

HERBICIDE GUIDE

***Note:** This information is provided as a guide to the herbicides available to control weeds in sugarcane in the Burnett Mary district and does not contain all of the critical information on the product labels. READ THE LABEL and adhere to the conditions of use when applying the selected herbicide.*

Pre-emergent Herbicide Options

Situation	Herbicide	Rate/ha	Cost (\$/ha)	Comments
Young Plant Cane: Annual grasses and broadleaf weeds	metribuzin 750g/kg e.g. Soccer® 750 WG	640g to 2 kg	\$21-65	<ul style="list-style-type: none"> Broad spectrum grass and broadleaf weed control for 5 -10 weeks. Use the higher rates for extended control. Mix with grass residuals for control of difficult species. Apply in a minimum of 250 L/ha of spray mixture and do not disturb the treated soil surface after application. Safe to spray over cane.
	pendimethalin 455 g/L e.g. Stomp® Xtra + atrazine 900 g/kg e.g. Atradex®WG	2.2 to 3.3 kg + 1.5 – 2.0 kg	\$44-\$63	<ul style="list-style-type: none"> 6-10 weeks control of grasses and broadleaf weeds and vines. For best results, incorporate with 12 to 25 mm of rain or irrigation from 3-5 days after application. Use higher rate for longer weed control. Is compatible with paraquat (e.g. Gramoxone®) and glyphosate (Round Up®)
	s-metolachlor 960 g/L e.g. Dual Gold® + atrazine 900 g/kg e.g. Atradex® WG	1.1 to 1.45 L + 1.5 – 2.0 kg	\$28-\$36	<ul style="list-style-type: none"> Good pre-emergent control of grasses, broadleaf weeds and vines. Needs rain or irrigation within 10 days for best results Where small (2 to 4 leaf stage) grasses and broadleaf weeds are present, add 1 L/ha paraquat (e.g. Gramoxone®) and apply as a directed spray.
	ametryn 731.5 g/kg + trifloxysulfuron sodium 18.5 g/kg e.g. Krismat® WG	1.5 – 2.0 kg	\$50 - \$67	<ul style="list-style-type: none"> Controls broadleaf weeds and suppresses nut grass and summer grass. Provides residual control of most grass species. Apply when weeds are actively growing with grasses at the 3 leaf to early tillering stage and broadleaf weeds at the 2 to 6 leaf stage. May be applied over the top of cane up to the 6 leaf stage or as a

Ratoons and Plant Cane at Out-of-Hand stage: Annual grasses, broadleaf weeds and vines.	Isoxaflutole 750 g/kg e.g. Balance®750 WG + paraquat 250 g/L e.g. Gramoxone®W + atrazine 900 g/kg e.g. Atradex® WG	100-200g + 1.2 L + 1.5 – 2.0 kg	\$50-\$84	directed spray on varieties sensitive to ametryn (KQ228). <ul style="list-style-type: none"> • Apply to moist soil with follow-up rain or irrigation in 10 days. • Good pre-emergent control of seedling grasses such as Guinea grass, crowsfoot and green summer grass. • Crop safety is a real issue with Balance® on our sandy and red soils. If you have not used Balance® before, get a soil test first. Do not apply if the CEC is less than 4.5 meq/100g or the Organic Carbon (OC) is less than 1%. • Allow weeds to germinate and then apply Balance® with paraquat as a directed spray minimising spray contact with cane foliage. • Can be applied to burnt or trash blanketed ratoon cane for up to 12 weeks control. Avoid soil disturbance after application. • Atrazine is needed for vine control
	metribuzin 750 g/kg e.g. Soccer®750 WG + isoxaflutole 750 g/kg e.g. Balance® 750 WG	1.1 – 1.6 kg + 200g	\$66 - \$112	<ul style="list-style-type: none"> • 8 to 10 weeks control. • Use the higher rate of Soccer® for vine control. • Soccer® needs to be applied to moist soil and incorporated with rain or irrigation from 2 to 7 days for best results. Do not apply if heavy rain is expected within 48 hours of application. • See notes above for Crop Safety with Balance®. • Bayer are trialling rates of Balance® of 100g/ha with good results to date when tank mixed with Soccer®.
	imazapic 240 g/L e.g. Flame® + paraquat 250 g/L e.g. Gramoxone® W	400 ml + 1.2 L	\$21	<ul style="list-style-type: none"> • Good control of broadleaf weeds, vines and most grasses. Flame® does not control crowsfoot grass. Where crowsfoot grass is a problem add Stomp® Xtra @ 2.2 L/ha. • May be applied to trash blankets but heavy trash layers may prevent the product reaching the soil. • Sufficient rain or overhead irrigation is required after application and prior to weed emergence to wet soil to a minimum depth of 5 cm. • Apply as a carefully directed inter-row spray to weeds and at the base of the plant, minimising contact with sugarcane foliage. • Pre-emergence weed control may be limited on Krasnozem or red

