Newsletter
EDITION 59, MARCH 2017

DO WORMS BECOME SUSCEPTIBLE AGAIN TO DRENCHES NOT USED FOR YEARS?

What happens to the effectiveness of a drench group when it hasn't been used for many years? Typically, this question arises way down the track after a drench group has been taken out of service following a treatment failure. This poses two key questions. Will the effectiveness increase, and if so, for how long will the benefit last?

Reversion
Reversion is not well understood. It is speculated that the main way in which the effectiveness of a drench might improve after its removal from use is if resistant worms were less fit. Fitness refers to the ability of worms to reproduce, survive and complete their life cycle. Any negative changes reduce fitness and result in fewer resistant worms contributing to the population.

Less fit worms might have lower egg production, be less successful in developing from egg to infective larvae, have shorter survival as infective larvae, have lower rates of establishment in the host, or a shorter life span as adult worms. Negative changes in these life traits make the worms less fit and result in a smaller proportion of those resistant worms as part of the overall worm population over time. This process is referred to as reversion.

Reversion in the field
It is not uncommon for producers to report good results from the initial use of a drench group that had not been used (because of low effectiveness) for a long period.

Unfortunately, it is also common for producers to report that effectiveness of the "re-established" drench group quickly declines from the encouraging results obtained from the initial re-use. Introducing the drench group would remove many of the susceptible worms from the population resulting in a fairly fast re-establishment of drench resistant population over one or a few uses of the drench.

Take home message
Drench groups that have been out of service for a long period of time might provide a valuable, but very temporary, addition to a drench program. Whether the temporary improvement in effectiveness is due to reversion, caused by a lack of fitness, or simply due to a change in the genetic make-up of the worm population, is still uncertain.
So in response to the questions posed at the beginning of this article:
Q) What happens to the effectiveness of a drench group when it hasn't been used for many years?
A) It very likely will increase.
Q) If the effectiveness increases, how long will the benefit last?
A) It is likely that it will be short-lived but if effective multi-active combination drenches are used, then this will extract the most from the re-established drench group.

AgriWest
A RURALCO PARTNER
CRT Your Local Bloke®

VALUE ADDING YOUR GRAIN - VIA THE RUMEN

With high livestock prices and strong international demand for Australian lamb, the outlook for the Australian sheep industry is very positive. Prices are staying above average, and the forecast is for them to be maintained for the long-term. Coupled with low grain prices, now is the time to capitalise on these great market conditions – get your sheep into peak feed conversion efficiency and gain maximum weight.

Value adding your grain through sheep, whether it be via feedlotting or supplementary feeding, is currently much more profitable than selling a tonne of grain. Efficient feeding systems are the key to driving profit. Improving your livestock's feed conversion efficiency is a surefire way to increase your productivity – consuming much less feed and decreasing input costs. By adding the correct supplements and management techniques into the system, sheep on grain have the genetic potential to convert 3:1. Let's put this into a dollar value:

Average Feed Conversion	Enhanced Feed Conversion
7 : 1	3 : 1
Based on a ration per tonne cost of $400 (or $0.40/kg)	Increase input cost by 50% (never this much but for demonstrative purposes)
7 x $0.40* = $2.80	3 x $0.60* = $1.80
Cost of Grain/kg = $2.80	Cost of Grain/kg = $1.80

POTENTIAL = OPPORTUNITY!

This equation does not only apply to grain feeding. Feed conversion efficiency can be greatly improved in grazing stock also (to the tune of 25:1 down to 8:1 – almost three times less feed!!)

What would more weight gain for less feed consumed mean to your enterprise? Higher stocking rate? More available feed? Finishing lambs earlier?

Come in and see our dedicated animal production team today for more information or discuss a tailored plan for your enterprise.

STAFF PROFILES

ARNÉ MURRAY

Role: Irrigation Manager
Store: Forbes
Time at AgriWest: 3 weeks
Hometown: Warwick, QLD/Cape Town, South Africa
Industry History: 13 Years
Interests: The great outdoors
Favourite sport: Rugby Union
Favourite band/singer: Any, none specific
Favourite movie: Saving Private Ryan
What are you looking forward to most about your role with AgriWest? Interaction with clients and expanding the water side of the business at Forbes.

BE AWARE OF 'INVERSIONS' WITH CHEMICALS SUCH AS 2, 4-D.

Surface temperature inversions occur when air temperature increases with height from the ground surface, which is the opposite of what normally happens (i.e. the temperature profile is 'inverted'). This results in a layer of cool, still air being trapped below warmer air. The height above the ground where the temperature stops increasing and begins to decrease is the top of the inversion layer.

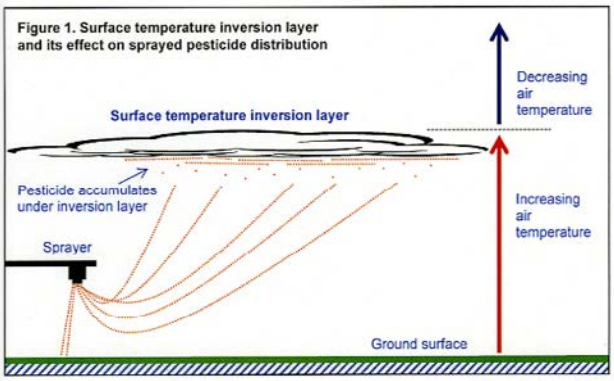
If pesticides are sprayed during an inversion, fine droplets of the chemical can be concentrated in the cool layer near the ground and isolated from the surrounding weather conditions (Figure 1). The direction and distance which the droplets will then move becomes unpredictable and the chemical may be transported away from the target area.

