

When to use Q-drench® Multi-Combination Drench for Sheep

STRATEGIC DRENCHING PROGRAMS

Drenching programs ideally incorporate Worm Egg Counts (WECs) to ensure that drenching is required and the drench selected is effective.

Q-drench can provide effective worm control if the current drench resistance status on a farm is not known, or if there are multiple species of resistant worms present.

Q-drench has achieved high efficacy levels in flocks with known ML resistance. Uses on farm for Q-drench include:

- > Entry or primer drench

> Exit or tail cutter drench

> Pre-lamb drench

> Quarantine drench
- > Weaning drench

> Liver Fluke control

> Tapeworm control

How to use Q-drench® Multi-Combination Drench

DOSE RATE FOR Q-DRENCH MULTI-COMBINATION DRENCH FOR SHEEP:
1 mL / 5 kg bodyweight given orally

Liveweight (kg)	Dose (mL)	1 L treats	10 L treats
21 – 25	5	200	2,000
26 – 30	6	166	1,666
31 – 35	7	142	1,428
36 – 40	8	125	1,250
41 – 45	9	111	1,111
46 – 50	10	100	1,000
51 – 55	11	90	909
56 – 60	12	83	833
61 – 65	13	76	769
66 – 70	14	71	714
71 – 75	15	66	666
> 75	Sheep in excess of 75 kg to be dosed at 1 mL per 5 kg bodyweight.		

Presentation Liquid: 1 L, 10 L (drum).

Meat WHP: 28 days.

Milk: Milk intended for sale for human consumption must be discarded for 35 days following treatment.



4WAY
POWER

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Q-drench®

Multi-Combination Drench for Sheep



4WAY
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The smart way to control worms

Active Constituents: 40 g/L Levamisole hydrochloride,
37.5 g/L Closantel, 25 g/L Albendazole, 1.0 g/L Abamectin

Q-drench is the ideal choice for strategic treatments such as weaning, pre-lambing, quarantine, primer and exit drenches which rely on the highest possible efficacy to achieve their aims.

Using **Q-drench** as part of, or within a season drench rotation will increase sheep productivity and help delay the development of parasite resistance to existing drenches.



What is Q-drench® Multi-Combination Drench for Sheep?

Q-DRENCH® IS A SHORT ACTING, 4 WAY COMBINATION SHEEP DRENCH.

4 ACTIVES with 4 different modes of action at 4 fully effective doses	
Q-drench Multi-Combination Drench for Sheep contains:	
Active constituent	Group
1. abamectin 1.0 g/L	ML Macrocyclic lactones ('mectin')
2. albendazole 25.0 g/L	BZ Benzimidazoles ('white')
3. closantel 37.5 g/L	SAL-P Salicylanilides / Phenols
4. levamisole 40.0 g/L	LEV Imidazothiazoles ('clear')

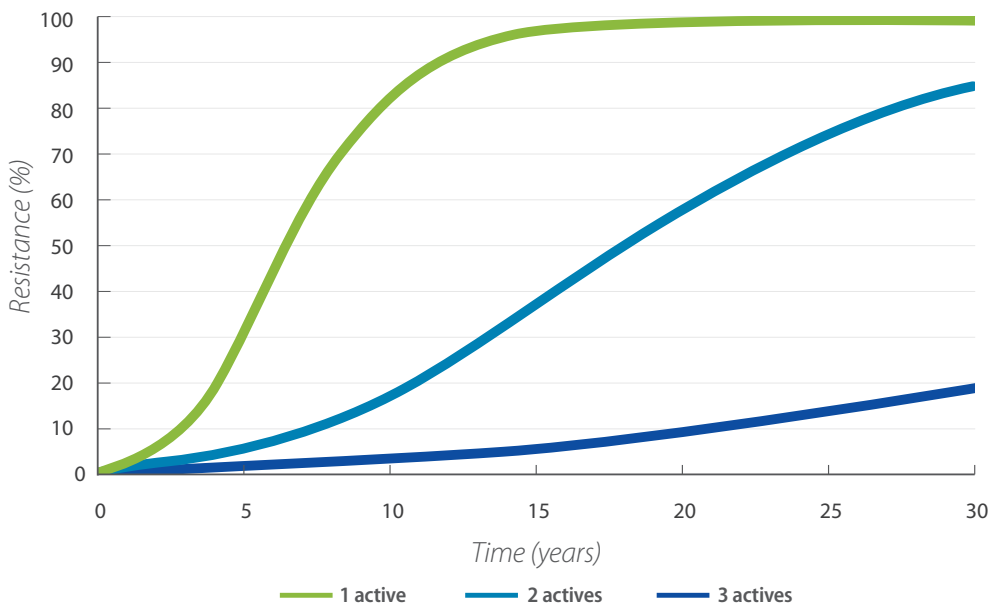
Q-DRENCH® IS A BROAD SPECTRUM ORAL ANTHELMINTIC.

