

CAUTION

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Cavalier®

Herbicide

ACTIVE CONSTITUENT: **240 g/L OXYFLUORFEN**

SOLVENTS: 612 g/L LIQUID HYDROCARBONS
100 g/L N-METHYL PYRROLIDONE

GROUP **G** HERBICIDE

For selective weed control of broadleaf weeds and some grasses
as specified in the Directions for Use table



ADAMA

Formulation type
Emulsifiable
Concentrate

EC

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CONTENTS: 1 L - 20 L

DIRECTIONS FOR USE

RESTRAINT: DO NOT disturb weeds by cultivation or sowing for 1 day following application to annual weeds and 7 days for perennial weeds to ensure herbicide absorption, unless specified in the CRITICAL COMMENTS

CROP / SITUATION	WEEDS CONTROLLED	TIME OF APPLICATION	RATE	CRITICAL COMMENTS
Trees (Fruit & Nut) and Vines at least 3 years old as a dormant application, including: Grapevines, Olive Trees, Pome Fruit, (e.g. Apple, Pear, Nashi, Quince), Stone Fruit, (e.g. Apricot, Cherry, Nectarine, Peach, Plum), Tree Nuts, (e.g. Almond, Macadamia, Pecan, Walnut)	Refer to Weeds Controlled list	Weed free soil	3 or 4 L/ha	DO NOT apply CAVALIER® once bud swell has occurred. Apply to freshly cultivated weed free soil. Use the higher rate when longer residual control is required (up to 4 months). Where grass weeds are expected to be a major problem, or when control of a wider weed spectrum is required, mix the lower rate with 4 - 5 L Cameo® 500 (oryzalin) per treated hectare. Read and follow all label directions.
		Emerged weeds present (4-6 leaf stage)		DO NOT apply CAVALIER® once bud swell has occurred. Use the higher rate when longer residual control is required (up to 4 months). When light infestations of weeds are present, apply as a tank mix with Wipe-Out® or Spraytop® to produce both knockdown and residual control. Read and follow all label directions. Where weed growth is large and dense, weeds must be eliminated prior to application of CAVALIER®, using Wipe-Out® or mechanical means. Macadamias: Apply in 250 - 500 L water/ha. Apply after harvest to prevent spray contacting nuts. Avoid spray contact with the foliage and stem. DO NOT apply to nuts on the ground.

