ADAMA

Sierra®

Bring on the boost.

Boost the efficacy of ADAMA Wipe-Out® or Spraytop® with Sierra®, the easy-to-use liquid saflufenacil formulation that enhances control of tough broadleaf weeds.

Product Guide

HERBICIDE

ADAMA.COM

Introduction

Sierra® herbicide boosts the power of knockdown herbicides to control challenging or resistant broadleaf weeds.

Key points

- Group 14 chemistry (160 g/L saflufenacil) with knockdown and systemic activity
- Unique soluble liquid (SL) formulation for ease of use, excellent compatibility and superior efficacy compared with granule formulations
- Controls 30+ broadleaf weeds, including fleabane, red pigweed, wild radish, capeweed and volunteer cotton
- Ideal boost for tank-mixes with glyphosate or paraquat for control of annual grass and broadleaf weeds
- Unique OSST registration broadens use pattern options in fallow and before sowing
- Aids harvest in pulses, overcoming uneven crop maturity and reducing weed biomass for improved harvest efficiency
- Also registered for use in established lucerne, orchards, forestry and non-crop situations
- Low use rates – convenience; minimal packaging, handling and transport

Unique formulation

Sierra® herbicide is a unique Soluble Liquid (SL) formulation of 160 g/L saflufenacil, a systemic Group 14 herbicide that provides rapid brown-out of more than 30 broadleaf weeds. Sierra® herbicide can be applied before sowing summer and winter crops; in fallow (and in combination with optical spot spray technologies); as a harvest aid for winter pulses; and in established lucerne, orchards, forestry and non-crop situations.

Application

Ground application: 80–250 L water/ha.
Aerial application (helicopter only): Apply in sufficient water to achieve thorough coverage of target foliage and weeds.
OSST: 100 L water/ha.

Use of surfactant/wetting agent

Always use with a blended methylated/ethylated seed oil at 1% e.g. Hasten*, Plantocrop* or Kwickin*. Not all surfactants or crop oils are of equal quality. ADAMA Australia does not support the use of alternative products other than those listed in the compatibility section of the label.

Compatibility

Sierra® is compatible with a range of ADAMA herbicides and other crop protection products. Always follow the correct mixing order. Refer to the Sierra® Physical compatibility guide and correct mixing order guide at adama.com before use.

Water quality

The performance of Sierra® herbicide is not impacted by alkaline water. However, check tank-mix partner herbicide sensitivities to alkaline water quality characteristics and address as appropriate.
The addition of ammonium sulphate (AMS) is recommended where water hardness is an issue.

Mixing

Completely fill the spray tank with water, leaving sufficient room for the addition of products and commence agitation. If required, add any WG or SC partners before any EC products. Allow sufficient time for granular products to completely disperse before continuing to add additional products to the tank mix. Add Sierra® herbicide to the tank and once dispersed, any additional SL formulations of glyphosate or paraquat may be added. Once all crop protection partners are dispersed completely, add the surfactant as recommended on the label and in this guide to the tank. Good agitation must be maintained at all times during application.

Target weeds

The following weeds (Table 1) are controlled with Sierra® herbicide, either alone or in tank-mixes with glyphosate or paraquat products (refer to Sierra® Compatibility Guide).

Table 1: Weeds targeted by Sierra® herbicide.

