

## Early Broadleaf Weed Control for Winter Cereals

Affinity Force is a market leading early post-emergent herbicide for the control of broadleaf weeds in wheat, barley, triticale, oats and cereal rye.

Features	Benefits
<p><b>Group G chemistry</b></p> <p>Carfentrazone-ethyl, the active constituent in Affinity Force, is a member of the aryl triazolinone class of Group G herbicides. This group of chemistry is described as protoporphyrinogen oxidase inhibitors or “protox” inhibitors and are contact, non-systemic herbicides.</p> <p>Protox inhibitors are rapidly absorbed through plant leaves and work by inhibiting the enzyme protoporphyrinogen oxidase in the chlorophyll biosynthetic pathway that ultimately leads to cell membrane disruption and desiccation.</p>	<p>Affinity Force has a unique mode of action (Group G) for broadleaf weed control in winter cereals. The chemistry provides an excellent additional option for broad spectrum, broadleaf weed control and as a rotational tool in broadleaf weed management.</p>
<p><b>Rapid uptake through foliage</b></p> <p>Weeds die after 3 to 7 days. The foliar uptake of Affinity Force is rapid and its action as a protox inhibitor in the chlorophyll biosynthetic pathway and subsequent cell membrane disruption leads to plant desiccation and death within 3 to 7 days after application.</p>	<p>Rainfast within 1 hour and 6 hours when mixed with MCPA amine.</p> <p>This means that Affinity Force is one of the fastest acting selective broadleaf herbicides available for use in winter cereals, ensuring minimal crop competition and maximum crop yield responses.</p>
<p><b>Broad spectrum activity</b></p>	<p>Tank mix with MCPA amine to provide excellent broad spectrum control of broadleaf weeds.</p>
<p><b>No grass activity</b></p>	<p>Excellent crop tolerance to all cereals. Positive yield responses.</p>
<p><b>No soil activity</b></p> <p>At the recommended rates, Affinity Force does not have any soil activity regardless of soil pH.</p>	<p>No plantback periods or cropping restrictions on the label.</p>
<p><b>Low use rates</b></p> <p>65 to 100mL/ha+ 500mL/ha MCPA amine</p> <p>500 or 330mL/ha– MCPA amine 750.</p>	<p>Simple rate choice.</p> <p>Fewer containers.</p> <p>Easy to handle.</p>
<p><b>Non Scheduled Poison</b></p>	<p>Excellent safety when handling for mixer, loader and operator.</p>

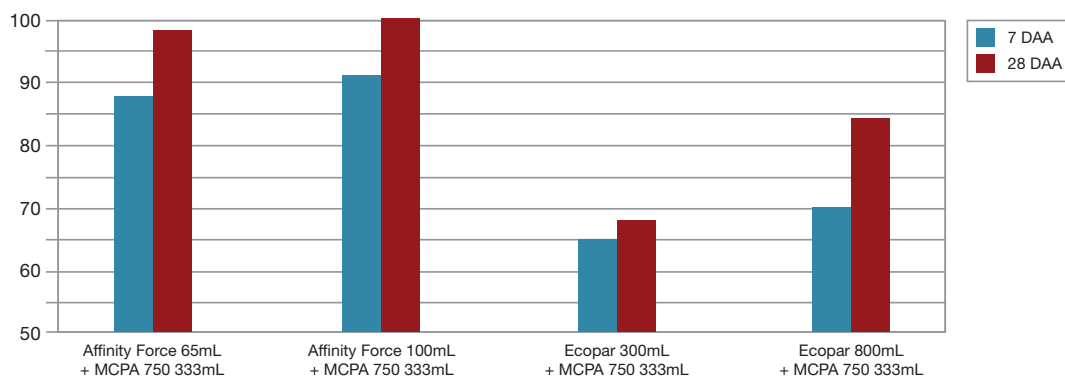
## Weeds controlled

Affinity Force controls a wide range of difficult to kill broadleaf weeds, including:

Ball Mustard	Capeweed	Capeweed
Capeweed	Crassula	Bedstraw/ Cleavers
Bifora	Fumitory (dense flower)	Indian hedge mustard
Ivy-leaf speedwell	Long storksbill (erodium)	Marshmallow
Musk weed	Paterson's curse	Prickly lettuce
Rough poppy	Sheepweed /corn gromwell	Shepherd's purse
Sowthistle	Toadrush	Turnip weed
Wild Turnip	Spiny emex (double gee, three cornered jack)	Sub clover
Wild Radish	Volunteer canola (including Roundup® Ready)	
Volunteer pulses - Faba beans, Field peas, Lentils, Lupins, Vetch		

