

## Providing enhanced effectiveness of crop protection sprays using Protec Plus<sup>®</sup>

Performance of crop protection products can be affected by numerous factors. Amongst these are things such as hard to wet plants, waxy or hairy leaves, hard to penetrate foliage, hot dry or wet application conditions, wind, and other environmental situations such as the close proximity of susceptible crops or stock, or neighbours.

The farmer or contractor applying the spray needs to be able to ensure that he can maximize the ability of the spray to contact the target plant maximising the effectiveness of the spray, and minimizing the off target drift and losses.

One way of maximizing the spray performance and reduce off-target impacts is to add **Protec Plus** Spray Adjuvant to the spray mix.

### What is Protec Plus Spray Adjuvant?

Protec Plus Spray Adjuvant is a blend of esterified oil and non-ionic surfactants that when combined in chemical applications enhances their performance. Esters are more soluble in water than the parent oils. In a prepared adjuvant they need surfactants with them however, to get them to flash emulsify i.e. spread throughout the spray tank instantly.

Adjuvants can be made from raw canola esters or de-gummed canola esters which are harder to emulsify. Raw Ester products can lead to tank scum or layers on top when mixed in water.

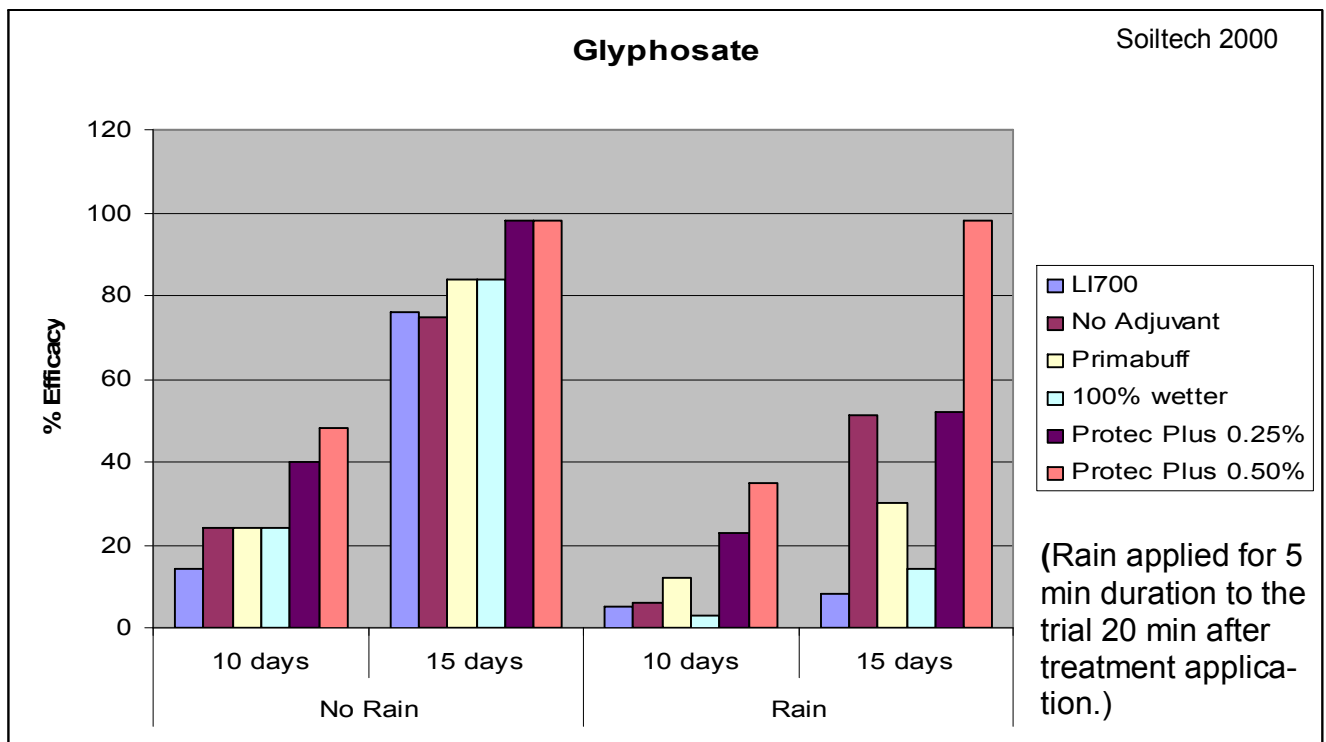
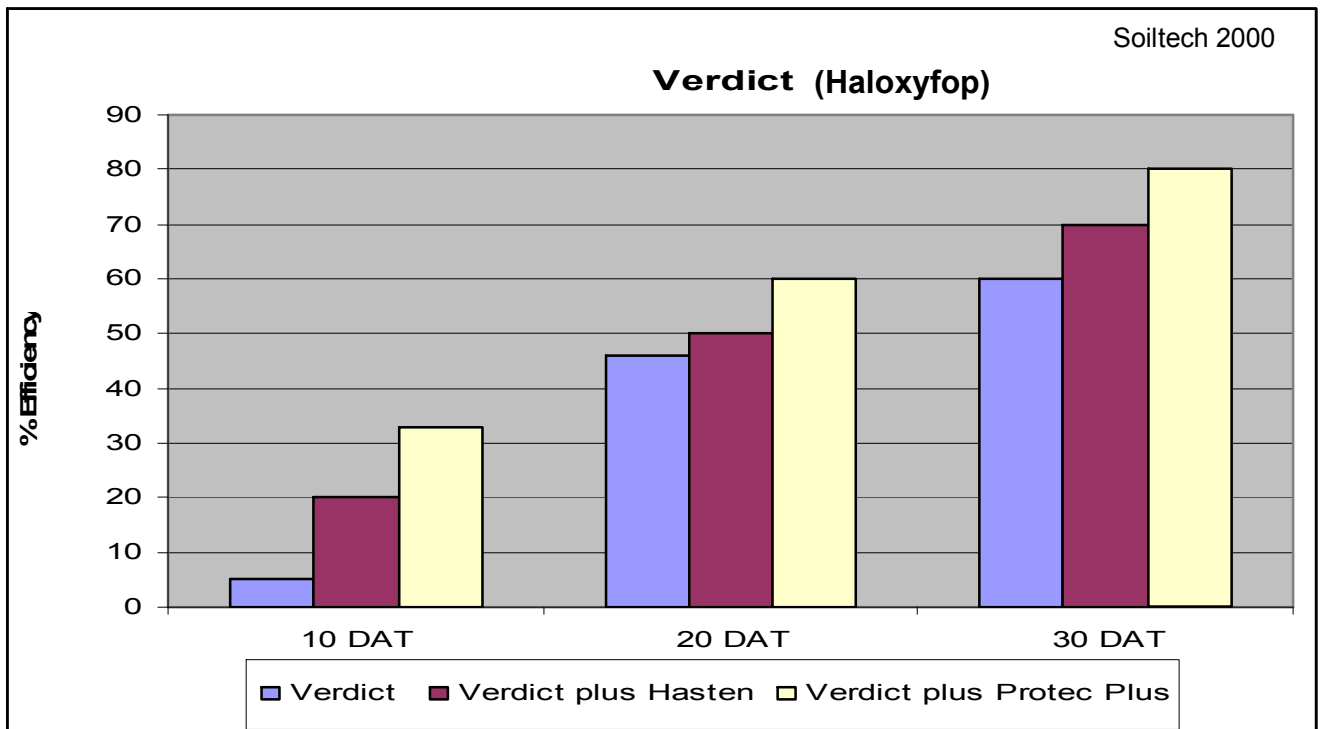
### Benefits of using Protec Plus