- > Effective against susceptible gastrointestinal roundworms (Including *Haemonchus contortus* strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel, and strains of *Haemonchus contortus* with emerging resistance to closantel)
- > Effective against lung worm and tapeworms
- > Effective against mature and late immature (from 6 week stage) liver fluke
- > Effective against nasal bot and itch mite

Why sheep producers need the 4 way power of Q-drench®

The 4 way power of Q-drench slows the development of resistance to individual actives by attacking parasites in 4 different ways. Combination drenches have two important benefits. The first is an increased efficacy of the drench overall, whilst the second is that these actives all protect each other from the development of drench resistance. Combination drenches like Q-drench have been shown to delay how quickly resistance to a class of drench develops. In these drenches, if a parasite is resistant to one of the actives, it is likely to be killed by one of the other actives in the drench, meaning that it does not survive to produce a resistant population. Whilst it is possible for a parasite to be resistant to more than one class, the initial population of these parasites is very low, meaning that it takes a lot longer for this population to increase in numbers.

Recent modelling conducted by the University of New England¹ found that when using a combination of actives, resistance can be delayed for many years more than if using a single active. The more actives in the drench, the longer resistance is delayed.



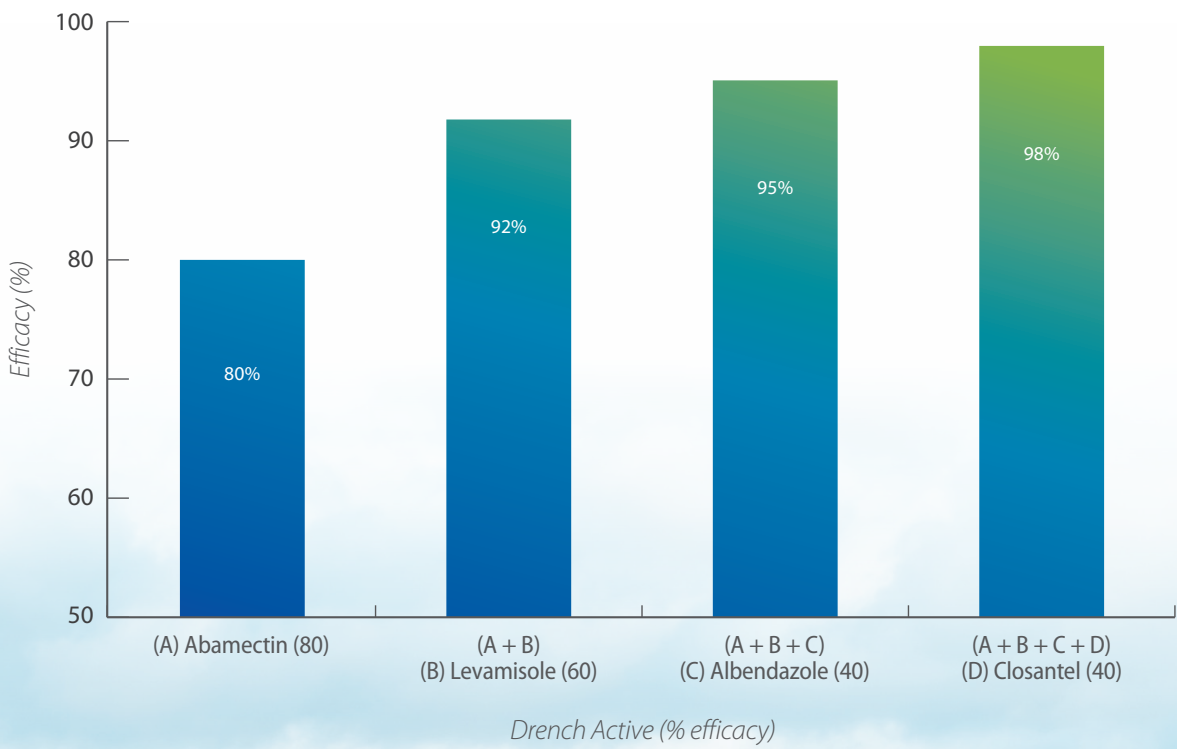
Graph 1: Single-active drenches vs Combination drenches (from wormboss.com.au)

1. Besier, B & Laurenson, Y (2016), Drench Resistance Management, Paraboss Technical Workshop, https://www.paraboss.com.au/files/pages/news/paraboss-technical-workshop-2016/ presentations-and-summary/Drench-resistance-management_Besier-Laurenson.pdf, viewed on 11th April 2019.

How Q-drench® Multi-Combination Drench for Sheep Works

Q-drench fights resistant parasites using the combined effects of the 4 different actives. Each active in Q-drench “adds up” to deliver a result with a higher efficacy compared to that achieved if the single actives were administered individually. This is known as the additive effect.

A working example using a 4 way combination drench targeting the parasite *Haemonchus contortus*, if the efficacy (the percentage of parasites killed) of a single active, A, was 80%, and another single active, B, was 60%, when both are used in combination, the overall efficacy of the drench would be 92%. If another single active, C, with an efficacy of 40%, was added, the efficacy would increase to 95%. Adding a fourth active, D, with an efficacy of 50%, the efficacy would increase to 98%. The more actives included in a combination drench, the more actives can be “added up” to increase the efficacy of the drench overall.



Graph 2: Additive effect of a 4 Way Combination Drench against *Haemonchus contortus*

