

POISON

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

CHOICE HALOFOP™ 520 HERBICIDE

ACTIVE CONSTITUENT: 520 g/L HALOXYFOP-P
(present as the methyl ester)

GROUP A HERBICIDE

For the post-emergent control of a wide range of annual and perennial grass weeds in grain legume and oilseed crops, lucerne, medic and clover pasture and seed crops, forestry, bananas, citrus, grapes, pineapples, pome and stone fruit, pyrethrum, tropical fruit and nut crops as specified in the Directions for Use.

APVMA Approval No: 62480/0714

THIS LEAFLET IS PART OF THE LABEL



GROW CHOICE PTY LTD

113 Fitzroy Street
Tamworth NSW 2340

ACN 069 839 961

Tel: (02) 6766 3979

DIRECTIONS FOR USE: RESTRAINTS

DO NOT apply to weeds which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (water-logged or drought affected), poor nutrition or previous herbicide treatment as reduced levels of control may result.
DO NOT spray if rain is likely to occur within one hour.

Table 1a: Winter Crops – Canola, Chickpeas, Faba beans, Field peas, Lentils, Linola, Linseed, Lupins, Lucerne, Vetch, Medic and Clover pastures or seed crops:

Weeds Controlled	Weed Growth Stage	Rate		Critical Comments
		With Penatrol ¹ Spray Oil	With a Non-ionic Wetter ²	
Annual Ryegrass	2 to 4 leaf	75 mL/ha	100 mL/ha	CANOLA, LINOLA AND LINSEED DO NOT apply after the 8 leaf stage of the crop. DO NOT apply after the commencement of stem elongation This means that application must not occur after the 8 leaf stage, or if stem elongation commences before the 8 leaf stage, application must not occur after stem elongation has commenced. DO NOT apply more than 1 application of herbicide containing haloxyfop per crop. DO NOT apply after grazing. 1 2 See GENERAL INSTRUCTIONS Spraying Oils / Wetters Section.
	Early tillering	100 mL/ha	100 mL/ha	
Barley grass Brome grass	2 to 4 leaf	50 mL/ha	75 mL/ha	DO NOT apply more than 1 application of herbicide containing haloxyfop per crop. DO NOT apply after grazing. 1 2 See GENERAL INSTRUCTIONS Spraying Oils / Wetters Section.
	Early tillering	75 mL/ha	100 mL/ha	
Paradoxa grass Volunteer cereals	Early tillering	75 mL/ha	100 mL/ha	DO NOT apply more than 1 application of herbicide containing haloxyfop per crop. DO NOT apply after grazing. 1 2 See GENERAL INSTRUCTIONS Spraying Oils / Wetters Section.

Wild oats WA, SA, Vic, Tas, Southern and Central NSW	2 to 4 leaf	37.5 mL/ha	50 mL/ha	<p><i>(Continued from above)</i></p> <p>FIELD PEAS AND CANOLA: The only oil recommended for use with Choice Halofof 520 is Penatrol Spray Oil.</p> <p>Choice Halofof 520 + Lontrel 750SG + Penatrol Spray Oil are compatible and selective to canola. This tank-mix is also compatible with atrazine and selective to triazine tolerant canola.</p> <p>LUPINS AND FIELD PEAS: Mixtures with Brodal* or Simazine may cause crop yellowing and separate applications are recommended.</p> <p>CHICKPEAS, FABA BEANS, LENTILS AND VETCH, LINOLA, LINSEED: Broadleaf herbicides should not be added to Choice Halofof 520. Apply Choice Halofof 520 and broadleaf herbicides at least a week apart.</p> <p>LUCERNE, CLOVER OR MEDIC PASTURES: If grazed or cut for hay immediately prior to treatment, delay application until all grasses have fully expanded leaves. Use 75 mL + spraying oil or 100 mL + wetter / ha. (See GENERAL INSTRUCTIONS, Spraying Oils / Wetters Section). If silver grass (<i>Vulpia</i> spp.) is present in pasture, Simazine should be tank mixed with the higher rate of Choice Halofof 520 plus a non - ionic wetter.</p>
	Early tillering	50 mL/ha	75 mL/ha	
Wild oats Northern NSW and Qld	2 to 4 leaf	50 mL/ha	75 mL/ha	
	Early tillering	75 mL/ha	100 mL/ha	

Table 1b: Winter crop growth stage application windows

Crop	Crop Growth Stage
Lucerne, Medic and Clover pastures or Seed crops	Apply from 2nd trifoliolate leaf onwards. For <i>Erodium</i> spp., spraying, apply from cotyledon crop stage onwards.
Canola, Linola, Linseed	Apply from 2 leaf to 8 leaf stage of crop growth. DO NOT apply after the commencement of stem elongation This means that application must not occur after the 8 leaf stage, or if stem elongation commences before the 8 leaf stage, application must not occur after stem elongation has commenced.
Chickpeas, Faba beans, Field peas, Lentils, Lupins, Vetch	Apply from 5cm to flowering. Apply from 2nd leaf, 2nd node or 2nd branch prior to flowering.