CROP / SITUATION	WEEDS CONTROLLED	TIME OF APPLICATION	RATE	CRITICAL COMMENTS
Fruit and Nut Trees, Vines including: Grapevines, Olive Trees, Pome Fruit, (e.g. Apple, Pear, Nashi, Quince), Stone Fruit, (e.g. Apricot, Cherry, Nectarine, Peach, Plum), Tree Nuts, (e.g. Almond, Macadamia, Pecan, Walnut)	Annual Weeds Refer to Weeds Controlled list and Wipe-Out® 360 label	Actively growing emerged weeds	75 mL/ha plus Wipe-Out® 360 at recommended label rate	Addition of CAVALIER® to Wipe-Out® will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity (compared to results achieved with Wipe-Out® applied alone), and give control of Annual Nettles (<i>Urtica</i> spp.). For rates of Wipe-Out®, refer to the appropriate label. Read and follow all label directions. DO NOT apply the tank mix of Wipe-Out® and CAVALIER® near trees or vines less than 3 years old unless they are effectively shielded from spray and spray drift.
	Most annual grasses and broadleaf weeds Refer to Weeds Controlled list and diquat + paraquat herbicide labels	Emerged weeds present	250 mL/ha plus diquat + paraquat herbicide at recommended label rates OR 25 - 30 mL/100 L plus diquat + paraquat herbicide at recommended label rates	The addition of CAVALIER® to diquat + paraquat herbicide will improve control of Small-flowered Mallow, Evening Primrose and other weeds sensitive to CAVALIER®. Apply as a tank mix with diquat + paraquat herbicide, refer to the appropriate label and follow all label directions.
Duboisia (After transplanting of young seedlings or after harvest of mature plants)	Refer to Weeds Controlled list (Best results are achieved when applied to moist soil free of weeds)	Weed free soil	4 or 8 L/ha	Use the higher dosage where longer residual control (up to 6 months) is required. "Over-the-top" application will be tolerated.
		Weeds at the 4 - 6 true leaf stage		Recently germinated small seedling grasses and broadleaf weeds (4 to 6 true leaves) will be controlled with these rates. Established larger weeds must be eliminated by mechanical means prior to application of CAVALIER®. Add a non-ionic surfactant, Wetspray® 1000 (250 mL/100 L spray solution) to enhance activity.
Tropical and Subtropical Fruit (inedible peel) including: Avocado, Cherimoya, Custard Apple, Durian, Feijoa, Guava, Jackfruit, Kiwifruit, Longan, Lychee, Mango, Mangosteen, Papaya, Passionfruit, Persimmon, Rambutan, Star Apple	Refer to Weeds Controlled list	Weed free soil	4 L/ha	Best results are obtained when applied to moist soil free of weeds.
		Emerged weeds present		If weeds are present CAVALIER® should be applied as a tank mix with recommended rates of Wipe-Out®, diquat + paraquat herbicide or Spraytop® 250.
Brassica Crops, Cabbages, Cauliflower, Broccoli	Refer to Weeds Controlled list	Weed free soil	1.5 - 2 L/ha	Apply CAVALIER® to prepared ground 4 - 7 days prior to transplanting. If soil is dry, irrigation or rainfall is required prior to transplanting for activation of CAVALIER®. Utilise transplanting techniques which cause minimal soil disturbance. Excessive soil disturbance will lessen herbicidal activity. Use the higher rate in situations where weed pressure is known to be heavy.
Onions (seeded)	Blackberry Nightshade	Hook leaf stage	50 - 100 mL/ha	DO NOT exceed 100 mL/ha at the hook leaf stage as excessive crop damage may occur.
	Docks, Crowsfoot/ Storksbill, Fumitory Weed (Pink and White Weed), Hogweed (Wireweed), Plantain, Sorrel, Volunteer Potato, Potato Weed, Milk Thistle, Deadnettle, Common Cotula, Groundsel	1½ to 2½ true leaf stage	350 - 500 mL/ha	Best results are obtained when the hook leaf stage treatment is followed by a further application of CAVALIER® when onions are at the 1½ to 2½ true leaf stage. Apply CAVALIER® in at least 100 L/ha water at pressures below 150 kPa. DO NOT exceed 150 kPa pressure because excessive crop damage could result. Multiple treatments may be applied provided the total dose does not exceed 2 L/ha in one season. For control of other weeds, use in a program with other registered herbicides. Note: Can cause flecking, twisting or stunting of onion plants although such symptoms are normally short-lived. DO NOT apply in conditions of very high humidity. DO NOT apply to weeds or crops which are stressed by prevailing weather conditions, disease or mechanical damage. DO NOT use wetting agents or other adjuvants.
Tobacco	Refer to Weeds Controlled list	Weed free soil	4 L/ha	Use to control weeds along spray lines only. DO NOT apply to tobacco crop. Apply to soil after solid-set irrigation system has been laid out in the field. CAVALIER® should be applied to a moist soil. Where very small weeds (2-3 leaf) emerge prior to spraying, the addition of a wetting agent to the spray mixture is necessary for effective control. Should the weeds be more advanced, the addition of 2 L diquat + paraquat 200 g/L herbicide is required. Avoid spray drift.

