



USER GUIDE

Alion

Longer Lasting Pre-emergent Weed Control in Apples and Grapes.

Apart from being unsightly, weeds not only compete for water, light and nutrients, but also require significant time, energy and expense to control.

Alion® is new herbicide technology that provides highly effective pre-emergence control of a wide range of grass and broadleaf weeds. Alion offers up to 6 months pre-emergence control, simplifying weed control in apple and grape crops, allowing more time to focus on other important management tasks.

Alion is an easy to use liquid formulation with a low use rate, which minimises environmental impacts, without compromising crop safety.

- Long lasting weed control to protect your high value crops
- Flexible application timing - can be applied from pre bud break through to late spring/early summer (observe withholding periods)
- Saves costs by reducing the number of in-season herbicide applications
- Alternative mode of action provides herbicide resistance management, including control of glyphosate resistant weeds
- Allows growers to focus on other important management jobs rather than weeds



Alion – The Product

How does it work?

The mode of action of Alion is as an inhibitor of cellulose biosynthesis (CBI). Alion inhibits meristem growth and acts as a soil herbicide via inhibition of germination, root development and weed emergence. Alion has no knockdown on already emerged weeds.

Environmental Profile

Alion has low toxicity to birds, small mammals and non-target arthropods. Alion is not toxic to earthworms or adult honey bees. Alion has low to medium mobility in soils and low use rates results in a low potential for contamination of groundwater. Alion does not have any long term effects on soil microflora. Alion is toxic to algae, fish and some aquatic plants. Mitigate risks by employing sound agricultural practices and avoid spraying Alion onto water or where runoff could occur.

User Safety

Alion has a favorable toxicity profile

- Acute oral toxicity $LD_{50} > 2000$ mg/kg
- Acute dermal toxicity $LD_{50} > 2000$ mg/kg
- Not a skin or eye irritant

Applicators should follow below precautions when using Alion

- Wear protective clothing and protective gloves
- Avoid unnecessary contact with the product
- After work wash your hands with soap and water

Resistance Management

Alion is a Group L herbicide from the alkylazine group (Group 28). While offering a alternative mode of action, Alion should be use as part of an integrated weed management programme to prevent and manage the spread of weed resistance and protect currently available effective herbicides. This includes:

- Do not rely on Alion exclusively for weed control
- Incorporate herbicides with other modes of action
- Employ non-chemical control methods

Effectively Controls Glyphosate Resistant Ryegrass

Trials in ryegrass resistant sites in New Zealand have shown excellent control of ryegrass



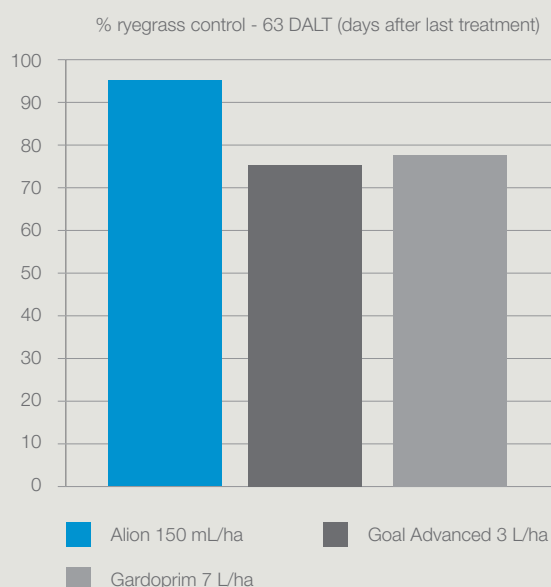
Untreated



Treated

Herbicide Trial - 2014/15

Grapes - Marlborough
Glyphosate - ryegrass resistant site



USE RECOMMENDATIONS:

LABELLED CROPS

- Grapes and apples

USE RATE

- 150 mL/ha
- Use a water rate of 150 – 300 L/ha

APPLICATION TIMING

- Apply in the spring – early summer prior to weed germination
- Apply to a bare soil, free of significant plant material to ensure complete soil coverage
- Excessive weed mass may reduce soil coverage and reduce weed control

WEED KNOCKDOWN

- Alion does not provide knockdown of weeds
- If weeds are present a knockdown herbicide (eg; Buster, glyphosate) should be tank mixed
- If dense stands of living weeds are present
 - It is recommended to apply a knockdown herbicide at label rate first
 - Follow with Alion application once weeds are sufficiently knocked down

SOIL MOISTURE

- Moisture is required to activate and incorporate Alion into the soil
- Ideally apply Alion to a moist soil and prior to a rainfall or irrigation event
- Minimum 6-7 mm of rain is required for activation
 - Within three weeks of application