Table 2a: Lucerne, Medic and Clover seed crops and pastures.
See *Table 1b* for crop stages.

Weeds Controlled	Weed Growth Stage	Rate With Penatrol ¹ Spray Oil	Critical Comments
Prairie grass (<i>Bromus catharticus</i>)	Up to early tillering	100 mL/ha	<p>1 See GENERAL INSTRUCTIONS Spraying Oils / Wetters Section.</p>
Musk or ferny leaf Storksbill (<i>Erodium moschatum</i>) Common Crowsfoot or Common Storksbill (<i>Erodium cicutarium</i>)	Up to 6 leaf or 5cm diameter	50 to 75 mL/ha ³	<p>3 Use lower rate when growing conditions and crop or pasture competition are good and when weed populations are below 100 plants/m². Use the higher rate when weed populations are above 100 plants/m² or when crop or pasture competition is poor.</p> <p>NOTE: Storksbill may not be controlled if Simazine or Broadstrike are tank-mixed with Choice Halofop 520.</p>
Long or shiny leaf Storksbill (<i>E. botrys</i>)	Up to 8 leaf or 5cm diameter	75 to 100 mL/ha	<p>LUCERNE, CLOVER OR MEDIC PASTURES:</p> <p>If grazed or cut for hay immediately prior to treatment, delay application until all grasses have fully expanded leaves. Use 75 mL + spraying oil or 100 mL + wetter/ha. (See GENERAL INSTRUCTIONS, Spraying Oils / Wetters Section.) If silver grass (<i>Vulpia</i> spp.) is present in pasture, Simazine should be tank-mixed with the higher rate of Choice Halofop 520 plus a non-ionic wetter.</p>

Table 2b: Lucerne, Medic and Clover seed crops only – not to be used for stockfeed.
 See *Table 1b* for crop stages.

Weeds Controlled	Weed Growth Stage	Rate With Penatrol ¹ Spray Oil	Critical Comments
Couch grass (suppression), Rhodes grass (control)	Tillering seedlings	150 mL/ha + 150 mL/ha ⁴	<p>⁴ For best suppression of couch or control of Rhodes grass, make two (2) applications of Choice HaloTOP 520 Herbicide 2 to 4 weeks apart. Time second application to coincide with tillering stage of weeds and just after irrigation or significant rain.</p>
Couch grass (control) Rhodes grass (control)	Established stands	400 to 800 mL/ha	<p>Only treat actively growing weeds which are not moisture stressed. Use these rates for control of couch and Rhodes grass.</p>

Table 3a: Summer crops – Cotton, Cowpea, Lucerne, Mung beans, Navy beans, Navy beans, Peanuts, Soybeans, Sunflowers

Weeds Controlled	Weed Growth Stage	Rate With Penatrol ¹ Spray Oil	Critical Comments
Australian millet	2 leaf to tillering up to 15cm	150 mL/ha	<p>¹ See GENERAL INSTRUCTIONS, Spraying Oils / Wetters Section.</p> <p><u>NAVY BEANS, PEANUTS, SOYBEANS:</u></p> <p>For broadleaf weed control, Choice Halofof 520 at 150mL/ha plus wetter may be tank mixed with Blazer (except on Navy beans) or Basagran.</p> <p>Tank mixtures may cause transient leaf spotting on the crop but do not normally affect yield.</p> <p>DO NOT tank mix broadleaf herbicides with Choice Halofof 520 if grasses have begun tillering or if the grasses are under moisture stress.</p> <p>DO NOT add Penatrol Spray Oil when mixing with Blazer or Basagran.</p> <p>DO NOT use Blazer or Basagran tank-mixes on cowpea.</p>
Baryard grass	2 to 5 leaf	100mL/ha	
	Tillering up to 15cm	150mL/ha	
Crowsfoot grass Green panic Johnson grass (rhizome)	2 leaf to tillering up to 15cm	150mL/ha	
	2 to 5 leaf	100mL/ha	
	Tillering and up to 15cm	150mL/ha	
Summer grass	2 leaf to tillering up to 15cm	150mL/ha	
	2 to 4 leaf	100mL/ha	
Volunteer cereals	Tillering up to 15cm	150mL/ha	

Table 3b: Summer crop growth stage application windows

Crop	Crop Growth Stage
Lucerne	Apply from 2nd trifoliate leaf onwards.
Cowpea, Mung beans, Navy beans, Soybeans	Apply from 2nd leaf to flowering.
Peanuts	Apply from 2nd leaf to pegging.
Cotton	Apply from 2nd leaf to before the onset of flowering.
Sunflowers	Apply from 2nd leaf to head initiation.

