

# Everything you ever wanted to know about drenches – and some things you didn't

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# Introduction

What do farmers expect (want) from their drenches?

1. They work (~100%) and will keep working
2. They are cheap
3. They are easy to administer
4. They are long-acting
5. They come with free advice, and a nice jacket?

# Introduction

What do farmers get?

1. Drenches differ in their ability to kill worms
2. On many (most) farms some drenches won't work properly because of resistance
3. Some drenches are more likely to select for resistant worms
4. Some persistent products are not persistent against all worms
5. Sheep drenches range from ~3c to \$3.30 / dose
6. Cattle drenches range from ~40c to >\$6 / dose

# Drench resistance

National survey in 2004-5

|                          | Sheep     | Beef cattle |
|--------------------------|-----------|-------------|
| Tested                   | % failing | % failing   |
| Ivermectin               | 25        | 92          |
| Albendazole              | 41        | 76          |
| Levamisole               | 24        | 8           |
| Combination (A+L) (I+A)  | 7         | 74          |
| Farms passing all groups | 36        | 6           |

Almost certainly an under estimate

# What does it cost to use a drench with is not fully effective?

## In lambs

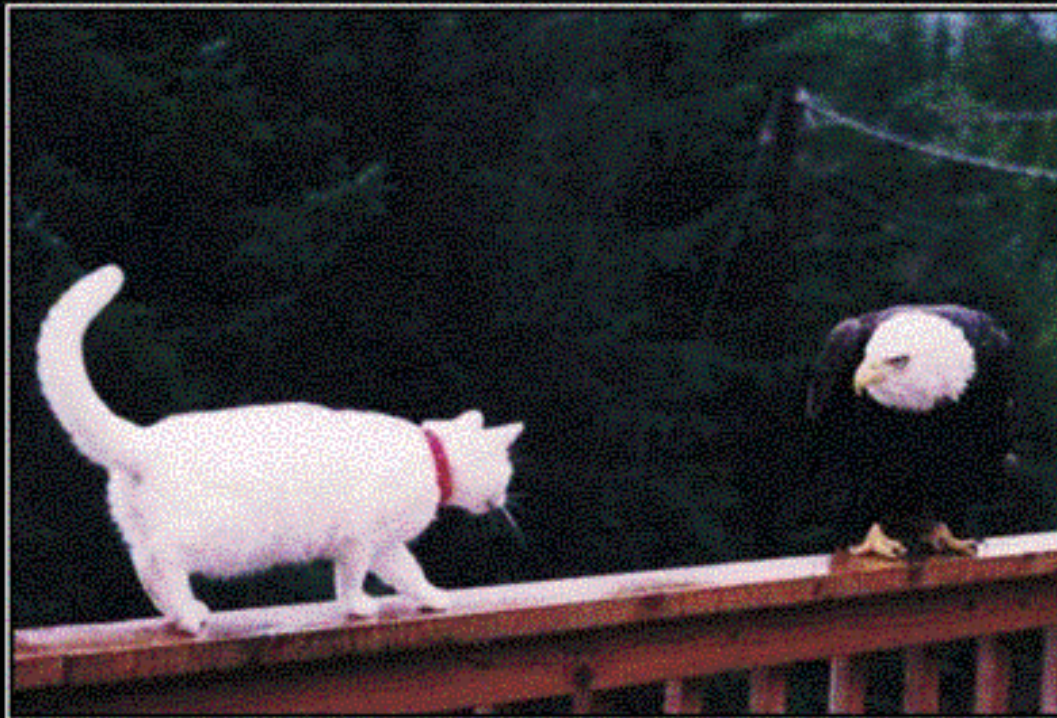
- ~20% liveweight gain
- 2.8 kg Jan – May (14% loss of carcass value)
- 9.0 kg Mar – Aug (\$11.56 difference carcass value)
- \$1,000 - \$3,000 / 2,000 ewes

## In calves

- 8-10kg live weight at 12 months of age

# Most farmers don't test

“Resistance is a problem, but I don't have it because my stock look fine”



## OVERCONFIDENCE

This is going to end in disaster, and you have no one to blame but yourself.

