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KATANA contains 250 g/kg flazasulfuron (MOA Group 2)

A new way to slash weeds

Features

- New mode of action (Group 2) for grapevines, citrus and olives
- Excellent and reliable residual weed control
- Active on hard-to-kill weeds
- Long and flexible application window
- Low use rates
- Compatible with knockdown herbicides

Background

KATANA[®] 250 WG provides a new herbicide mode of action in grapevines, citrus (orange, mandarin and lemon only) and olives for pre- and early post-emergent control of a range of broadleaf and grass weeds.

Mode of Action

Flazasulfuron, the active ingredient in KATANA, belongs to the family of the sulfonylurea (Group 2) herbicides. It is rapidly absorbed through leaves and roots of the weeds and is then translocated through the xylem and the phloem towards the growing points. Flazasulfuron interferes with acetolactate synthase (ALS), a key enzyme for branched chain amino acids synthesis, resulting in cessation of cell division and plant growth.

Weed growth stops within hours after application, however symptom progression from discoloration or chlorosis to necrosis usually requires 2–4 weeks. Speed of control is generally a function of temperature, with faster action during warmer weather and on actively growing weeds.

Application Method

Apply with a directed sprayer to weeds and/or soil along the tree or vine row in a minimum spray volume of 200 L/ha with nozzles delivering a coarse droplet size.

Application Timing

KATANA has both pre- and post-emergent activity on weeds, and is best applied in late winter/early spring as a pre-emergent herbicide prior to the main spring weed germination period in grapevines, citrus and olives. When applied as a post-emergent herbicide, it is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium to achieve greater weed control.

When applying KATANA as a pre-emergent residual herbicide, it is important to have adequate soil moisture to activate the herbicide and to promote the germination of weeds. In the 2-week period following application, ensure the site receives >10 mm of rainfall. If rain fails to occur, irrigate with an equivalent amount of water. Lack of soil moisture will reduce the efficacy of KATANA.

Withholding Period

The harvest withholding periods for grapes is 11 weeks, olives 4 weeks and citrus 1 day after application. For all crops, do not graze or cut for stockfeed.

For grapes destined for export wine, consult the AWRI or AgNova Technologies for the latest information on withholding periods before using KATANA.

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Crop Safety

KATANA has been tested extensively, both in Australia and internationally, for crop safety on different varieties of grapevines, citrus and olives, across a range of soil types and seasons. When applying KATANA, the key factors to ensure the safety of the target crop are:

- Do not apply KATANA to stressed or unhealthy trees or vines suffering from root diseases or pest infestations
- Do not apply KATANA to plants that are under environmental stress due to drought, waterlogging, or low soil fertility
- Do not apply KATANA to olive trees or grapevines less than 3 years old, or citrus trees that are less than 5 years old
- Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury
- Do not apply KATANA to trees or vines which have previously experienced damage from other residual herbicide applications
- Do not apply KATANA to grapevines or olives grown on stony soils
- Do not apply KATANA to citrus trees grown on stony soils, or on sandy soils with a cation exchange capacity (CEC) of less than 5 meq/100 g. Soils with a low cation exchange capacity have reduced ability to bind herbicides, hence making them more available in the soil which can lead to crop damage
- Apply with a directed sprayer delivering at least coarse droplets to seedling weeds and/or soil along the tree/vine row
- Do not apply KATANA from the beginning of spring bud burst until the end of summer bud burst in citrus, as root flush during this period may be susceptible to crop damage

Resistance Management

Sulfonylurea herbicides, including KATANA, are classified by CropLife Australia as high risk of developing resistance if they are not used correctly as part of an integrated weed management program.

For resistance management, KATANA is limited to one application per year and must be used in conjunction with a range of other weed management strategies, including other herbicide modes of action, cultural and mechanical management techniques. It is also important to check for any weeds that are not controlled following application of KATANA and ensure they are controlled by another means prior to any seed set.