Table 4: Annual and Perennial grasses and *Erodium* spp. in Orchard, Vine and Plantation crops, Forestry and Pyrethrum.

Crops	Crop Growth Stage	Weeds Controlled	Weed Growth Stage	Rate With Penatrol Spray Oil ¹	Critical Comments
Orchard, Vine and Plantation Crops, including: Apples Avocado Banana Blueberry Citrus Custard apple Feijoa Grapevines Guava Kiwi/fruit Litchi (Lychee) Longan Mango Nashi Nut trees Passionfruit Paw paw Pear Persimmon Pineapple Rambutan Stone fruit	All growth stages	<u>Perennial grasses:</u> Couch Rhodes grass Slender rats tail grass	Established stands	400 to 800 mL/ha	1 See GENERAL INSTRUCTIONS, Spraying Oils / Wetters Section. Spray should be directed to the base of the tree or vine avoiding contact with fruit and foliage.
		Buffel grass Green panic Johnson grass Kikuyu <i>Paspalum</i> spp. <i>Setaria</i> spp.	Vegetative to early tillering Late tillering	200 mL/ha 400 mL/ha	
Forestry: <i>Pinus radiata</i> <i>Eucalytus</i> spp.		<u>Annual grasses:</u> Annual ryegrass Barley grass Barnyard grass Brome grass Crowsfoot grass Lesser canary grass Liverseed grass Mossman river grass Paradoxa grass Summer grass Volunteer cereals Wild oats	2 leaf to tillering	200 mL/ha	Spot Spray: Use 25 mL to 50 mL/100 L of water. Use higher rate on late tillering mature grasses. Annual Grasses: Where treated in association with perennial grasses, these annual grasses will be controlled. (Continued below)

Crops	Crop Growth Stage	Weeds Controlled	Weed Growth Stage	Rate With Penatrol Spray Oil ¹	Critical Comments
Forestry: <i>Pinus pineaster</i>	All growth stages	<u>Annual grasses:</u> As above	Vegetative to tillering	125 to 250 mL/ha	(Continued from above) Forestry: For annual grasses apply lowest rate to newly emerged grasses, increasing the rate as they develop.
Pyrethrum		Barley grass Brome grass Rope twitch Barnyard grass <i>Erodium</i> spp. Volunteer cereals	Vegetative to tillering	100 to 250 mL/ha	Pyrethrum Tasmania only: For <i>Erodium</i> spp., apply 75 to 100mL/ha if the main weed is <i>E. botrys</i> . Use 50 to 75mL/ha if either <i>E. cicutarium</i> or <i>E. moschatum</i> are the main weeds.

Table 5: Choice Halofofop 520 and Clethodim Herbicide tank-mixes – Canola, Chickpeas, Faba beans, Field peas, Lupins, Lentils.

Weeds Controlled	Weed Growth Stage	Rate		Critical Comments
		Choice Halofofop 520	Clethodim Herbicide	
FOP /DIM susceptible Annual ryegrass + Volunteer barley Volunteer wheat Brome grass Wild oats Barley grass Phalaris	2 to 4 leaf	25 mL/ha	150 mL/ha	See GENERAL INSTRUCTIONS, Spraying Oils / Wetters Section. Use Penatrol Spray Oil at 500 mL/ 100L or Effectivoil at 1L/100L. Apply at the same crop growth stages as those in <i>Table 1b Winter Crops</i> . Lentils: Apply up to 7 node -early branching crop growth stage only. Lupins: Not for Qld.
	Early tillering	38 mL/ha	150 mL/ha	
	2 to 4 leaf	25 mL/ha	200 mL/ha	
	Early tillering	38 mL/ha	250 mL/ha	
FOP resistant Annual ryegrass + Volunteer barley Volunteer wheat Brome grass Wild Oats Barley grass Phalaris	2 to 4 leaf	25 mL/ha	200 mL/ha	Lentils: Apply up to 7 node -early branching crop growth stage only. Lupins: Not for Qld.
	Early tillering	38 mL/ha	250 mL/ha	
	2 to 4 leaf	25 mL/ha	200 mL/ha	
	Early tillering	38 mL/ha	250 mL/ha	

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

HARVESTING WITHHOLDING PERIODS

NOT REQUIRED WHEN USED AS DIRECTED FOR: NOT REQUIRED WHEN USED AS DIRECTED FOR:

Canola, chickpeas, cotton, cowpea, faba beans, field peas, lentils, linola, linseed, lupins, mung beans, navy beans, orchard crops, peanuts, plantation crops, soybeans, sunflowers, vetch or vine crops.