Weed	Sierra® + blended methylated/ ethylated seed oil (including OSST application)	Sierra® + glyphosate + blended methylated/ ethylated seed oil	Sierra® + paraquat + blended methylated/ ethylated seed oil
Amaranth			
Amsinckia			
Annual ryegrass			
Australian crassula			
Barley grass			
Bindweed/climbing buckwheat			
Blackberry nightshade			
Brome grass			
Caltrop			
Capeweed			
Charlock			
Chickweed			
Clovers			
Common Catsear			
Cowvine/peachvine			
Crassula/stonecrop			
Fat Hen			
Fleabane			
Heliotrope			
Indian Hedge Mustard			
Khaki weed			
Kochia			
Marshmallow/Small-flowered mallow			
Medics			
Mexican poppy			
Muskweed			
Paterson's curse			
Penny cress			
Prickly lettuce			
Red pigweed			
Scarlet Pimpernel			
Shepherd's purse			
Silver grass			
Slender thistle			
Snoutbean			
Sowthistle			
Spiny emex			
Stinging nettle			
Storksbill			
Volunteer canola (max 4 leaf), including Roundup Ready* varieties			
Volunteer cotton seedlings including Roundup Ready Flex* varieties			
Volunteer pulse crops including lupin and chickpea			
Wild oats			
Wild turnip/turnip weed			
Wild radish			
Wireweed			

Efficacy data

Sierra® herbicide has demonstrated robust efficacy in trials conducted throughout Australia:

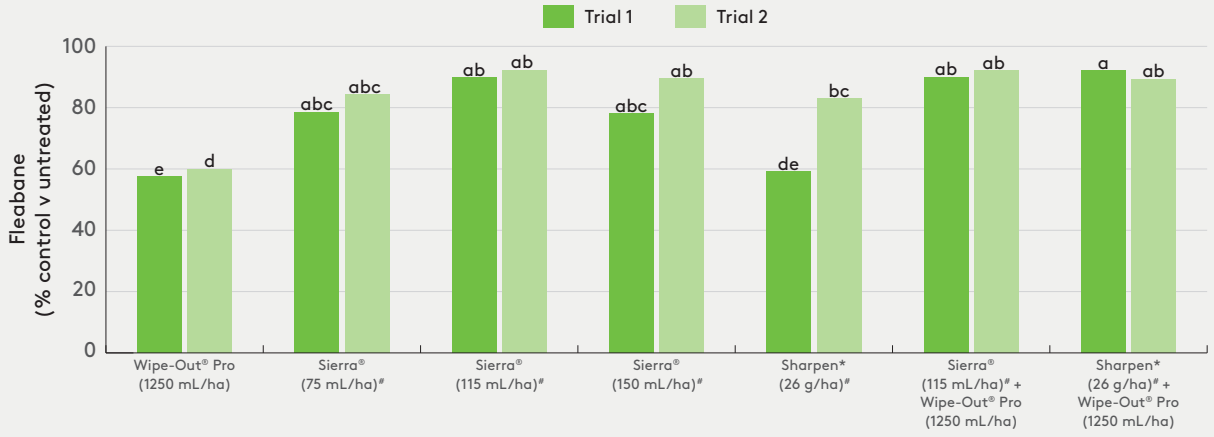
- Sierra® herbicide, applied alone or in a tank mix with Wipe-Out® Pro, provides comparable or superior performance to the industry standard when targeting fleabane (Figure 1).
- The addition of a blended methylated/ethylated seed oil (i.e. Hasten*, Plantocrop* or Kwickin*) at 1% v/v is crucial to maximising the efficacy of Sierra® herbicide on target weeds (Figure 2).
- Sierra® herbicide, applied alone or in tank-mixes with Wipe-Out® Pro or Spraytop®, provides robust control of wild radish (Figure 3).
- Sierra® herbicide, alone or in tank-mixes with Wipe-Out® Pro or Spraytop®, provides robust activity against red pigweed (Figure 4).
- Tank-mixes of Sierra® herbicide and Wipe-Out® Pro provide robust control of capeweed, with results comparable to the industry standard (Figure 5).

The efficacy of Sierra® herbicide, applied alone or in tank-mixes, is maximised when targeting small, actively-growing weeds.

Table 2: Rate conversion.