Off target crops and plants include;

- Fruit trees, cotton, many garden plants and Kurrajong trees - which are particularly sensitive.

A surface temperature inversion is likely to be present if:

- Mist, fog, dew or a frost have occurred
- Smoke or dust hangs in the air and moves sideways, just above the surface
- Cumulus clouds that have built up during the day collapse towards evening
- There is a large difference between the observed maximum and overnight minimum temperatures
- Wind speed is constantly less than 11km/h in the evening and overnight
- Cool, off-slope breezes develop during the evening or overnight
- Distant sounds become easier to hear
- Aromas are more distinct during the evening than during the day
- Smoke pots and smoking devices fitted to a sprayer's exhaust can help indicate if the atmosphere has become stable or the wind has become less turbulent, which are strong indicators that a surface temp inversion may have formed



Source:
(http://agriculture.vic.gov.au/agriculture/farm-management/chemical-use/agricultural-chemical-use/spraying-spray-drift-and-off-target-damage/surface-temperature-inversions)

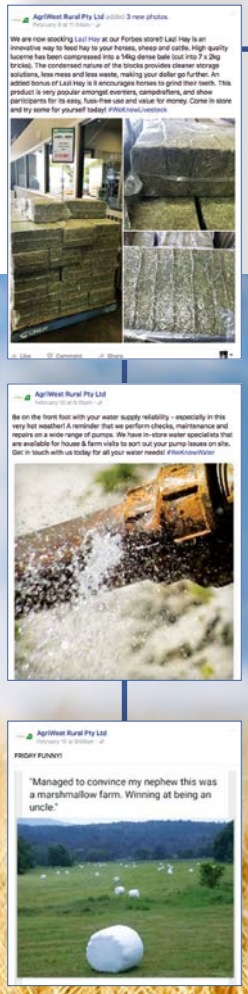
LARISSA HOFSTEDE

Nickname: Larry
Role: Graduate Agronomist
Store: Peak Hill
Time at AgriWest: Just started
Hometown: Greenhill, VIC
Industry History: Graduated in 2016 from Wagga University **-** Bachelor of Ag Science
Interests: Horse Riding, Netball and Swimming
Favourite football team: Sydney Swans
Favourite band/singer: Dire Straits & Safia
Favourite movie: The Horse Whisperer
What are you looking forward to most about your role with AgriWest? Being part of a team and putting my learnings from Uni to practical use.

AgriWest
A RURALCO PARTNER

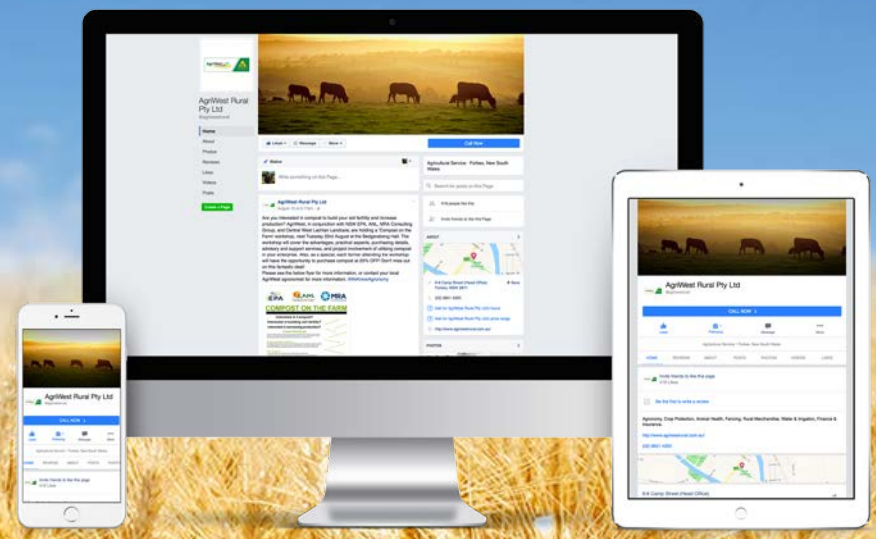
CRT Your Local Bloke

Find us on Facebook
facebook.com/agriwestrural



FACEBOOK: MONTHLY RECAP

Looking for more insights? Our Facebook page is a great way to stay informed. Regular product information and specials, seasonal insights, community events and branch updates – it's all there at your fingertips! Last month alone we posted about the Forbes store stocking Lazi Hay, new staff profiles, water supply reliability and more... Check us out and share your thoughts!



Contact an AgriWest specialist today for more information.

Agronomy

Forbes:
Guy Webb
M: 0422 806 325

Parkes/Peak Hill:
Luke Wood
M: 0427 691 633

Animal Health

Forbes:
Em Wollen
M: 0427 523 601

Parkes/Peak Hill:
Dave Rathbone
M: 0428 515 405

Pumps & Water

Forbes:
Arné Murray
M: 0419 783 503

Parkes/Peak Hill:
Mitch Leckie
M: 0422 213 443

Finance & Insurance

All Branches:
Ryan Thornberry
M: 0408 742 521

AgriWest Parkes
20-22 Clarinda Street, Parkes NSW 2870
T (02) 6862 1066 **F** (02) 6862 1583
E parkes@agriwestrural.com.au

AgriWest Forbes
6-8 Camp Street, Forbes NSW 2871
T (02) 6851 4200 **F** (02) 6851 4338
E forbes@agriwestrural.com.au

AgriWest Peak Hill
110 Caswell Street, Peak Hill NSW 2869
T (02) 6869 1449 **F** (02) 6869 1592
E peakhill@agriwestrural.com.au

www.agriwestrural.com.au