DO NOT HARVEST FOR:

Medic and Clover seed crops:

7 DAYS AFTER APPLICATION

STOCK FOOD WITHHOLDING PERIODS

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR:

Canola, chickpeas, cotton, cowpea, faba beans, field peas, lentils, linola, linseed, lupins, mung beans, navy beans, peanuts, soybeans, sunflowers and vetch:

28 DAYS AFTER APPLICATION

Lucerne:

21 DAYS AFTER APPLICATION

Medic and Clover pasture:

7 DAYS AFTER APPLICATION

COTTON GIN TRASH MUST NOT BE FED TO ANIMALS.

GENERAL INSTRUCTIONS

MIXING

- Add water to the spray tank to 10cm above the level of agitation and ensure the agitation device is working vigorously. (There must be a minimum of 100L of water in the tank before any pesticide is added.)
- If tank mixing, firstly add any soluble liquid formulations (e.g. Clopyralid 300 Herbicide) and allow agitation for approximately one minute.
- Then add Choice Halofop 520 at the point where agitation is strongest. **(DO NOT add Choice Halofop 520 through a strainer or sieve.)** Allow further agitation for one minute.
- Half fill the spray tank.
- If using wettable powder or water dispersible granules, or other emulsifiable concentration formulations (e.g. Clopyralid 750WG or Mite-Master, these should be **added after the Choice Halofop 520** to the half-full spray tank ensuring vigorous agitation.
- Finally add Penatrol Spray Oil or approved alternate spraying oil/wetter. (*See section on spraying oils/wetters*) and continue filling the tank to the required volume maintaining agitation at all times.
- Only mix sufficient solution for immediate use. Choice Halofop 520 and any other tank mixes should be applied immediately for best results.

Spraying Oils / Wetters

- ¹ **Spraying Oils:** It is essential to add an adjuvant to Choice Halofop 520. Best results will be achieved with Penatrol Spray Oil at 0.5 L/100L of spray solution. Alternatively, other oils plus a non-ionic wetter may also be used. When other crop spraying oils are used, mix at 1.0L/100L and add a non-ionic wetter (surfactant) at 200mL/100L of spray solution. **Use of an oil is not always recommended.** See Critical Comments for specific situation recommendations.

- ² **Non-ionic Wetters:** When Penatrol or other oils are not used, a 100% concentrate non-ionic wetting agent such as BS-1000* at 200mL/100L must be used along with the higher rate of Choice Halofop 520 as specified in the Directions for Use.

Where water volumes of less than 50L/ha are used, **DO NOT** use less than 250mL/ha of Penatrol or 500mL/ha for oils other than Penatrol or less than 100mL/ha of wetter.

CANOLA, LUCERNE, MEDIC AND CLOVER PASTURES AND SEED CROPS:

When tank mixing Choice Halofop 520 with Clopyralid herbicides (canola only) or Broadstrike (lucerne, clover and medics), use Penatrol Spray Oil with the lower rates of Choice Halofop 520 or a wetting agent with the higher rates of Choice Halofop 520 unless otherwise specified. When mixing Choice Halofop 520 with other broadleaf herbicides on these crops, **DO NOT** use an oil, use a wetter instead.

FIELD PEAS AND CANOLA:

The oil recommended is Penatrol Spray Oil. Effectivoil is also recommended for use with tank mixtures of Choice Halofop 520 and Clethodim Herbicide.

For canola, Choice Halofop 520 + Clopyralid 750SG + Penatrol Spray Oil are compatible and selective to canola. This tank mixture is also compatible with atrazine or simazine and selective to triazine tolerant canola.

NAVY BEANS, PEANUTS, SOYBEANS:

When mixing with Blazer or Basagran, **DO NOT** add spraying oil to these mixtures.

DO NOT use these tank mixes on cowpea.