CROP / SITUATION	WEEDS CONTROLLED	TIME OF APPLICATION	RATE	CRITICAL COMMENTS
Coffee (Apply after transplanting coffee plants or under established bushes)	Refer to Weeds Controlled list	Weed free soil	2 - 4 L/ha	Use the higher rate where longer residual activity (up to 4 months) is required. Best results are achieved when applied to moist soil, free of weeds with follow-up irrigation.
		Weeds at the 2 to 4 true leaf stage		When seedlings are present, apply as a tank mix with Spraytop® to produce both knockdown and residual control. Wetspray® 1000 should be used in the spray mixture at 250 mL/100 L. Apply as a directed spray to avoid contact with coffee plants. Mature established weeds must be eliminated by mechanical or chemical means prior to application.
Forestry Plantations <i>Eucalyptus</i> spp. <i>Pinus</i> spp.	Refer to Weeds Controlled list	Weed free soil (either before or preferably within 4 weeks of transplanting)	3 or 4 L/ha	Under weed-free conditions, apply as a directed or "over-the-top" spray. Disturbance of the herbicide barrier on the soil surface at transplantation may reduce the length of weed control. If weed seedlings are present, apply as an "over-the-top" spray. In either situation, use the higher rate for longer residual control. CAVALIER® can be applied in a tank mix with simazine to extend the spectrum and length of weed control. DO NOT use this tank mix in Eucalyptus plantations grown on sands, with no clay or organic matter. The likelihood of foliar damage to trees (especially eucalypts) will increase if applied to foliage that has not hardened off and/or if the temperature exceeds 20°C. However CAVALIER® is generally regarded as safe to common planted forestry species but the sensitivity of less common species should be tested on small areas before a large-scale application is made.
		Weeds at the 4 to 6 true leaf stage		
Forestry Trees	Broadleaf weeds and grasses	Weeds at the 4 to 6 true leaf stage	4 L/ha or 4 mL/10 m ²	For the establishment of trees for approved farm practices such as wind breaks, erosion control, woodlots and forestry plantings. When applying as a post-plant spray, ensure spray is directed to the base of seedlings, or that seedlings are protected. DO NOT apply under hot or windy conditions.
Pyrethrum – as bare rooted transplants or seedlings	Refer to Weeds Controlled list (except chickweed)	Pre-plant incorporated into weed free soil worked to a fine tilth	4 - 6 L/ha	Apply prior to final soil preparation. The preferred implements for final soil preparation would be either a multiple tyne cultivator or rotary harrows. Use the 6 L rate for heavy black clay soils only (as found in the Derwent and Coal River Valleys, Tasmania). CAVALIER® will not provide consistent control of Chickweed.
Pyrethrum – greater than 4 leaves	Blackberry Nightshade (<i>Solanum nigrum</i>), Fumitory (<i>Fumaria</i> spp.), Hogweed (<i>Polygonum aviculare</i>), Sorrel (<i>Rumex acetosella</i>), Volunteer Potato (<i>Solanum tuberosum</i>), Cleavers (<i>Galium aparine</i>), Field Bindweed (<i>Convolvulus arvensis</i>), Groundsel (<i>Senecio vulgaris</i>)	Emergent weeds present	100 - 150 mL/ha	Apply when pyrethrum growth stage is greater than 4 true leaf.
Pyrethrum – established crops greater than 1 year old	As above plus Sowthistle (<i>Sonchus</i> spp.), Spear Thistle (<i>Cirsium vulgare</i>)		200 mL - 4 L/ha	
Prior to Sowing - Winter Cereals, Cotton	Annual Weeds Refer to Weeds Controlled list and Wipe-Out® 360 or Wipe-Out® labels	Actively growing emergent weeds	75 mL/ha plus Wipe-Out® or Wipe-Out® 360 at recommended label rates	Addition of CAVALIER® to Wipe-Out® or Wipe-Out® 360 will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity (compared to results achieved with Wipe-Out® or Wipe-Out® 360 applied alone), and give control of Annual Nettles (<i>Urtica</i> spp.) and Marshmallow (<i>Malva parviflora</i>). For rates of glyphosate, refer to the appropriate label.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS

GRAZING: DO NOT GRAZE TREATED WEEDS.

HARVEST: NOT REQUIRED WHEN USED AS DIRECTED.

WEEDS CONTROLLED BY CAVALIER® HERBICIDE

INCLUDE THE FOLLOWING:

Amsinckia (*Amsinckia* spp.)
Barley Grass (*Hordeum leporinum*)
Barnyard Grass (*Echinochloa* spp.)
Blackberry Nightshade (*Solanum nigrum*)
Bladder Ketmia (*Hibiscus trionum*)
Burrgrass (*Cenchrus australis*)
Caltrop (*Tribulus terrestris*)
Capeweed (*Arctotheca calendula*)
Chickweed (*Stellaria media*)
Crowsfoot Grass (*Eleusine indica*)
Deadnettle (*Lamium amplexicaule*)
Fat Hen (*Chenopodium album*)
Giant Pigweed (*Triantherna portulacastrum*)
Liverseed Grass (*Urochloa panicoides*)
Lovegrass (*Eragrostis* spp.)
Pigeon Grass (*Setaria* spp.)
Pigweed (*Portulaca oleracea*)
Prickly Lettuce (*Lactuca* spp.)
Red Natal Grass (*Rhynchelytrum repens*)
Redshank (*Amaranthus cruentus*)
Ryegrass (*Lolium* spp.)
Sesbania Pea (*Sesbania cannabina*)
Shepherd's Purse (*Capsella bursa-pastoris*)
Smallflower Mallow (*Malva parviflora*)
Soursob (*Oxalis pes-caprae*)
Sowthistle (*Sonchus oleraceus*)
Starburr (*Acanthospermum hispidum*)
Stinkgrass (*Eragrostis cilianensis*)
Summer Grass (*Digitaria* spp.)
Thornapple (*Datura stramonium*)
White Eye (*Richardia brasiliensis*)
Wild Mustard (*Sisymbrium* spp.)
Wild Radish (*Raphanus raphanistrum*)
Wireweed (*Polygonum aviculare*)