# Not all drenches are equal

1. In their ability to kill worms
2. In their potential to select for resistance

Choice of drench product can make a HUGE difference to productivity and whether you end up with resistance

# The choices you make!

## Drench resistance in sheep within Landcorp Farming

Tested 46 farms (2004-7)

| Tested                  | % failing |            |
|-------------------------|-----------|------------|
|                         | Landcorp  | Nationally |
| Ivermectin              | 2         | 25         |
| Albendazole             | 13        | 41         |
| Levamisole              | 4         | 24         |
| Combination (Alb + Lev) | 0         | 7          |

83 % of Landcorp farms passed all test groups cf 36% nationally

# Formulation makes a difference

## Cydectin in sheep

| Parasite species | Mox-oral   |             | Mox-inj    |             |
|------------------|------------|-------------|------------|-------------|
|                  | Efficacy-R | Persistency | Efficacy-R | Persistency |
| Haemonchus       | >99%       | 35          | >99%       | 35          |
| Ostertagia       | >99%       | 21          | >99%       | 35          |
| Trichostrongylus | 98%        | 0           | 4%         | 7           |
| Cooperia         | ?          | ?           | ?          | ?           |
| Nematodirus      | ?          | ?           | ?          | ?           |

Many farmers that use Cydectin end up with Trichostrongylus problems on their farm

# Formulation makes a difference

## Cydectin in cattle

Single active (ML) drenches in cattle under 15 months of age probably won't work

The most effective way to drench cattle is orally

# Not just Cydectin

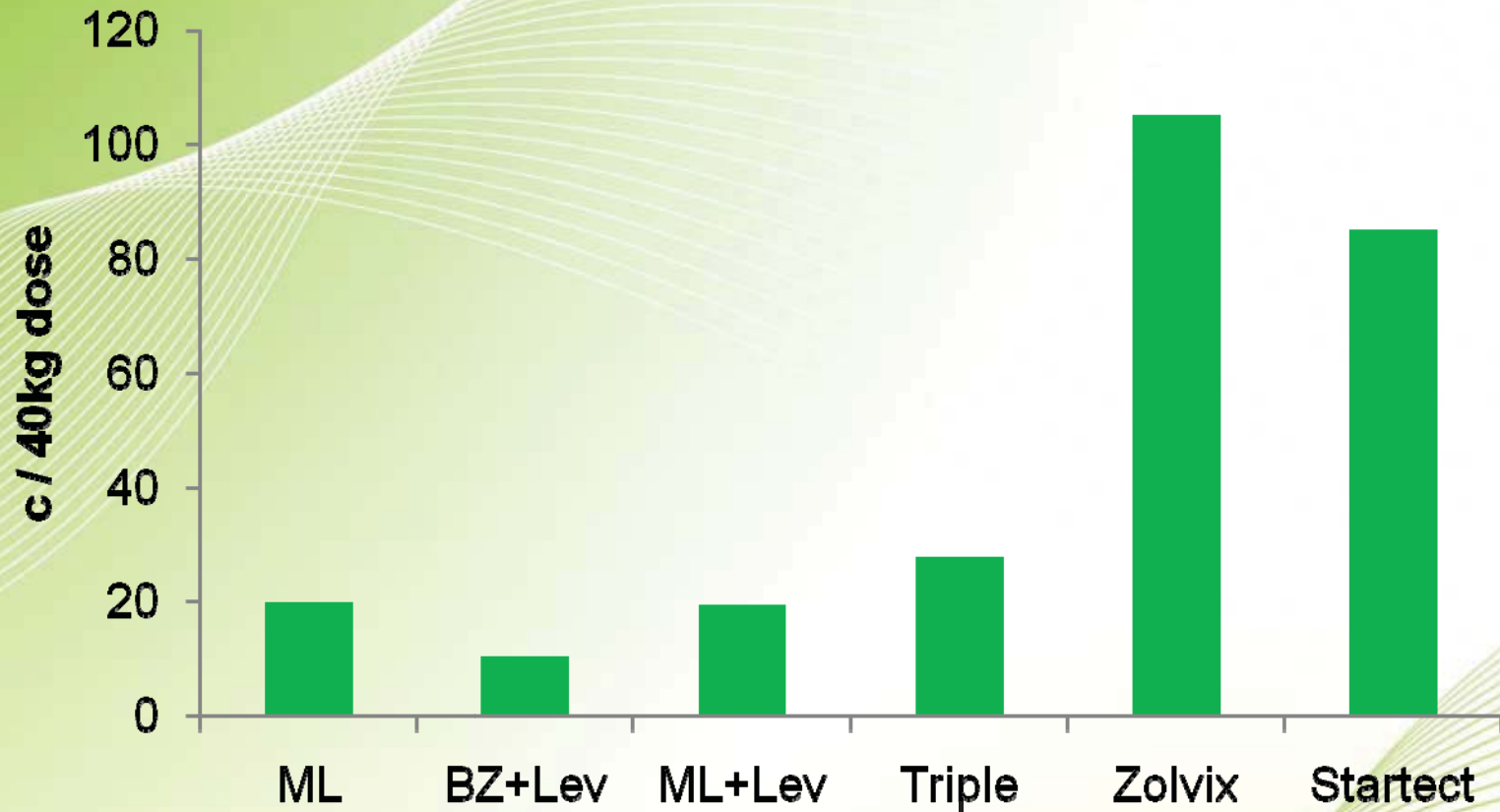
- The only treatments which would control those parasites were combinations containing levamisole