Sierra® herbicide (mL/ha)	Saflufenacil 700 WG (g/ha)
75 mL	17 g
115 mL	26 g
150 mL	34 g

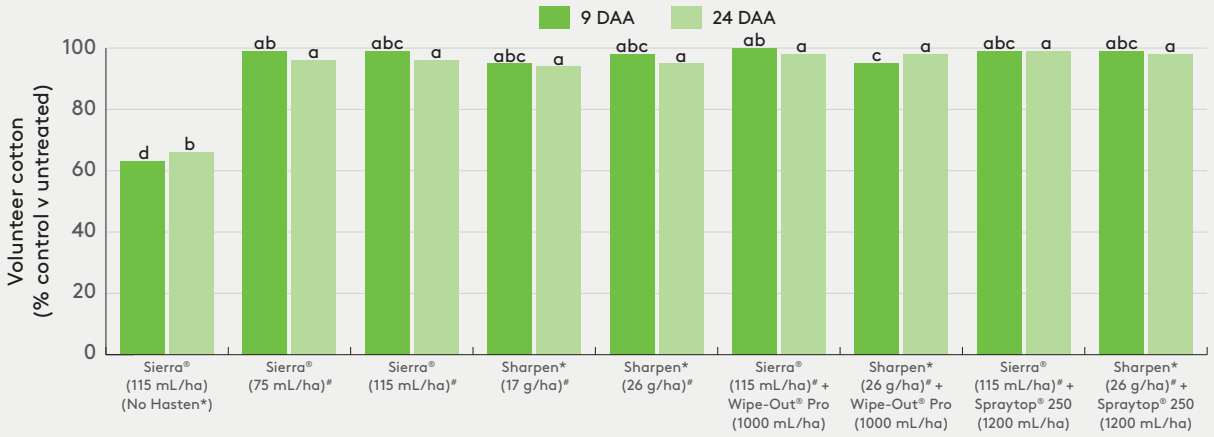
Figure 1: Sierra® herbicide in fallow – % fleabane control 25-27 DAA.



#Applied with Hasten @ 1% v/v.*

(Trial 1: Oakey, QLD, Fleabane 4–8 leaf and flowering.
Trial 2: Jandowae, QLD, Fleabane 2–12 leaf)

Figure 2: Sierra® herbicide in fallow adjuvant response – volunteer cotton (2–3 leaf) control 9 DAA and 24 DAA.



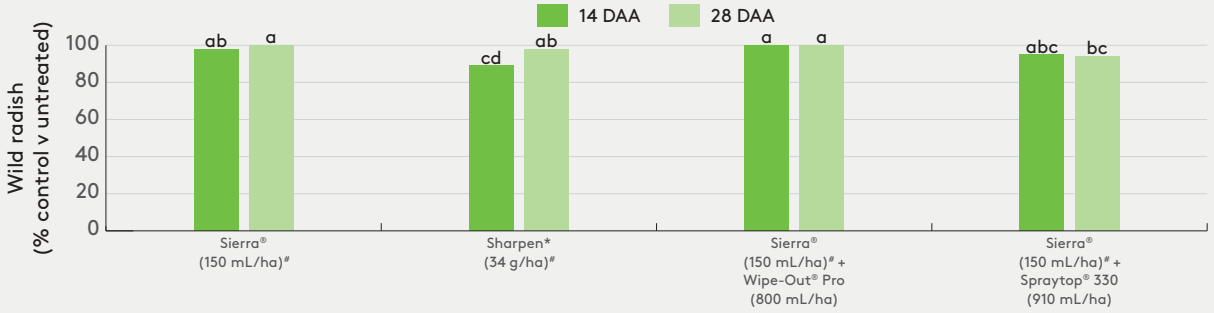
#Applied with Hasten @ 1% v/v.*

(Condamine Plains, QLD)

Tank-mixing with glyphosate or paraquat

As with other Group 14 herbicides, Sierra® herbicide is light activated. Herbicide symptoms may be accelerated under intense light, warm and moist conditions. During summer, in conditions of intense light, the speed and degree of brown-out caused by Group 14 herbicides can be too rapid and prevent adequate uptake and translocation of non-selective tank-mix partners, such as glyphosate, compromising efficacy on summer grass species in particular. When applying Sierra® herbicide as a tank-mix with glyphosate, always maintain robust application rates of the glyphosate formulations and robust water volumes to compensate for evaporation and to promote better coverage and uptake. Alternatively, paraquat (e.g. Spraytop® 250 or Spraytop® 330) is an effective tank-mix partner option, as the speed of entry and herbicidal effects are as fast or faster than Group 14 herbicides, meaning the efficacy of Spraytop® is not compromised.