- Can be used where an emulsifier oil or non-ionic surfactant is recommended.
- Dramatically improves wetting, sticking and penetrating ability of chemicals.
- Makes spray applications rain fast.
- Reduces evaporation as Protec Plus is an oil based surfactant.
- Reduces drift through eliminating fine droplets, leading to increased spray percentage reaching the target.
- Oil base improves droplet deposition
- Decreases odour by encapsulating the spray chemical.
- Compatible with and enhances the performance of most Herbicides,
- Insecticides, Fungicides, Foliar Fertilizers, IPM Programmes, Defoliant and Desiccants.
- May be used with all methods of spray application.
- No special equipment required for use.

The relative value of each of these benefits will depend on the target pest or plant and the environmental conditions.



Effectiveness can be proven as shown from the trial results below.



## Directions for Use

Protec Plus will maximize the performance of horticultural and agrochemical spray by increasing droplet deposition, droplet spread and uptake into the target. Protec Plus is designed to aid the formulation of uniformly sized spray droplets, to reduce water evaporation and therefore minimize drift. Protec Plus sprays is rain fast within minutes of application.

## Application directions for Protec Plus

Situation	Rate	Critical Comments
Broadacre & Boom Spray	200ml – 1L/100L water	Use the lower rate when using low application rate products
Aerial, CDA, or ULV	200ml – 2L/Ha	
Handgun	(Spot spraying ) 150 – 300ml/100L water	
Knapsack	15ml – 20ml/10L water	
Tree Orchard Plantation Spraying	(High Volume) 100ml – 200ml/ 100L	

## Compatibility

Protec Plus is non-phytotoxic at recommended rates and is compatible with most commonly applied chemicals including herbicides, fungicides, insecticides and other foliar sprays. Do not mix with Bravo® or Dormex®.

## Mixing Instructions

It is important for best results and to avoid gelling in the spray tank to mix all components of the mix in the correct order:

1. Fill the spray tank to  $\frac{3}{4}$  of required water volume
2. Add the pesticide/herbicide to the spray tank with full agitation as per manufacturers instructions.

If using multiple products in the mixture, add according to the WALES order:

- Wettable powders or dry flowables
- Agitate plus adjuvants such as buffering agents
- Add liquid or soluble products
- Add emulsifiable concentrates

3. Add Promax or Protec Plus last
4. Top up with required volume of water

Note: Always add the pesticides to the spray tank one by one, preferably premixed, not as concentrates. Do not add pesticides together before adding to the spray tank. Keep agitation operating throughout mixing and spraying. When using a new product for the first time, to avoid any excess uptake of pesticide material damaging the crop, always test the rate applied by application to a small area prior to full scale spraying. Avoid spraying near midday in high temperature and high humidity.

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**For further information on use of Protec Plus,  
contact Grevillia Ag on 1300 669 556.**