## Efficacy

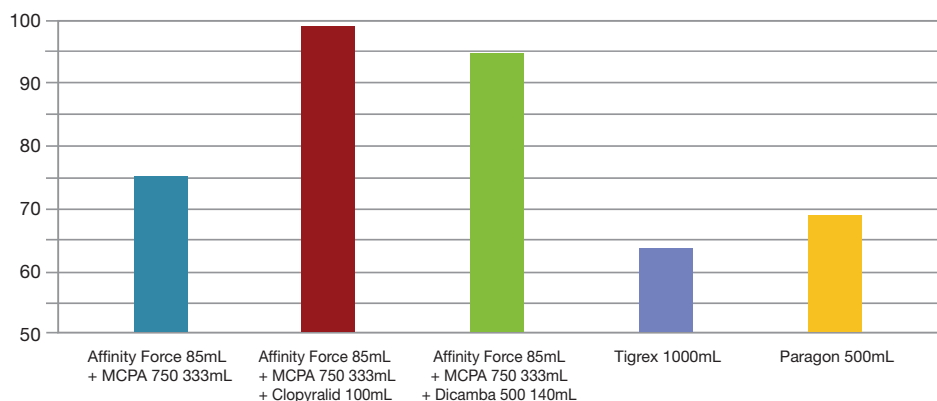
### Marshmallow control



Source: Nufarm/08/06b, 080308 (York)

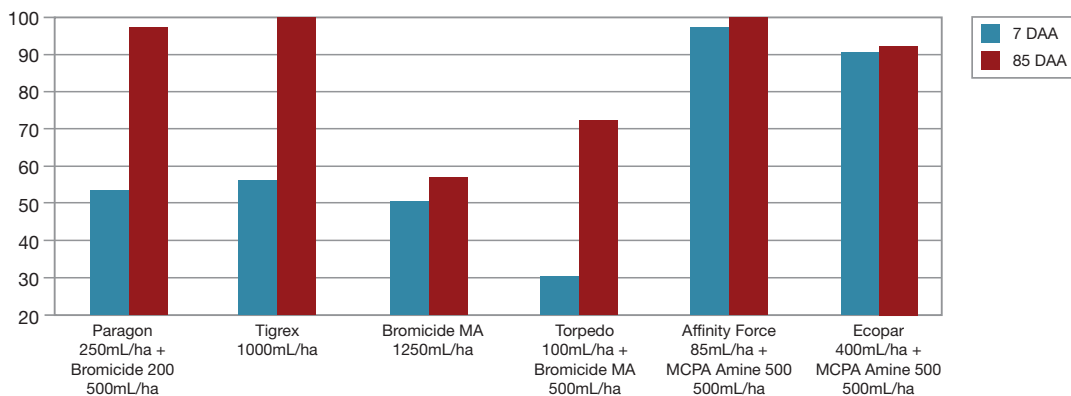
### All Pulses control

(Peas, beans, lentil and vetch)



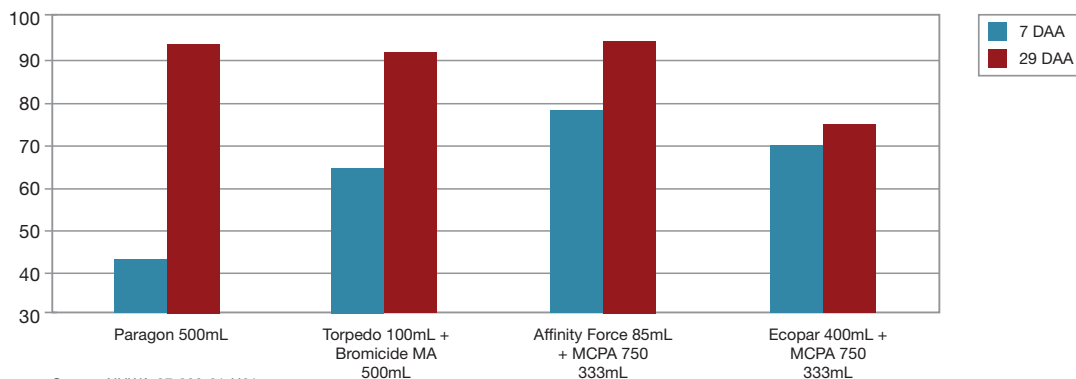
Pulses sown in barley crops as volunteers. UTC mean 11.8 plants/m<sup>2</sup>. Trial SANUF0305, Maitland, SA.

