

CAUTION

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

BUTAMINE

500 HERBICIDE

ACTIVE CONSTITUENT:

500 g/L 2,4-DB (present as the dimethylamine salt)

GROUP  HERBICIDE

For the control of broadleaf weeds in seedling and established lucerne, medic and clover pastures, peanuts and cereal crops undersown with lucerne, medic or clover as specified in the Directions for Use table.

IMPORTANT: READ THIS LEAFLET BEFORE USING THIS PRODUCT

APVMA APPROVAL NO: 68960/59502



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DIRECTIONS FOR USE:

RESTRAINTS: DO NOT apply if rain is expected within 4 hours.

DO NOT apply to crop or weeds under stress (not actively growing) due to periods of extreme cold or heat, moisture stress (water logged or drought affected), poor nutrition or previous herbicide treatments as increased levels of crop effect and/or reduced levels of weed control may result.

DO NOT use with hard water (>500 ppm) or water containing suspended matter.

Situation & Crop	Weeds Controlled	State	Rate L/ha	Critical Comments
Lucerne, - seedling and established	Amaranthus <i>spp</i> Burrs - Bathurst Xanthium <i>spinosum</i> - Californian Xanthium <i>orientale</i> - Noogoora Xanthium <i>strumarium</i> Capeweed <i>Arctotheca calandula</i> Charlock <i>Sinapis arvensis</i> Dock (seedlings) Rumex <i>spp</i> Evening primrose <i>Oenothera stricta</i>	All States	1 - 3.2 L	Spray seedling weeds at the 2-6 leaf stage when seedling lucerne has between 1-8 trifoliolate leaves. Use lower end of rate range only for 2-4 leaf weeds under good growing conditions or for spray grazing. Small weeds which have been growing slowly under stress and are therefore physiologically older may not be well controlled. To avoid leaf distortion cut or graze established lucerne before spraying. Unless "Spray-Grazing" DO NOT cut, mow or graze for 4 weeks after application to maximise weed control.

Situation & Crop	Weeds Controlled	State	Rate L/ha	Critical Comments
<p>Lucerne, - seedling and established</p>	<p>Fat hen <i>Chenopodium album</i> <i>Fumitory</i> spp <i>Fumaria</i> spp Marshmallow <i>Malva parviflora</i> Mexican poppy <i>Argemone</i> spp Mustards <i>Sisymbrium</i> spp Paterson's curse (Salvation Jane) <i>Echium plantagineum</i> Plantains (Flat weeds) <i>Plantago</i> spp Prickly lettuce <i>Lactuca serriola</i> Shepherd's purse <i>Capsella bursa-pastoris</i> Sowthistle <i>Sonchus oleraceus</i> Spiny emex (Doublegee) <i>Emex australis</i> Stinging nettle <i>Urtica urens</i></p>	<p>All States</p>	<p>1 - 3.2 L</p>	<p>Spray seedling weeds at the 2-6 leaf stage when seedling lucerne has between 1-8 trifoliate leaves. Use lower end of rate range only for 2-4 leaf weeds under good growing conditions or for spray grazing. Small weeds which have been growing slowly under stress and are therefore physiologically older may not be well controlled. To avoid leaf distortion cut or graze established lucerne before spraying. Unless "Spray-Grazing" DO NOT cut, mow or graze for 4 weeks after application to maximise weed control.</p>

Situation & Crop	Weeds Controlled	State	Rate L/ha	Critical Comments
<p>Lucerne, seedling and established</p>	<p>Thistles - Safron <i>Carthamus lanatus</i> - Slender <i>Carduus pycnocephalus</i> - Soldier <i>Picnoman acarna</i> - Spear <i>Cirsium vulgare</i> - Variegated <i>Silybum marianum</i></p> <p>Turnip weed <i>Rapistrum rugosum</i> Wild (Mediterranean) turnip <i>Brassica tournefortii</i> Wireweed <i>Polygonum aviculare</i></p>	<p>All States</p>	<p>1 - 3.2 L</p>	<p>Spray seedling weeds at the 2-6 leaf stage when seedling lucerne has between 1-8 trifoliolate leaves. Use lower end of rate range only for 2-4 leaf weeds under good growing conditions or for spray grazing. Small weeds which have been growing slowly under stress and are therefore physiologically older may not be well controlled. To avoid leaf distortion cut or graze established lucerne before spraying. Unless "Spray-Grazing" DO NOT cut, mow or graze for 4 weeks after application to maximise weed control.</p>

