THE MISSING LINK IN MITE CONTROL

Campbell

APOLLO®

Miticide

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For Control of Couch mite eggs

Images above for illustration purposes and not couch mite
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The Key to Professional Turf
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Apollo at a glance

Product Name:	**Apollo SC Miticide**
Product Type:	**Miticide/Ovicide**
Active Constituent:	**500g/L Clofentezine**
Resistance group:	**Group 10A Insecticide (Contact)**
Formulation:	**Suspension concentrate**
Pack Size:	**1L and 5L**

Couch Mites have been an ever growing problem in Australia. Various products have been used in turf for a number of years now with good effect. However these products are only effective on larvae and adult mites. Apollo brings a new dimension to mite control as an ovicide that specifically controls mite eggs.

Apollo has been used very successfully in horticulture crops for a number of years for egg mite control. Apollo now gives the ability to target all stages of couch mite with the ovicide activity.

FEATURES OF APOLLO

- Miticide - as a mite growth regulator
- Ovicidal activity- targets eggs of couch mites
- Schedule 5 signal heading
- Apollo is safe for bees, predatory mites and beneficial insects

HOW DOES APOLLO WORK & USE

- Apollo is absorbed through the egg case and prevents respiration on the developing embryo
- Apollo has no effect on larvae or adults. However when female adults are exposed to Apollo egg laying and viability slows down for a short time (several days).
- Long residual up to 45 days

Situation	Pests	Rate	Critical Comments
Couch Turf Including but not limited to golf greens, tees and fairways, bowling greens, sports fields and racetracks.	Couch Mite (Aceria cynodoniensis)	500 mL/ha (72.2mL per standard size bowling green 38m x 38m)	Apply Apollo in an early curative situation (after first symptoms are apparent). Best results are achieved if applied as populations begin to build rather than at the peak of population growth. OR Apply in a tank mix with the registered rate of a knockdown miticide when there are significant number of mites present, but before the infestation reaches an economically damaging level. Apply a maximum of 2 sprays, 10-14 days apart. Do not apply two consecutive sprays of Apollo unless mixed with a knockdown miticide e.g. Abamectin.

WHY THE NEED TO TANK MIX APOLLO?

Apollo, even though in the trial results showed efficacy by itself, is highly recommended to be tank mixed with a knock down miticide. There are 2 reasons for this:

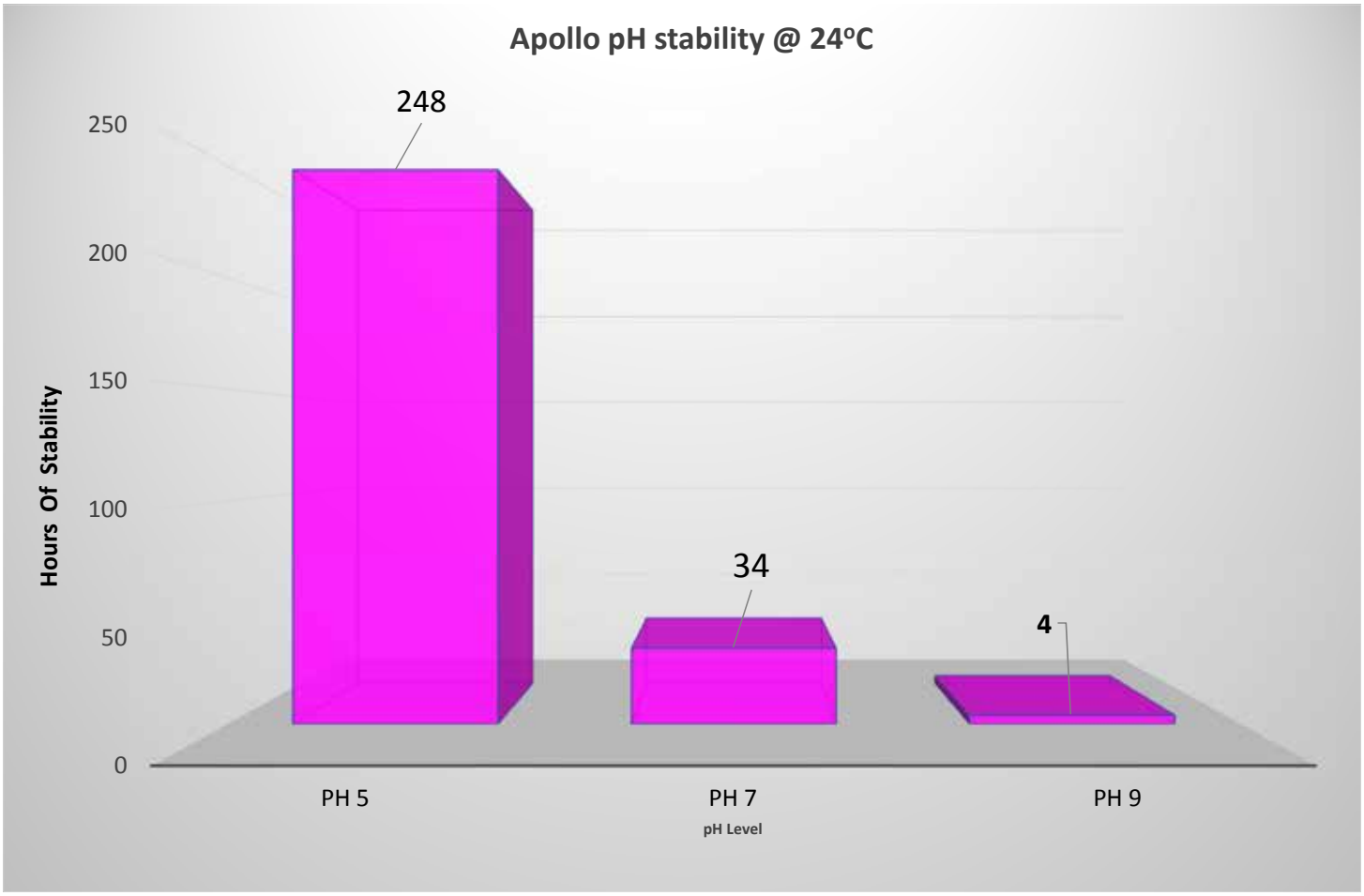
1) Apollo only controls the eggs of mites and does not control the larvae or adults that are doing the damage. Hence damage will still occur if you just use Apollo on its own- tank mixing is highly recommended to target all stages of the mite life cycle. Working out when eggs are present without adults and larvae is very difficult couch mite has a short lifecycle and can be present at multiple growth stages.

2) Resistance- with long term experience of miticides in horticulture it has been documented many times that mites build up resistance to miticides very quickly. Using stand alone products greatly increases the speed of this, hence we advocate Apollo to be tank mixed with a knockdown miticide in all areas where Apollo is registered (see label for other uses). Resistance management in mites is paramount and good cultural practices along with using miticides correctly will delay the onset of resistance.