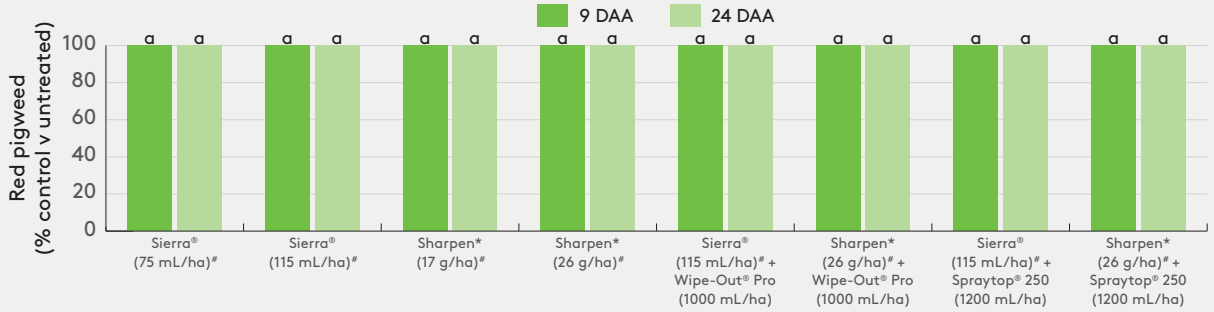
Figure 3: Sierra® herbicide wild radish (rosette) control 14 DAA and 28 DAA. 100L water/ha.



#Applied with Hasten @ 1% v/v.*

(Roseworthy, SA)

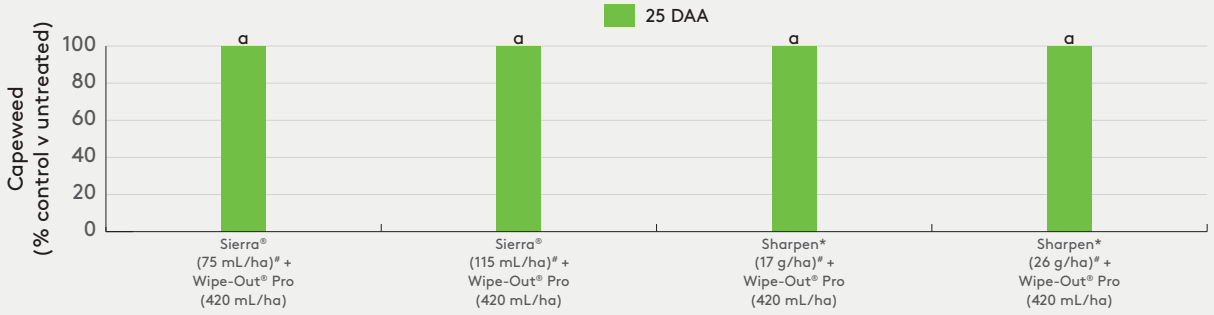
Figure 4: Sierra® herbicide in fallow – Red pigweed (vegetative 2–15cm) control 9 DAA and 24 DAA.



#Applied with Hasten @ 1% v/v.*

(Condamine Plains, QLD)

Figure 5: Sierra® herbicide plus Wipe-Out® Pro efficacy on capeweed (4–6 leaf rosette) 25 DAA.