Situation & Crop	Weeds Controlled	State	Rate L/ha	Critical Comments
<p>Clover and Medic Pastures, - seedling and established</p> <p>Legumes showing acceptable tolerance</p> <p>Clover</p> <ul style="list-style-type: none"> - Arrow leaf cvs - Cefalu, Zulu II - Balansa cvs - Bolta, Frontier, Paradana - Berseem cv - Elite II - Persian cvs - Nitro, Lazer, Leeton, Prolific, Shaftal - Rose cv - Hykon - Red - Sub cvs - Coolamon, Dalkeith, Gosse, Goulburn, 	<p>Refer to Weeds Controlled in Lucerne</p>	<p>All States</p>	<p>1 - 3.2 L</p>	<p>Spray weeds at the 2-6 leaf stage when seedling medic and clover has between 1-8 trifoliolate leaves. Use lower end of rate range only for 2-4 leaf weeds under good growing conditions or for spray grazing.</p> <p>Medic and Clover safety</p> <p>Butamine may reduce initial vigour of most pasture legumes. Depending on inherent tolerance this may not result in reduced spring growth or seed yield. Tolerance can vary between seasons, legume type and cultivars. Because of the continuing introduction of new pasture legumes and cultivars caution is advised before applying Butamine to any new legume. Caution is especially advised if a treated crop is intended for seed production. Application beyond the 8 trifoliolate leaf stage can increase the chance of reduced vigour and production. The use of higher rates can also increase vigour reduction. DO NOT exceed 3L/ha when spraying Robinson or Sava snail Medic. Do not exceed 2.5L/ha when spraying Sapu or Paraponto gama medic. DO NOT use on Berseem clover or on Red clover when it is being harvested for seed. Growth of Red clover may be retarded. Butamine is unsafe to use on Biserrula, Gland clover, Popany vetch and Orion, Santiago & Serena medics due to the risk of excessive growth and seed. Butamine is unsafe to use on chicory and plantain.</p>

Situation & Crop	Weeds Controlled	State	Rate L/ha	Critical Comments
<p>Legumes showing acceptable tolerance</p> <p>Clover</p> <ul style="list-style-type: none"> - Sub cvs Junee, Nungarin, Riverina, Seaton Park, Trikkala, Urana - White cv <p>NuSiral etc</p> <p>Medic</p> <ul style="list-style-type: none"> - Barrel cvs Caliph, Parabinga - Burr (polymorpha) cv Circle valley - Gama cvs Paraponto, Sapo - Murex cv Zodiac - Snail cvs Robinson, Sava <p>Serradella</p> <ul style="list-style-type: none"> - French cv Erica 	<p>Refer to Weeds Controlled in Lucerne</p>	<p>All States</p>	<p>1 - 3.2 L</p>	<p>Spray weeds at the 2-6 leaf stage when seedling medic and clover has between 1-8 trifoliolate leaves. Use lower end of rate range only for 2-4 leaf weeds under good growing conditions or for spray grazing.</p> <p>Medic and Clover safety</p> <p>Butamine may reduce initial vigour of most pasture legumes. Depending on inherent tolerance this may not result in reduced spring growth or seed yield. Tolerance can vary between seasons, legume type and cultivars. Because of the continuing introduction of new pasture legumes and cultivars caution is advised before applying Butamine to any new legume. Caution is especially advised if a treated crop is intended for seed production. Application beyond the 8 trifoliolate leaf stage can increase the chance of reduced vigour and production. The use of higher rates can also increase vigour reduction. DO NOT exceed 3L/ha when spraying Robinson or Sava snail Medic. Do not exceed 2.5L/ha when spraying Sapo or Paraponto gama medic. DO NOT use on Berseem clover or on Red clover when it is being harvested for seed. Growth of Red clover may be retarded. Butamine is unsafe to use on Biserrula, Gland clover, Popany vetch and Orion, Santiago & Serena medics due to the risk of excessive growth and seed. Butamine is unsafe to use on chicory and plantain.</p>

Situation & Crop	Weeds Controlled	State	Rate L/ha	Critical Comments
Sown Pasture containing Clover or Medics	Refer to Weeds Controlled in Lucerne	All States	1 - 3.2 L	Apply when clovers or medics are at the 1-8 trifoliolate leaf stage. Grass seedlings should have 3 or more leaves. Medic and Clover safety refer to the Critical Comments above.
Sub. clover pasture	Doublegee <i>Emex australis</i>	WA only	1.2 L	Spray when Doublegee has less than 14 leaves; best results are obtained when weed has 6-8 leaves. Clover should have 2-8 trifoliolate leaves. DO NOT apply to pastures when one or more false breaks in the season occur, as uneven germination will result. Doublegee which emerge after spraying will not be controlled. Medic and Clover safety refer to the Critical Comments above
Peanuts - Runner types - Virginia types - Spanish types	Ipomoea spp including - Bellvine <i>Ipomoea plebeia</i> - Morning glory <i>Ipomoea purpurea</i> - Red convolvulus <i>Ipomoea hederifolia</i> Spiny emex <i>Emex australis</i> Thornapples <i>Datura</i> spp	Qld only	1.3-1.7L	Apply between 1 and 12 weeks after seedlings have emerged. Use the lower end of the rate range for control of Ipomoea spp weeds only.