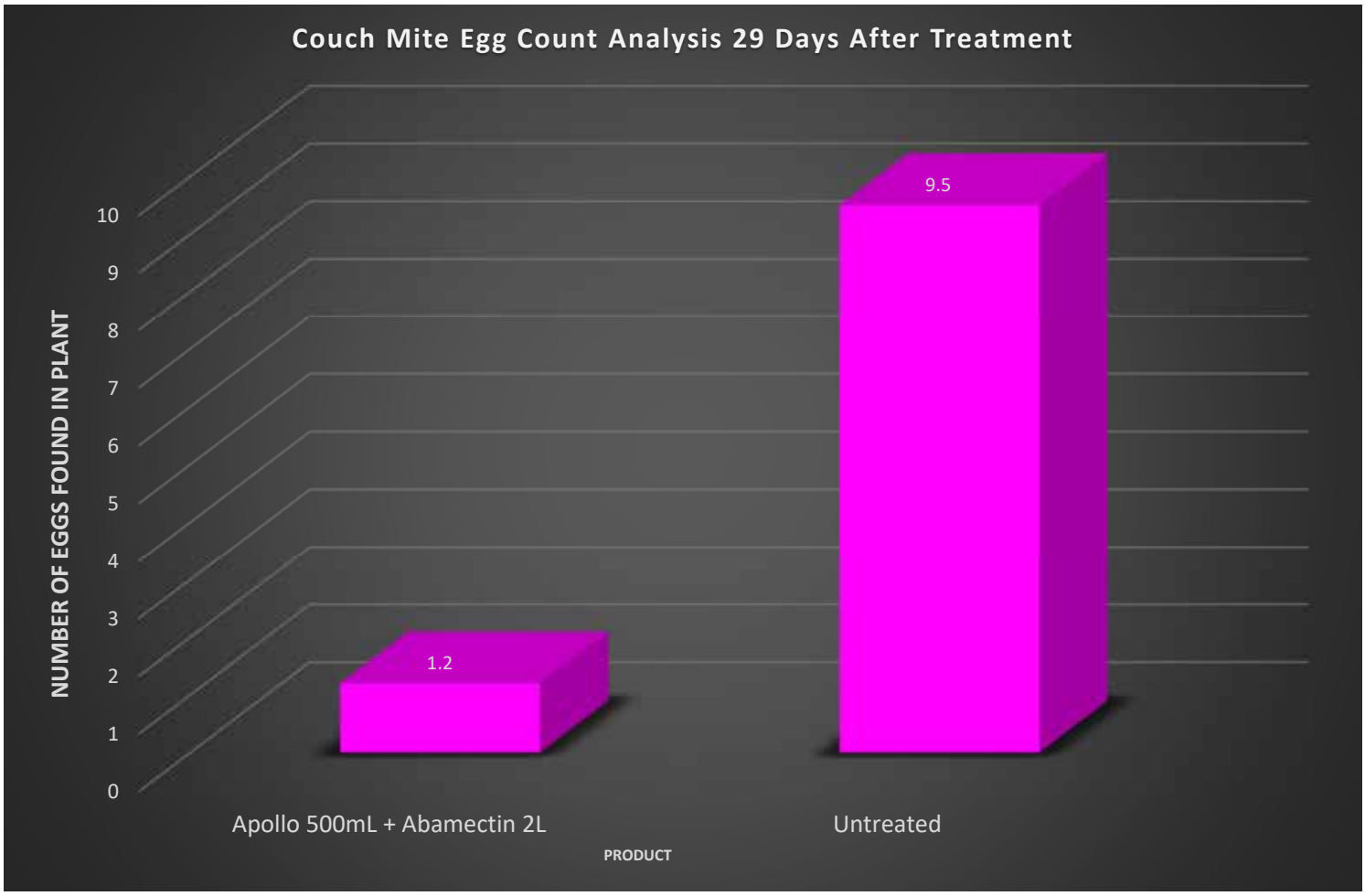
APOLLO AND WATER pH?

High pH of water can cause some chemicals to break down, This is referred to as Alkaline Hydrolysis. It is very important to test the pH of your water each time before using Apollo. Having the wrong pH can greatly reduce the effectiveness of Apollo as demonstrated by the chart below. Do not assume town water pH is fine as many times it has a high pH > 8.

We recommend taking these steps:
1) Fill water in tank and test ph of the water
2) Add any buffer needed and retest the water pH
3) If all is well add Apollo as per directions on the label.