GENERAL INSTRUCTIONS

CAVALIER® Herbicide is a selective herbicide for the control of certain annual grass and broadleaf weeds in dormant apples, grapes, peaches, pears, plums, apricots, almonds, macadamia, duboisia, tobacco, coffee, pyrethrum, winter cereals, tropical/subtropical crops, brassicas, onions, *Eucalyptus* and *Pinus* spp. and other forestry trees, applied either to weed free soil or to seedling weeds up to the 4 to 6 true-leaf stage.

CAVALIER® applied to well prepared, weed free soil should not be disturbed or incorporated after application. Weed control for up to 6 months can be expected with high label rates, but spot treatment of escape weeds or perennial grasses may be necessary with knockdown herbicides. When CAVALIER® is applied to seedling weeds at the 4 to 6 leaf stage, a non-ionic surfactant such as Wetspray® 1000 should be added at recommended rates to improve activity, where suggested in the CRITICAL COMMENTS.

CAVALIER® can also be used at low rates as a "spike" to improve the weed spectrum of knockdown herbicides such as glyphosate and paraquat or diquat/paraquat mixtures.

RESISTANT WEEDS WARNING

CAVALIER® Herbicide is a member of the Diphenyl ether group of herbicides. The mode of action of CAVALIER® is to inhibit protoporphyrinogen oxidase. For weed resistance management CAVALIER® is a Group G Herbicide. Some naturally occurring weed biotypes resistant to CAVALIER® and other Group G herbicides may exist through normal genetic variability in any weed population. The resistant weeds can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by CAVALIER® or other Group G herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Adama Australia accepts no liability for any losses that may result from the failure of CAVALIER® to control resistant weeds.

GROUP **G** HERBICIDE

SEEDLINGS (LESS THAN 4 TRUE LEAF)

WEEDS CONTROLLED BY CAVALIER® HERBICIDE

INCLUDE THE FOLLOWING:

Amsinckia (*Amsinckia* spp.)
Bellvine (*Ipomoea* spp.)
Capeweed (*Arctotheca calendula*)
Common Cotula (*Cotula australis*)
Crowsfoot Grass (*Eleusine indica*)
Deadnettle (*Lamium amplexicaule*)
Groundsel (*Senecio vulgaris*)
Liverseed Grass (*Urochloa panicoides*)
Pigweed (*Portulaca oleracea*)
Potato Weed (*Galinsoga parviflora*)
Redshank (*Amaranthus cruentus*)
Shepherd's Purse (*Capsella bursa-pastoris*)
Sowthistle (*Sonchus oleraceus*)
Stinging Nettle (*Urtica urens*)
Stinkgrass (*Eragrostis cilianensis*)
Wild Radish (*Raphanus raphanistrum*)

TIMING

Residual Control

For optimum residual weed control, CAVALIER® should be applied to the soil surface prior to weed emergence after all other agricultural operations, such as mechanical cultivation and re-shaping of irrigation furrows, have been completed. The area should be left undisturbed during the time period for which weed control is desired.

When applied to seedling weeds, they should be young and actively growing.

Weed control for up to 6 months is expected with high label rates, but spot treatment, with knockdown herbicides, for escape weeds and perennial grasses may be necessary.

Post-emergence weed control

For optimum post-emergence weed control, CAVALIER® + glyphosate tank mixes should be applied to small seedling weeds up to 4 to 6 true-leaf stage. Use of a non-ionic surfactant such as Wetspray® 1000 is recommended to improve activity. Weeds should be actively growing and free from environmental stress (drought, cold, insect attack, nutrient deficiency). Cultivation after treatment and prior to or at planting is beneficial for final fallow weed control.

MIXING

When using CAVALIER® alone, fill the spray tank at least one-third full with clean water, add the recommended amount of CAVALIER® while the pump and agitator are running, then complete filling the spray tank. A non-ionic surfactant, if required by label directions, should be added near the end of the filling process to minimise foaming.

When tank mixing with Cameo® 500, add to one-third filled tank and then add the CAVALIER® during the filling operation. Maintain agitation during mixing and until spraying is completed.