#Applied with Hasten @ 1% v/v.*

(Adelaide, SA)

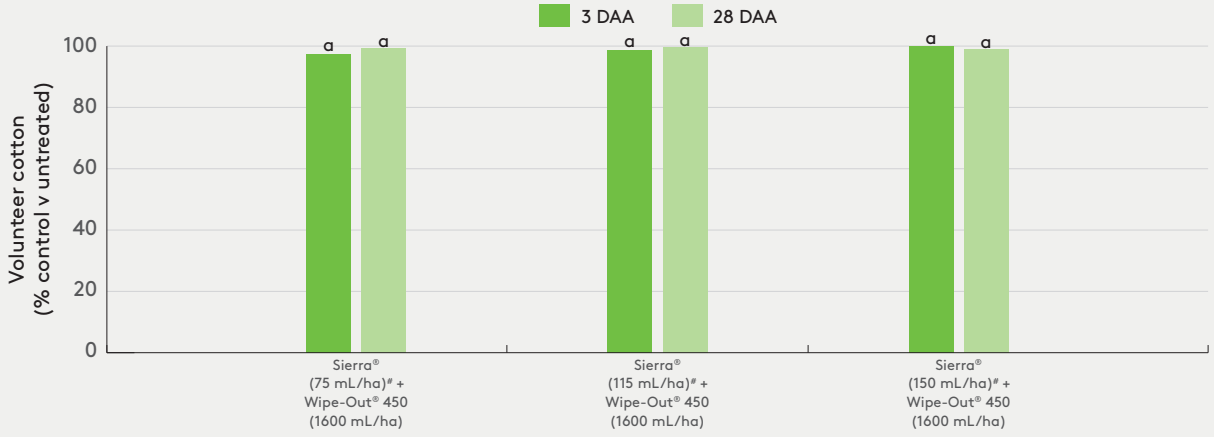
OSST application

Optical Spot Spray Technology (OSST) has become a significant weed management tool. It offers the ability to concentrate herbicide applications to target problematic weeds, resulting in superior efficacy and reduced herbicide use compared with traditional broadacre applications. The OSST use pattern for saflufenacil is unique to Sierra® herbicide. Trials have demonstrated Sierra® herbicide, applied alone or in tank-mixes with Wipe-Out® or Spraytop®, achieves robust control of volunteer cotton in challenging situations (Figure 6).

Winter pulse desiccation

Uneven crop maturity often presents challenges when harvesting winter pulses, including chickpeas, faba beans, field peas, lentils and lupins. The ability to achieve even crop maturity and reduce broadleaf weed biomass before harvest can help to improve harvest efficiency and optimise harvesting time. Trials have demonstrated the application of Sierra® herbicide in combination with Wipe-Out® Pro or Spraytop® provides effective desiccation of winter pulses, such as lentils, comparable to the industry standard (Figure 7).

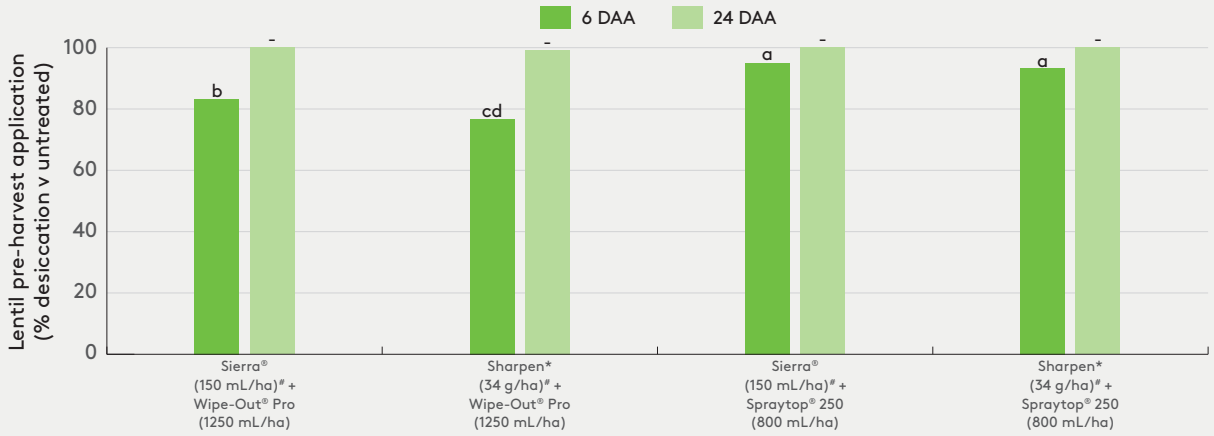
Figure 6: Volunteer cotton (1–3 leaf) control with Sierra® herbicide in fallow (OSST) 3 DAA and 28 DAA. 100 L water/ha.