Apollo Trial Work

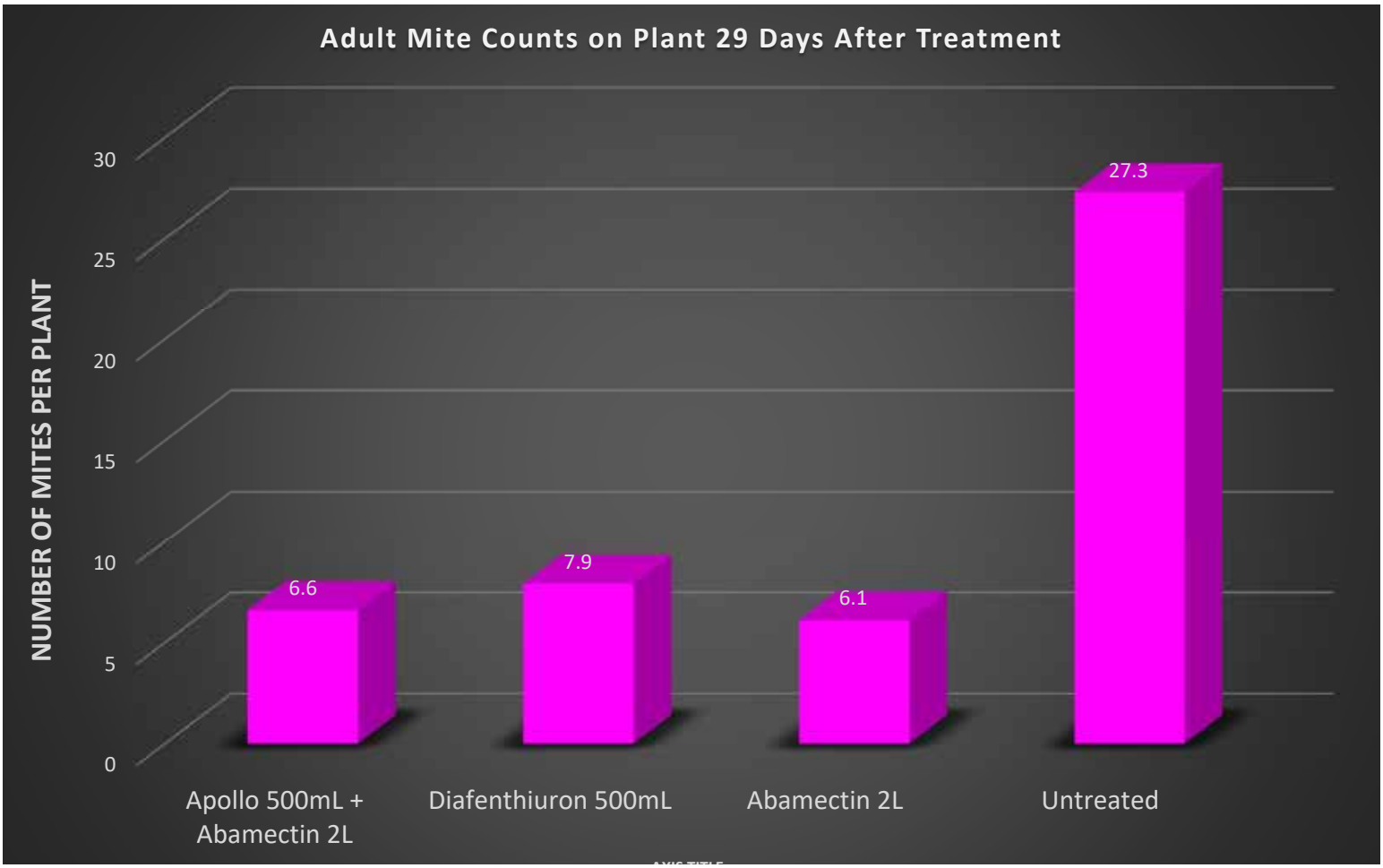


Aim of Trial
To determine mite egg numbers in the plant treated with Apollo against untreated.

Background
This trial was conducted in Queensland under high pressure mite conditions and 2 treatments were made 10 days apart. Assessment was made 29 days after the 2nd application

Results
Apollo (mixed with Abamectin) significantly reduced egg numbers vs untreated.