CAVALIER® + Glyphosate Tankmixes

Ensure thorough agitation when mixing, filling the spray tank and during application, irrespective of glyphosate formulations used. Follow recommended order and directions for tank mixing CAVALIER® and glyphosate. Use all spray mix immediately after preparation. DO NOT tank mix CAVALIER® and glyphosate without agitation. DO NOT allow mix to stand unagitated. DO NOT store CAVALIER® and glyphosate tank mixes. DO NOT mix other agrochemical products with CAVALIER® and Wipe-Out® tank mixes.

APPLICATION

Spray equipment should be calibrated carefully before use. CAVALIER® should be applied uniformly as a directed treatment to the base of tree and vine crops using flat fan or off-centre nozzles. Complete coverage of seedling weeds is required for maximum knockdown effect. Ensure both weed foliage and the soil surface are sprayed.

Apply using a vehicle mounted boom, calibrate to deliver a droplet spectrum classification defined as medium by the ASAE Standard S572, using water volume of 250 to 500 litres per hectare for bare soil or 100 to 1350 litres per hectare when seedling weeds (4 - 6 leaf stage) are treated. Use the higher volumes where weed density is high. Tank mixtures of 75 mL/ha of CAVALIER® with glyphosate herbicides should be applied in 30 - 200 litres spray volume per hectare. For maximum residual control, CAVALIER® should NOT be incorporated or disturbed after application.

CROP SAFETY

CAVALIER® may be applied as directed around dormant peach, plum, apricot, almond, apple and pear trees and grape vines of all ages when applied at rates of less than 1.0 L/ha. When applied at 3.0 L/ha and above, the trees and grape vines should be at least 3 years of age.

DO NOT apply CAVALIER® once bud swell has occurred when using rates greater than 1.0 L/ha.

Duboisia seedlings and mature plants will tolerate "over-the-top" applications of CAVALIER®. When using the 75 mL/ha rate, CAVALIER® may be applied as directed prior to sowing winter cereals.

SAFE SOWING INTERVALS

CAVALIER® at up to 75 mL/ha may be safely applied 1 day prior to planting broadacre crops such as cereals (wheat, barley, oats, triticale), canola, pulses (lupins, faba beans, field peas) and undersown pastures (lucerne, clover, medics, ryegrass, phalaris, cocksfoot) and 7 days minimum prior to planting cotton or soybeans, provided minimum tillage planting equipment is used with minimal soil disturbance. Inversion, mixing of surface soil with that in the planting zone or covering seed with treated soil may result in injury to emerging crop seedlings.

Avoid covering the seed with soil treated with CAVALIER® during the planting operation to minimise crop injury.

CAVALIER® has residual soil activity, especially when applied at rates greater than 75 mL/ha and on small-seeded horticultural crops. Plant-back intervals in the following table for horticultural crops must be observed if more than 75 mL/ha CAVALIER® has been applied.

Safe Sowing Intervals for Horticultural Crops (Days)

CAVALIER®	Up to 75 mL/ha	1 L/ha
Beans	7	60
Brassicas	14	90
Capsicums		
Carrots		
Cucurbits		60
Lettuce		90
Onions	21	180
Potatoes	7	60
Tomatoes	14	

COMPATIBILITY

CAVALIER® is compatible with diquat+paraquat, glyphosate, Wipe-Out® 360, Wipe-Out® 450, Wipe-Out®, Cameo® 500 (oryzalin), Reglone*, Spraytop®, Touchdown*, Spray.Seed* and Exonerate®.

RE-ENTRY PERIOD

DO NOT allow entry into treated areas until the spray has dried. If prior entry is necessary, wear chemical resistant footwear.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

PROTECTION OF LIVESTOCK

Use with care when applying in areas frequented by stock.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

This product is highly toxic to wildlife and fish.

DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Use care when applying in areas frequented by wildlife or adjacent to any body of water.

DO NOT apply when weather conditions favour drift from target areas.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area.

DO NOT store for prolonged periods in direct sunlight. Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or a designated collection point. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

For refillable containers, empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Will damage eyes and irritate the skin. Avoid contact with eyes and skin. When opening the container and preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length butyl rubber gloves and goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone 13 11 26. If swallowed, DO NOT induce vomiting. Give a glass of water. If in eyes wash out immediately with water.

SDS

Additional information is listed in the safety data sheet (SDS). A safety data sheet for CAVALIER® Herbicide is available from adama.com or call Customer Service on 1800 423 262.

CONDITIONS OF SALE: The use of CAVALIER® Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Adama Australia accepts no responsibility for any consequence whatsoever from the use of this product.

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