#Applied with Hasten @ 1% v/v.*

(Dalby, QLD)

Figure 7: Sierra® herbicide lentil desiccation (pre-harvest application) 6 DAA and 24 DAA.



#Applied with Hasten @ 1% v/v.*

(Wasleys, SA)

Re-cropping interval

Sierra® herbicide does not provide long-term residual activity. However, certain crops show sensitivity to soil residues. Refer to Table 3 for application-to-sow intervals applicable to the maximum label rate. Check the label of any product mixed with Sierra® herbicide to determine any plant back periods or restrictions on use.

Table 3: Sierra herbicide re-cropping intervals.

1 hour	1 day	6 weeks	16 weeks
Barley Wheat Oats Faba/broad bean Corn Chickpea Field pea Lentil Lupin Sub clover	Cowpea Sorghum Soybean	Cotton Canola	Sunflower Other crops

Withholding periods

Harvest

Pulses: DO NOT harvest for 7 days after application.

Other crops: Not required when used as directed. Refer to the withholding periods of products mixed with Sierra®.

Grazing

DO NOT allow livestock to graze treated weeds.

Pulses: DO NOT graze or cut for stock food for 7 days after application.

Lucerne: DO NOT graze or cut for stock food for 4 weeks after application.

Other crops: DO NOT graze or cut for stock food for 5 weeks after application.

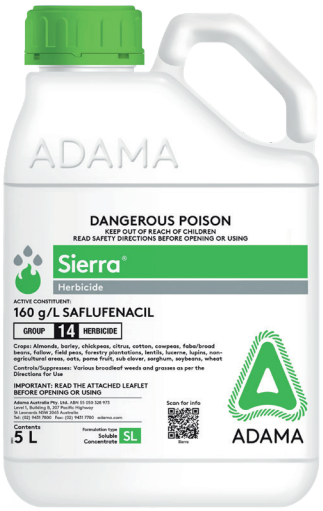
Restraints

DO NOT apply by fixed-wing aircraft.

DO NOT apply tank-mix with paraquat by aircraft.

Product information

Active ingredient	160 g/L saflufenacil
Mode of action	Group 14
Formulation	Soluble Liquid (SL)
Registered uses	Prior to sowing summer and winter crops, fallow, prior to harvest of winter pulses, OSST, established lucerne, orchards, forestry and non-crop situations
Application timing	Post-emergent
Target weeds	Broadleaf weeds
Water volume	**Ground application:** 80–250 L water/ha **Aerial application (helicopter only):** Apply in sufficient water to achieve thorough coverage of target foliage and weeds **OSST:** 100 L water/ha
Spray quality	COARSE droplet spectrum
Re-entry period	Once spray has dried
Rainfastness	1 hour



Always read and follow the product label directions of all tank-mix partners. **Care must be taken when tank mixing more than two products, particularly products that are not manufactured by ADAMA, due to potential variation in formulations or product quality. Seek competent advice or perform a jar test if unsure before proceeding.** Note that physical compatibility tests determine whether the products will mix and are suitable for application using commercial spray equipment. Physical compatibility tests do not check for adverse crop effects or the biological efficacy of the individual products when applied as a tank-mix. Recommendations for use, handling, storage and disposal of products may also change over time. The information contained in this document is not intended to replace the product label. The product label, safety data sheet and supporting product information can be viewed on the ADAMA website www.adama.com or by scanning the QR code located on this document or the product packaging.

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