Apollo Trial Work

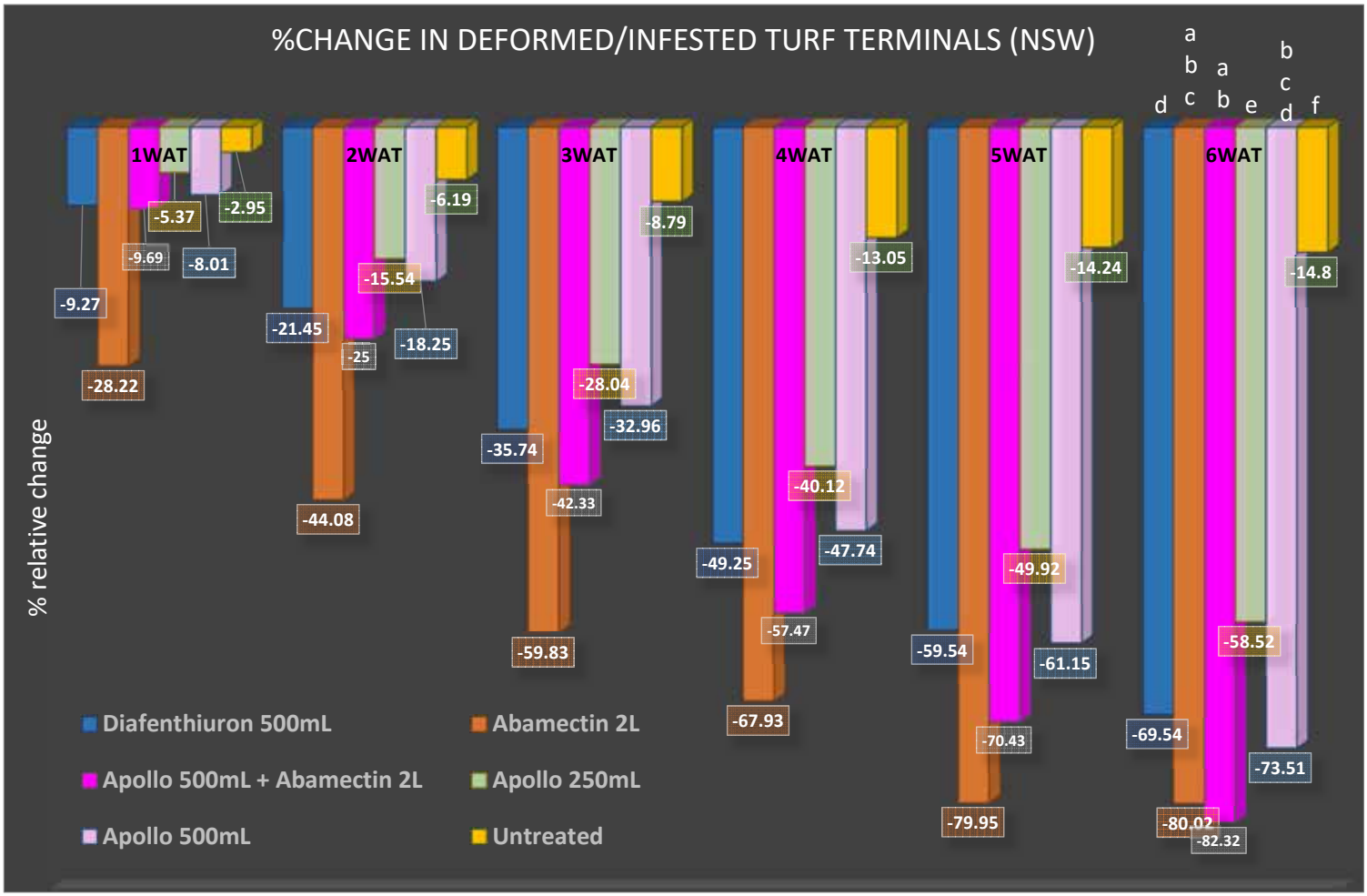


Aim of Trial
To determine adult mite numbers in the plant treated with a mix of Apollo + Abamectin mix efficacy against standard treatments stated.

Background
This trial was conducted in Queensland under high pressure mite conditions and 2 treatments were made 10 days apart. Assessment made was made 29 days after the 2nd application

Results
Apollo (mixed with Abamectin) significantly reduced adult numbers vs untreated and performed just as well as standard products on the market. Even though there was no significant difference in the treatments we advocate to tank mix Apollo as stated for resistance management as well as targeting all stages of the couch mite life cycle to reduce further damage.

Apollo Trial Work



Aim of Trial

To determine Apollo efficacy as a stand alone spray and a tank mix with Abamectin vs turf registered miticides.