Compatibility

When applying KATANA to seedling weeds, it is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium to provide a broader spectrum of weed control. Prior to application, review the withholding period of any tank-mix partners and comply accordingly.

As formulations of other products can differ and water quality will vary, growers should conduct their own test for compatibility prior to mixing KATANA in commercial quantities. Tank mixtures with KATANA should be sprayed out as soon as possible. Avoid leaving tank-mixed chemicals overnight.

Mixing

Fill spray tank with a minimum 50% of the required water and agitate when adding the required amount of KATANA. Add surfactant when required for post-emergent applications. Finally, add the rest of the required water volume. Keep the spray solution agitated until all product is applied, and never prepare more spray solution than required.

Ensure spray water is from a clean source with a pH of >6.5. If water requires buffering, add a buffering agent prior to the addition of KATANA.



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Directions For Use

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
VINEYARDS, OLIVE GROVES (>3 years old)	PRE-EMERGENT Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha	<p>Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury. Apply with a directed sprayer along vine or tree row. Apply to bare moist soil free of trash and before the main weed germination period. Excessive weed cover may prevent a uniform distribution of KATANA reaching the soil and consequently reduced residual weed control.</p> <p>Use higher rate where longer residual control of weeds is required, or if there is a low infestation of seedling weeds.</p> <p>Soil moisture is required for the activation of KATANA. Apply KATANA prior to rainfall or irrigation of 10 mm. Dry soil conditions following the application of KATANA may result in reduced weed control.</p> <p>DO NOT apply KATANA on stony soils.</p> <p>DO NOT apply in Tasmania where inter-row areas consist of bare soil.</p> <p>DO NOT apply in olive groves if fruit on the ground is still to be harvested.</p>
	POST-EMERGENT Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha + non-ionic surfactant *	<p>Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury. Apply with a directed sprayer along vine or tree row.</p> <p>Application to be made to seedling weeds with 2–6 leaves or before tillering in grasses.</p> <p>It is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium.</p> <p>Ensure application is made to stress free weeds within a Delta T range of 2–8.</p> <p>If weed coverage is not too dense, this application will also assist in residual weed control.</p> <p>DO NOT apply KATANA on stony soils.</p> <p>DO NOT apply in Tasmania where inter-row areas consist of bare soil.</p> <p>DO NOT apply in olive groves if fruit on the ground is still to be harvested.</p>
CITRUS ORCHARDS (oranges, lemons & mandarins only) (>5 years old)	PRE-EMERGENT Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha	<p>Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury. Apply with a directed sprayer along tree row. Apply to bare moist soil free of trash and before the main weed germination period. Excessive weed cover may prevent a uniform distribution of KATANA reaching the soil and consequently reduced residual weed control.</p> <p>Use higher rate where longer residual control of weeds is required, or if there is a low infestation of seedling weeds.</p> <p>Soil moisture is required for the activation of KATANA. Apply KATANA prior to rainfall or irrigation of 10 mm. Dry soil conditions following the application of KATANA may result in reduced weed control.</p> <p>DO NOT apply KATANA from the beginning of Spring bud burst until the end of Summer bud burst.</p> <p>DO NOT apply KATANA on stony soils, or on sandy soils with a cation exchange capacity (CEC) of less than 5 meq/100 g.</p>
	POST-EMERGENT Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha + non-ionic surfactant *	<p>Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury. Apply with a directed sprayer along tree row. Application to be made to seedling weeds with 2–6 leaves or before tillering in grasses.</p> <p>It is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium.</p> <p>Ensure application is made to stress free weeds within a Delta T range of 2–8.</p> <p>If weed coverage is not too dense, this application will also assist in residual weed control.</p> <p>DO NOT apply KATANA from the beginning of Spring bud burst until the end of Summer bud burst.</p> <p>DO NOT apply KATANA on stony soils, or on sandy soils with a cation exchange capacity (CEC) of less than 5 meq/100 g.</p>