## Wild Radish control



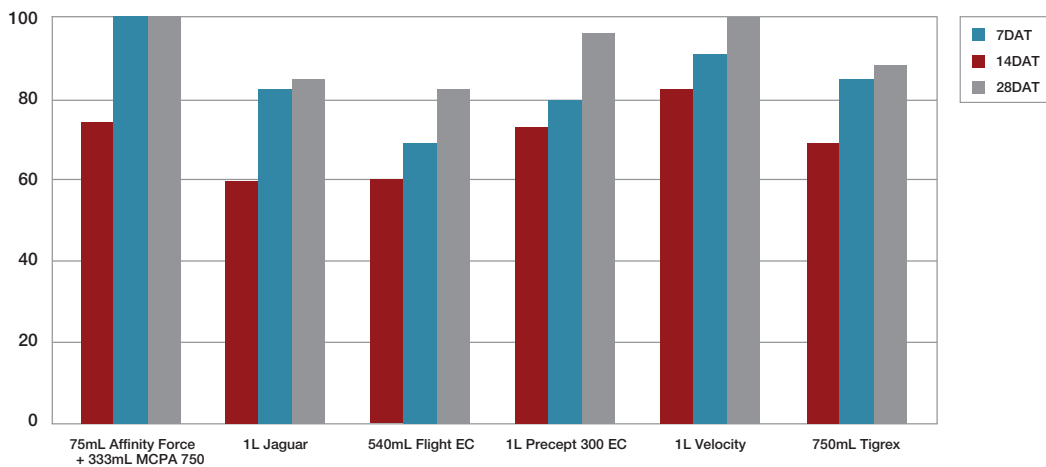
Source: NUWA-07-406-01-H46

## Capeweed control



Source: NUWA-07-028-01-H61

## Wireweed control



Source: Agrisearch, Eudunda SA, 2012.

### Timing / Crop Stage

As with any herbicide, application to actively growing, young weeds results in optimum weed efficacy. This earlier timing also provides the greatest increase in cereal grain yield due to moisture conservation and reduction in early crop competition.

Ideally cereal crops should be at the 3 leaf to early / mid tillering stage (Zadocks code 13 to 25) and prior to canopy closure.

### Application and Nozzle Selection

Apply Affinity Force (plus MCPA amine in cereals) as a broadcast application. Use conventional boom sprayers with either mechanical or by-pass agitation. Spray equipment should be properly calibrated to ensure correct application. Use a spray volume of 50 to 150 litres per hectare.

Experience has shown that using a minimum spray volume of 100 L/ha can improve weed control. This is particularly important on bifora and other hard to control weeds. Use a minimum of 100 L/ha if weed infestation is heavy or the crop cover is dense and this volume is highly recommended when using the preferred air induction (AI) nozzles. Tank mixes of Affinity Force plus MCPA amine must be applied with nozzles that produce a coarse spray quality (to ASAE S572 standard) due to the MCPA component.

Air induction nozzles are the most suitable nozzle type to produce a coarse spray quality. The preferred nozzles are Agrotop AirMix or TeeJet AIXR. Do not use air induction (AI) or non AI nozzles that produce a spray quality of very coarse and above to apply Affinity Force plus MCPA amine. Do not use TeeJet TT nozzles, as experience has shown inferior control of bifora in particular can result. Single orifice or twin orifice flat fan nozzles can be used, provided they meet the above specifications.

Use of 110-03 or bigger single orifice nozzles or equivalent bigger twin orifice nozzles with Affinity Force may reduce control of bifora but not other weeds.

**DO NOT** apply Affinity Force to cereals by aircraft.

### Compatibility

Affinity Force should always be mixed with **MCPA Amine** to widen the weed spectrum and range of weed growth stages.

**DO NOT** tank mix with **MCPA LVE or ester formulations** of other herbicides as excessive crop injury may occur.

**DO NOT** tank mix Affinity Force with grass selective herbicides.

### Compatibility – Tank Mixes with Affinity Force

**The following herbicides may be applied with Affinity Force:**

- Diuron
- Metsulfuron (Ally)<sup>®</sup>
- Metribuzin
- MCPA Amine
- Clopyralid (Lontrel)<sup>®</sup>
- 2,4-D Amine.

**The following insecticides appear to be compatible with Affinity Force plus MCPA Amine**

- Dimethoate
- Imidan<sup>®</sup>
- Le-Mat<sup>®</sup>
- Chlorpyrifos (Lorsban<sup>®</sup>) (may increase crop effect).

## Wetters and Adjuvants

**DO NOT** use any wetters, crop oils or oil surfactant blends (e.g. Caltex Spray Plus<sup>®</sup>, DC Tron<sup>®</sup>, Supercharge<sup>®</sup>, Hasten<sup>®</sup> or Uptake<sup>®</sup>) with Affinity Force. This may result in excessive crop damage.

## Rainfast Period

Affinity Force is rainfast within 6 hours when mixed with MCPA.

## Boomspray Clean Out

After spraying Affinity Force and before using the sprayer in sensitive crops such as faba beans, canola or lentils, the sprayer including the tank, hoses, nozzles and filters must be thoroughly cleaned using an alkaline detergent e.g. OMO<sup>®</sup> or SPREE<sup>®</sup>. Refer to the label for full details.

## Plantback Periods

Affinity Force does not provide residual activity, therefore NO plant back periods or crop rotational restrictions apply.

## Withholding Periods

Grazing: **DO NOT** graze treated areas for 14 days after application.

Crop Harvest: Not required when used as directed.

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