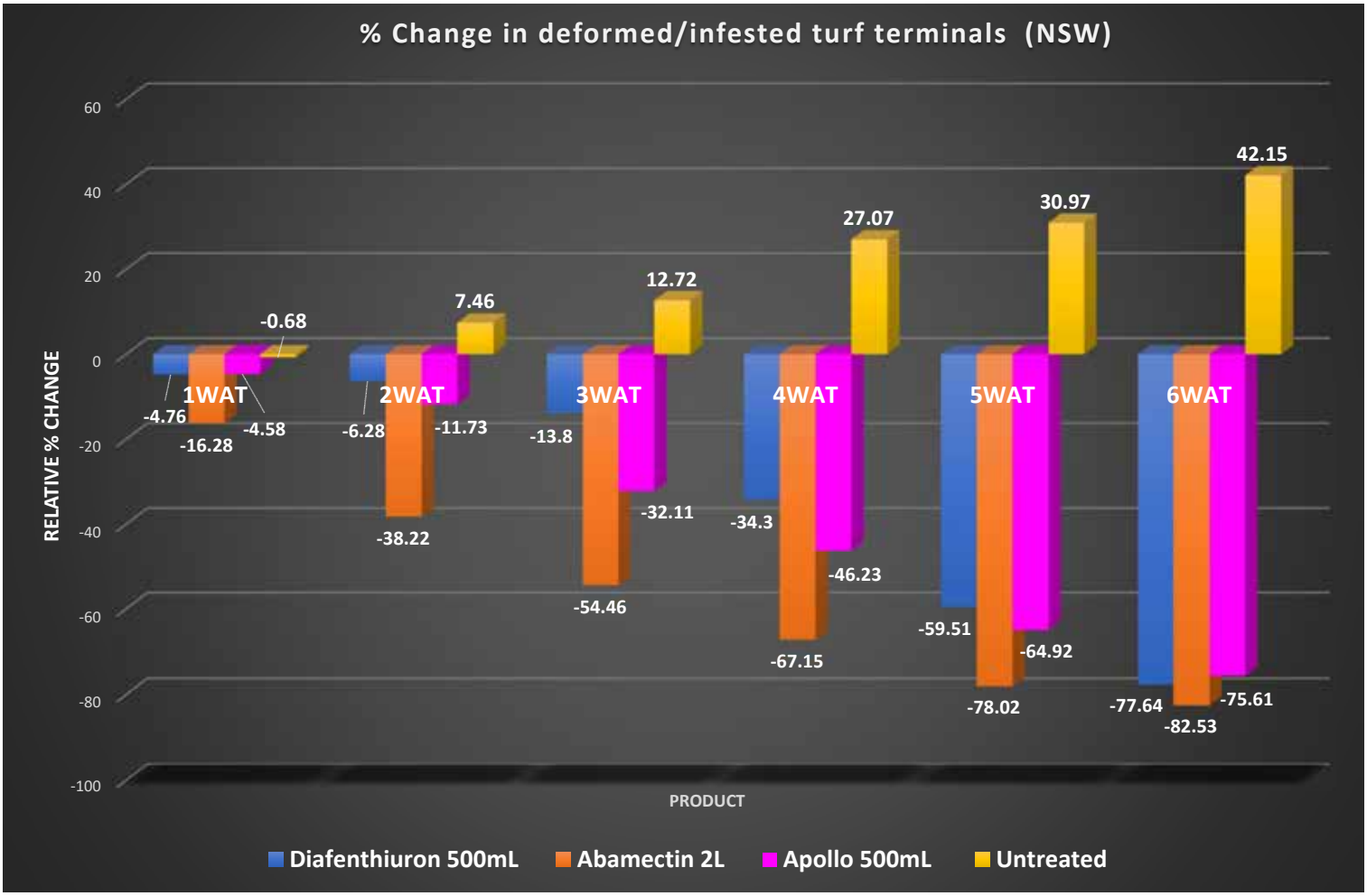
Background

This trial was conducted in NSW on couch turf. One treatment was made. Mite pressure reduced slightly during the trial period as indicated by the yellow bars (untreated)

Results (Key Points of Interest)

- Full turf recovery from mite damage takes time > 6 weeks for 100% recovery
- Apollo 500mL + Abamectin 2L performed equally as good as Abamectin on its own. Even though this is the case, resistance management as mentioned previously needs to be adhered to and tank mixing of Apollo is essential for this. The mixing of Apollo and a knock down miticide greatly reduces mite populations as all stages of the life cycle are targeted not just larvae/adults alone as abemectin does.
- Having Abamectin in the mix provided quicker turf recovery than Diafenthiuron and Apollo on its own.
- Apollo 250mL and 500mL did not work as significantly well as Apollo tank mix with Abamectin. This is not unexpected due to no control of larvae or adults and the natural life cycle of the mite has to take it's course.

Apollo Trial Work



Aim of Trial

To determine Apollo efficacy as a stand alone spray vs turf registered miticides.

Background

This trial was conducted in NSW on couch turf. One treatment was made. Mite populations greatly increased throughout the trial period as indicated by positive bars in untreated (yellow)

Results (Key Points of Interest)

- Full turf recovery from mite damage takes time > 6 weeks for 100% recovery
- Apollo 500mL performed equally as good as Abamectin and Diafenthiuron
- Even though this is the case, resistance management as mentioned previously needs to be adhered to and tank mixing of Apollo is essential for this. The mixing of Apollo and a knock down miticide greatly reduces mite populations as all stages of the life cycle are targeted not just larvae/adults alone as abemectin does.
- Abamectin provided quicker recovery initially. However by week 4 all treatments were statistically the same. Apollo performs just as well as standard turf registered miticides.

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