Compatibility:

Ground use only: Choice Halofop 520 Herbicide can be tank mixed with:

Insecticides: Dimethoate
Endosulfan
Chlorpyrifos
Mite-Master Insecticide

Herbicides: Atrazine
Basagran
Blazer
Broadstrike Herbicide
Clopyralid 300
Clopyralid 750SG
MCPA ester (LVE) – **DO NOT** exceed
700mL/ha of MCPA LVE
Oryzalin
Clethodim Herbicide
Simazine
Fluroxypyr 200 Herbicide

Fungicides: Dithane DF
Dithane Rainshield

Trace Elements: Magnesium Sulphate
Zinc Sulphate

Choice Halofop 520 Herbicide is **NOT COMPATIBLE** with 2,4-D or MCPA as sodium or amine salts.

Aerial Use: No product, other than a recommended crop oil or wetter, should be mixed with Choice Halofop 520 Herbicide when applied by air, except for addition of Lontrel Forestry Herbicide for use in forestry and Clopyralid 750SG for use in canola only.

Application

Apply Choice Halofop 520 Herbicide in sufficient water to obtain good coverage. It should be applied by an accurately calibrated ground rig or aircraft delivering droplets with a VMD of 200 to 300 microns.

The following spray volumes are recommended:

Ground application:	50 to 150L/ha
Aerial application:	30L/ha minimum

Use higher water volumes in orchards and in dense crops where the weeds may be shielded by the crop canopy.

CLEANING SPRAY EQUIPMENT

If broadleaf herbicides, particularly sulfonylureas, have been used in the spray equipment at any time prior to Choice Halofop 520, particular care should be taken to follow the directions on the relevant broadleaf herbicide label for equipment cleaning, or damage to susceptible crops may occur.

After using Choice Halofop 520, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, drain the tank and clean any filters in the tank, pump, line and nozzles.

To Rinse: After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

To Decontaminate: Before spraying cereals, maize, sorghum or other sensitive crops, wash the tank and rinse the system as above. Then, quarter fill the tank and add an alkali detergent (e.g. Surf, Cold Water SURF Concentrate, DynamoMatic Concentrate, OMO or DRIVE) at 500mL/100L of water or the powder equivalent at 500g/100L of water, and circulate throughout the system for at least fifteen minutes. Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow to drain. Chlorine-based cleaners are not recommended.

Rinse water should be discharged onto a designated disposal area, or if this is unavailable, onto unused land away from desirable plants and water sources.

RESISTANT WEEDS WARNING

GROUP	A	HERBICIDE
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Choice Halofop 520 Herbicide is a member of the aryloxyphenoxy propionate group of herbicides. Choice Halofop 520 Herbicide has the acetyl CoA carboxylase inhibitor mode of action. For weed resistance management, Choice Halofop 520 Herbicide is a Group A Herbicide.

Some naturally-occurring weed biotypes resistant to Choice Halofop 520 Herbicide and other inhibitors of acetyl CoA carboxylase 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 resistant weeds will not be controlled by Choice Halofop 520 Herbicide or other inhibitors of acetyl CoA carboxylase.

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 this product to control resistant weeds.

Strategies to minimize the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or Grow Choice representative.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

- Choice Halofop 520 Herbicide damages cereals and grasses.

- **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.
- Cereal crops or grasses planted within twelve (12) weeks of application may be damaged by the residual effects of Choice Halofop 520 Herbicide, particularly on light and red soils.

PROTECTION OF LIVESTOCK

DO NOT graze or cut treated crops for stock food except as specified under withholding periods.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

- Choice Halofop 520 Herbicide is toxic to fish.
- **DO NOT** contaminate streams, rivers or waterways with the chemical or used container.

STORAGE AND DISPOSAL

- Store in the closed, original container in a cool, well ventilated area. **DO NOT** store for prolonged periods in direct sunlight.
- **DO NOT** store near feedstuffs, fertilisers or seeds.
- Triple or preferably pressure 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 designated collection point.
- If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SMALL SPILL MANAGEMENT

Wear protective equipment (See **SAFETY DIRECTIONS**). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. When absorption is complete, sweep up material and contain in a refuse vessel for disposal (see **STORAGE AND DISPOSAL** section). If necessary, wash the spill area with an alkali detergent and water and absorb the wash liquid for disposal as described above.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin.

When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves, and face shield or goggles.

After each day's use, wash gloves, face shield or goggles and contaminated clothing. Wash hands after use.

FIRST AID

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

If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

MATERIAL SAFETY DATA SHEET

For further information, refer to the Material Safety Data Sheet (MSDS) which is available 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.



GROW CHOICE PTY LTD

113 Fitzroy Street

Tamworth NSW 2340

Telephone: (02) 67 663 979

ACN 069 839 961