## Local studies (2010)

### Price?

- Aba+Lev combo – oral is \$1.54 cheaper / 180 kg dose
- Over 500 calves x 5 treatments = \$3,850

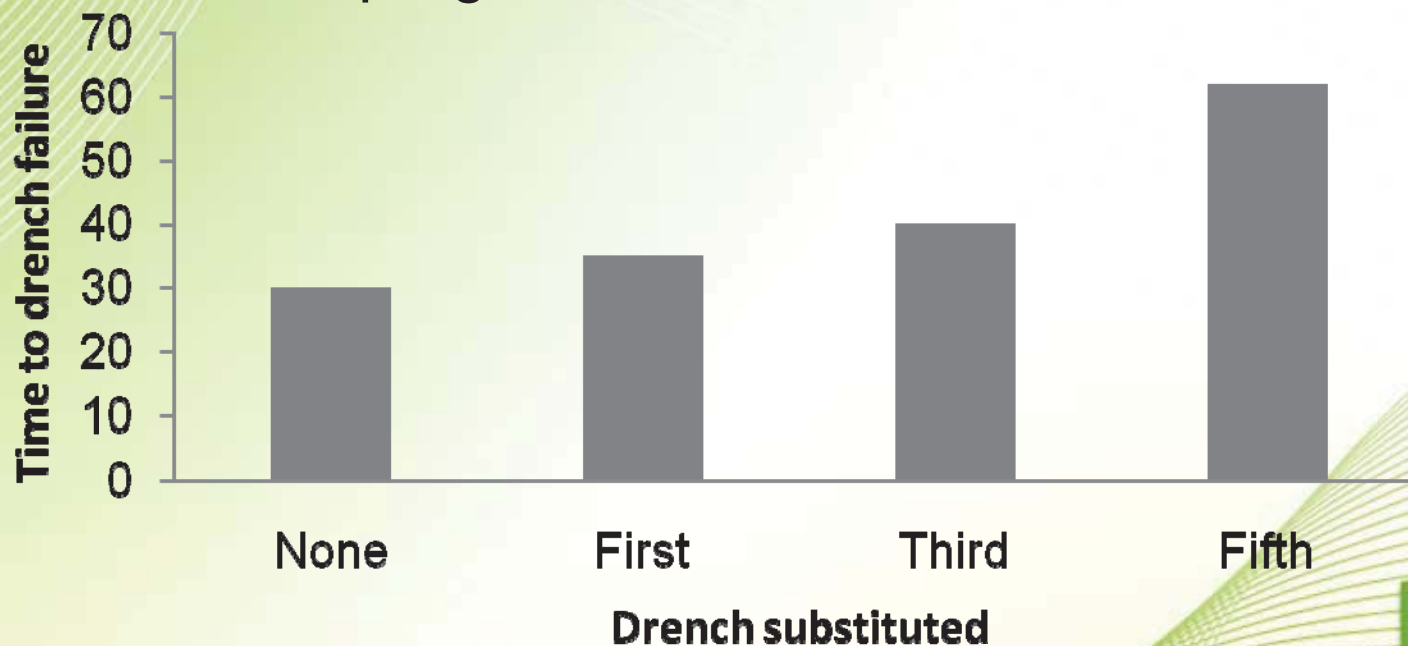
# Use of new actives?



## Use them to protect older drenches

Use as the last in a programme of routine drenches to lambs (about March)

Modelling - replace 1 treatment in a lamb-drenching programme with new class



# Use of new actives?

- Strategic (limited) use of new actives could double the useful life of the older (cheaper) drenches – hopefully without breaking the bank

# Take home messages

Drench resistance is everywhere and is costing farmers money

- You will not **see** a resistance issue developing – you **have** to test

Not all drenches are equal

- Some don't work as well as others
- Some are bad for selecting resistant worms

# Take home messages

- The most effective (cost effective) way to administer a drug is orally
- Consider using the new actives to save the older cheaper products for the future
- There is a lot of information available on some of these issues – don't be afraid to ask
- Don't believe everything you see on the TV or in a glossy magazine

# Discussion?



**Funding from;**  
**Govt through FRST**  
**Farmers through levies**

**Mentor group;**  
**Dave Smith**  
**Chris Ridland**  
**James Falloon**  
**Mark Gilmour**  
**Tony Rhodes**  
**Bill Pomroy**  
**Dave West**