Situation & Crop	Weeds Controlled	State	Rate L/ha	Critical Comments
Wheat, Barley, Oats, Triticale & Cereal Rye undersown with lucerne, medic or clover	Refer to Weeds Controlled in Lucerne	All States	2.1 to 3.2 L	Spray weeds at the 2-6 leaf stage when seedling lucerne, medic and clover has between 1-8 trifoliolate leaves. Use lower rate for 2-4 leaf weeds under good growing conditions. Apply to cereals after the "double ridge" stage which is normally through tillering after the main shoot has five leaves until booting (Z15- 33). The time to "double ridge" stage will vary depending on growing conditions and variety. Medic and Clover safety refer to the Critical Comments above.
Spot spraying (All Situations)			200-400 mL/ 100L water	Use lower rate for easy to kill weeds eg Fat hen or Variegated thistle. For harder to kill weeds eg Capeweed, Marshmallow, use higher rate. Where difficult to wet, hairy or very thick weed populations are present, add Wetter1000 to the spray mixture at a rate of 65 mL / 100 L water.

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

WITHHOLDING PERIOD:

DO NOT GRAZE OR CUT FOR STOCK FEED FOR 7 DAYS AFTER APPLICATION

GENERAL INSTRUCTIONS

Before opening, carefully read Directions for Use, Precautionary Statements, Safety Directions and First Aid Instructions.

MIXING

Mix with the required amount of water in the spray tank or mixing vessel. Apply using a low-volume boom spray fitted with fan jets, or by aircraft. Use mains or rain water for mixing. If not available, water with a hardness of less than 500 ppm (expressed as calcium carbonate equivalent) can be used but is not preferred. DO NOT tank mix Ammonium Sulphate with Butamine in hard water for this may cause nozzle blockages.

APPLICATION

Apply using boom or spot spray equipment. Application must be uniform. Nozzle type, output, speed and pressure should be adjusted to deliver a Coarse spray quality (ASAE S 527) in 110-220 litres per hectare by ground application and a minimum of 40 litres of water per hectare by aerial application.

COMPATIBILITY

Butamine is compatible with Broadstrike but not for control of Paterson's curse or doublegee – refer to Broadstrike label. The effectiveness of Dimethoate, Metasystox, Le Mat and Imidan may be reduced by alkaline hydrolysis if

tank mixed with this product. For these situations the addition of LI 700 or Acidowet is recommended which should be added to the tank first. The addition of Bonza Spray Adjuvant can improve control of weeds under some conditions, for example moisture stress but may also increase early effects on legumes. When tank mixing add the required amount of compatible product (and surfactant if recommended) when the spray tank is nearly full and while continuously agitating. If left overnight, agitate thoroughly before spraying.

RESISTANT WEEDS WARNING



Butamine 500 Herbicide is a member of the phenoxy group of herbicides. This product has disruptors of cell growth mode of action. For weed resistance management, Butamine 500 Herbicide is a Group I herbicide.

Some naturally-occurring weed biotypes resistant to Butamine 500 Herbicide and other Group I herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These weeds will not be controlled by Butamine 500 Herbicide or other Group I herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Grow Choice Pty Ltd accepts no liability for any losses that may result from the failure of Butamine 500 Herbicide to control resistant weeds.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Drift Warning: DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray drift onto nearby susceptible plants, adjacent crops, crop lands or pastures. Avoid spray drift and vapour movement onto susceptible crops such as cotton, tobacco, tomatoes, vines, lupins, fruit trees and ornamentals.

PROTECTION OF LIVESTOCK

SPRAY-GRAZING WARNING: Some pasture weeds can be controlled by Spray-Grazing a combination of herbicide treatment followed by heavy grazing 7-10 days later. Sprayed weeds become more palatable to stock and a higher intake of some weed species after spraying can cause stock deaths and other problems. Increased quantities of poisonous plants may be eaten by stock when the Spray-Grazing technique is being used. Take care if pastures are dominated by Caltrop, Capeweed, Cape Tulip, Paterson's curse (Salvation Jane) or Variegated Thistle. With Paterson's Curse preferably graze stock soon destined for slaughter and avoid extended periods of grazing. Avoid grazing with young or breeding stock. DO NOT graze horses or pigs in Paterson's curse (Salvation Jane) infested pasture.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with this product or used containers.

STORAGE AND DISPOSAL

Store in the closed original container, in a cool well ventilated area. DO NOT store for prolonged periods in direct sunlight.

This container can be recycled if it is clean, dry, free of visible residues and has the *drumMUSTER* logo visible. Triple or preferably pressure rinse containers before disposal. Dispose of rinsate by adding it to the spray tank. DO NOT dispose of undiluted chemical on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any *drumMUSTER* collection point or similar container management program site. The cap should not be replaced but may be taken separately.

If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. Do not burn empty containers or product.

SAFETY DIRECTIONS

Poisonous if swallowed. May irritate the eyes and skin. This product is alkaline. Avoid contact with the eyes and skin. DO NOT inhale spray mist. When preparing spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and washable hat. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms, and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

FIRST AID

If poisoning occurs, contact a Doctor or Poisons Information Centre (Phone Australia 13 11 26)

MATERIAL SAFETY DATA SHEET

For more information refer to the Material Safety Data Sheet (MSDS) which can be obtained from the supplier.

NOTICE TO BUYER

Grow Choice Pty. Ltd. will not be held liable for any loss, injury or damage, indirect or consequential, arising from the sale, supply, use or application of this product. The product is not to be used for any purpose or in any way contrary to label instructions.

