+2.5 kg	-1.8–4.5kg	9/14

Lambs tended to be heavier at weaning but not by much on some farms

Lamb liveweight weaning



mean	range	Farms sign
+1.56 kg	0.35–2.9kg	6/14

But, weight of lamb weaned per ewe was not improved

Kg lamb weaned / ewe



mean	range	Farms sign
+2.1 kg	-5.2 – +15.6kg	ns

On average, capsule treated ewes weaned fewer lambs

Proportion of ewes weaning multiples



mean	range	Farms sign
-2.6 %	-13.3 - +11.8%	ns



On average, lamb survival was lower when ewes were treated with a capsule

Lamb survival – birth to weaning



mean	range	Farms sign
-2.2%	-9.9 - +9.8%	ns



Cost-benefit

Much of the variation between farms and treatments was due to number of lambs born and number of lambs surviving to weaning



Wairarapa anthelmintic trial adding the cost of resistance



So how did some farms lose money?

• Where does the return on a capsule come from?

Variable	Gross benefit (\$)
Kg lamb weaned / ewe	\$5.68
Ewe liveweight mating	\$2.45
Ewe liveweight (culls)	\$0.66
Dags	\$0.15

Two thirds of value comes from weight of lambs weaned



Overall

- Overall, the things you can see were better (ewe and lamb weights, dags)
- But the things you can't see were not (fewer lambs)
 - the most important variable driving \$ return was lamb survival





Conclusion

Randomly treating your ewes every year with a capsule (or anything else) is as likely to result in a financial loss as in a gain.



What effect did the Se / Co in the capsule have on these results?



Which means?

On some farms a good proportion of the response was due to the minerals in the capsule (not the drench).





What determines whether a ewe needs drenching?





Wairarapa anthelmintic trial ewes treated with bionic capsule pre-lamb



Neither FEC nor condition score have any value in predicting the response to treatment



So, bring in another data set

- Long-term (5 year) study at Flock House
- Replicated farmlets (9) where ewes were treated annually with;
 - 1. BZ capsule (Extender)
 - 2. Oral drench at docking
 - 3. Untreated



Ewe liveweight v condition score



1 BCS is equivalent to ~2.6 - 5.4kg liveweight



What increase in liveweight can I expect from a pre-lamb drench?

Study	No of trials	Ewe liveweight advantage (kg)	
Gogolewski	10	1.1	CRC
Wairarapa	14	3.2	CRC
Bingham et al.	1	3.6-3.2	CRC + LA-inj
Cook et al.	3	0	dectomax
Mean	28	2.1kg	

A long acting treatment will return, **on average**, 0.4-0.8 of a BCS







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Conclude

If you try to solve an illthrift ('skinniness') problem in your ewes by drenching you will probably fail!



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Conclude

If you try to solve an illthrift ('skinniness') problem in your ewes by drenching you will probably fail!

But

Sometimes a drench may be warranted