ALION: PRECAUTIONS

- Avoid direct or indirect spray contact with crop foliage, green bark, roots or fruit as it may cause localized crop injury or death
- Do not apply in windy conditions
- Do not use Alion on soils with 20% or more gravel content
- Do not apply Alion to areas where soil erosion is likely to occur
- Do not apply within 2 metres of any waterbody
- Do not use Alion on trees and vines that are stressed, exhibit low vigour or poor health
- Do not apply to soils that have open channels or cracks in the soil

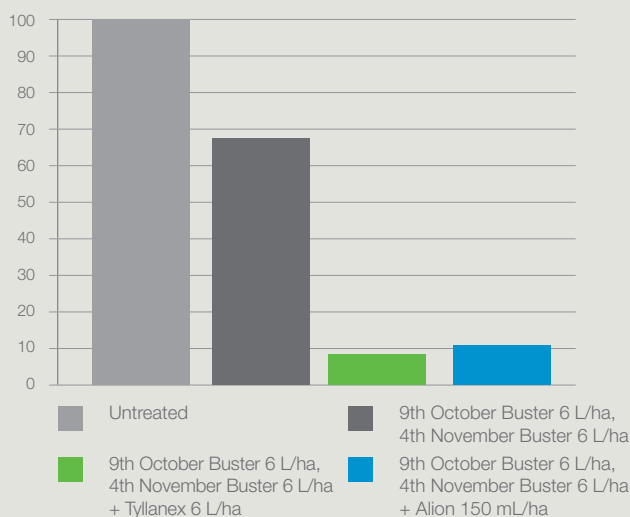
New Zealand Trials

Trials conducted in New Zealand (as below) have demonstrated the effectiveness of Alion.

Herbicide Trial - 2014/15

Grapes – Hawkes Bay

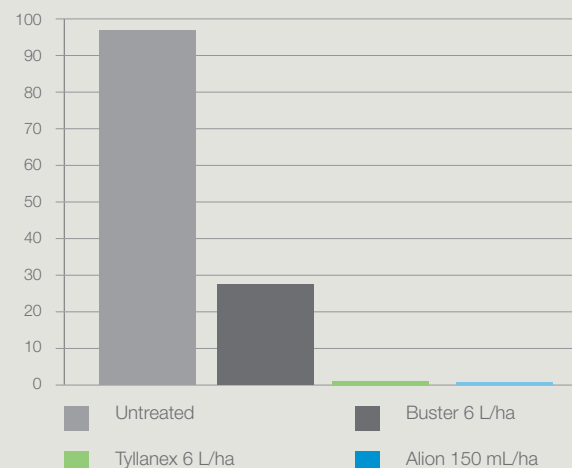
% weed cover – 138 DALY



Herbicide Trial - 2014/15

Apples – Marlborough

% weed cover – 138 DALY



ALION: USE AT A GLANCE

LABELLED CROPS	Apples and Grapes
USE RATE	150 mL/ha. Do not use more than 150 mL/ha
WATER RATE	Apply in 150 – 300 L/ha
NUMBER OF APPLICATIONS	Use only one application per season
WEEDS CONTROLLED	Annual poa, Black nightshade, White clovers, Dandelion, Fathen, Broad leaved fleabane, Hawkesbeard, Mallows, Ryegrass, Scrambling speedwells, Staggerweed, Willow weed, Wireweed, Summer grass
APPLICATION METHOD	Alion must be applied using ground based methods only with a low boom and coarse droplets. Do not apply Alion with handheld or backpack as a spot spray treatment
APPLICATION TIMING	Apply in spring to early summer prior to weed germination
CROP AGE	Do not apply Alion to apples trees less than 3 years or to grapes less than 5 years old. Only trunks with callused, mature brown bark may be sprayed with Alion
COMPATIBILITY	Alion can be tank mixed with Buster® and glyphosate. Follow the mixing directions on the label
WITHHOLDING PERIOD	Apples 56 days, Grapes 70 days
APPROVED HANDLER	Alion must be under the control of an approved handler during use
PACK SIZE	1L plastic bottle Agrecovery compatible

Regional Territory Managers

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Gisborne / Hawke's Bay / Nelson / Marlborough	Marc Fox	021 426 823
Lower North Island	Jeff Smith	021 426 824
Mid and North Canterbury	David Parker	021 760 794
Mid and South Canterbury	David Weith	021 426 096
Otago and Southland	Daniel Suddaby	021 426 822

Insist on Alion from Bayer.

www.cropscience.bayer.co.nz



Science For A Better Life

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