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Directions For Use

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
NON-CROP Under electric power transmission lines & towers in stock exclusion zones on public land	PRE-EMERGENT Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha	Avoid direct or indirect spray contact with desirable vegetation as it may cause localised plant injury. Apply to bare moist soil free of trash and before the main weed germination period. Excessive weed cover may prevent a uniform distribution of KATANA reaching the soil and consequently reduced residual weed control. Use higher rate where longer residual control of weeds is required, or if there is a low infestation of seedling weeds. Soil moisture is required for the activation of KATANA. Apply KATANA prior to rainfall of 10 mm. Dry soil conditions following the application of KATANA may result in reduced weed control.
	POST-EMERGENT Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha + non-ionic surfactant *	Avoid direct or indirect spray contact with desirable vegetation as it may cause localised plant injury. Apply to seedling weeds with 2–6 leaves or before tillering in grasses. It is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium. Ensure application is made to stress free weeds within a Delta T range of 2–8. If weed coverage is not too dense, this application will also assist in residual weed control.

* Use with a registered non-ionic surfactant at its recommended use rate for mixing with herbicides.

Weeds Controlled

TIMING	WEED TYPE	WEED NAMES
PRE-EMERGENT	Broad Leaf Weeds	Dandelion (<i>Taraxacum officinale</i>) Fat hen (<i>Chenopodium album</i>) Marshmallow (<i>Malva parviflora</i> & <i>Althaea officinalis</i>) Soursob (<i>Oxalis pes-caprae</i>) Sowthistle (<i>Sonchus oleraceus</i>) Staggerweed (<i>Stachys arvensis</i>) Stinging nettle (<i>Urtica dioica</i>) Subterranean clover (<i>Trifolium subterraneum</i>) Turnip weed (<i>Rapistrum rugosum</i>) White clover (<i>Trifolium repens</i>) Wild radish (<i>Raphanus raphanistrum</i>) Wireweed (<i>Polygonum aviculare</i>)
	Grass Weeds	Barley grass (<i>Hordeum</i> spp.) Awnless Barnyard grass (<i>Echinochloa crus-galli</i>) Common paspalum (<i>Paspalum dilatatum</i>) Couch grass (<i>Cynodon dactylon</i>) Perennial ryegrass (<i>Lolium perenne</i>) Toad rush (<i>Juncus bufonius</i>) Winter grass (<i>Poa annua</i>)
POST EMERGENT	Broad Leaf Weeds	Capeweed (<i>Arctotheca calendula</i>) Dandelion (<i>Taraxacum officinale</i>) Flatweed (<i>Hypochoeris radicata</i>) Fleabane (<i>Conzys</i> sp.) Marshmallow (<i>Malva</i> spp.) Pimpernel (<i>Anagallis arvensis</i>) Prickly lettuce (<i>Lactuca serriola</i>) Salvation Jane (<i>Echium plantagineum</i>) Shepherd's purse (<i>Capsella bursa-pastoris</i>) Soursob (<i>Oxalis pes-caprae</i>) Storksbill (<i>Erodium cicutarium</i>) Subterranean clover (<i>Trifolium subterraneum</i>) White clover (<i>Trifolium repens</i>) Wild radish (<i>Raphanus raphanistrum</i>) Willow herb (<i>Epilobium</i> spp.)
	Grass Weeds	Annual ryegrass (<i>Lolium rigidum</i>) Barley grass (<i>Hordeum</i> sp.) Awnless Barnyard grass (<i>Echinochloa crus-galli</i>) Great brome grass (<i>Bromus diandrus</i>) Perennial ryegrass (<i>Lolium perenne</i>) Silver grass (<i>Vulpia</i> sp.) Toad rush (<i>Juncus bufonius</i>)

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

The information provided herein may include extracts from the product label and does not constitute the complete directions for use. READ THE PRODUCT LABEL THOROUGHLY BEFORE OPENING OR USING KATANA

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