				brown Ferrosol soil types, where soil moisture is not maintained in the top 5 cm of soil.
Ratoons and Plant Cane at Out-of-Hand stage: Annual grasses, broadleaf weeds and vines. (Continued)	diuron 468 g/kg and hexazinone 132 g/kg e.g. Velpar®K4 DF	3.0-4kg	\$53-\$71	<ul style="list-style-type: none"> • DO NOT apply in the Burnett Mary between 1 November and 31 May as a broadcast application. • When applied as a 60% band spray DO NOT apply between 1 November and 29 February. • Follow the directions on the APVMA Permit for diuron use in regard to application, buffer zones and record keeping. • Up to 12 weeks residual control of grasses, broadleaf weeds and vines. • Do not spray over sugarcane or allow excessive spray contact as crop injury may result. • Do not replant treated areas to any other crop within two years after last application as injury to subsequent crop may result.
	Imazapic 25 g/L and hexazinone 125 g/L e.g. BobCat® I-Maxx	2.9-3.8L	\$64-\$84	<ul style="list-style-type: none"> • New Product. BSSL has little experience with this product. • Designed to replace Velpar K4 DF and other comparable products. • Pre emergent control may be limited on Krasonzem or red brown Ferrosol soil types where moisture is not maintained in the top 5cm of soil. • Incorporate with 12-25mm of rainfall or irrigation within 3-4 days of application • Do not plant susceptible crops for 24-36 months after application
	Imazapic 25 g/L and hexazinone 125 g/L e.g. BobCat® I-Maxx + paraquat 250 g/L e.g. Gramoxone®W	2.9-3.8L + 1.6L	\$75-\$95	<ul style="list-style-type: none"> • New Product. BSSL has little experience with this product. • If emerged cane is present always apply paraquat to minimise crop damage • Designed to replace Velpar K4 DF and other comparable products. • Pre emergent control may be limited on Krasonzem or red brown Ferrosol soil types where moisture is not maintained in the top 5cm of soil. • Incorporate with 12-25mm of rainfall or irrigation within 3-4 days of application • Do not plant susceptible crops for 24-36 months after application

Knockdown Herbicide Options

Situation	Herbicide	Rate/ha	Cost (\$/ha)	Comments
Young Plant or Ratoon Cane up to 3 leaf stage: Small grass (not stooling) small broadleaf weeds	paraquat 250 g/L e.g. Gramoxone®W + diuron 900 g/kg e.g. Diurex®	1.2 – 1.6 L + 275 to 500 g	\$11-\$17	<ul style="list-style-type: none"> Apply in a minimum of 250 L/ha of spray mixture. Controls grass and broadleaf weeds up to 5 cm high. Currently, diuron -Use as a directed spray after the cane 3-4 leaf stage.
	metribuzin 750 g/kg e.g. Soccer®750 WG + paraquat 250 g/L e.g. Gramoxone®W	640g + 1.2 L	\$29	<ul style="list-style-type: none"> Short term residual plus knockdown of weeds to 5 cm. Use as a directed spray after the cane 3-4 leaf stage. Do not use on plant crops on very light sandy soil. Do not apply in less than 250 L/ha of spray mixture.
	ametryn 800 g/kg e.g. Ametrex 800 WG	2.8 kg/ha	\$65	<ul style="list-style-type: none"> Good knockdown for small grasses up to 3 to 4 leaf stage. Apply as a directed spray, use a wetter KQ228 will show some leaf yellowing after application. Does not control green summer grass
	atrazine 250 g/L + ametryn 250 g/L e.g. Gesapax Combi® 500SC	6-8L	\$82-\$110	<ul style="list-style-type: none"> Knockdown of grass and weeds less than 3 to 4 leaf stage. Also gives residual control for 6 weeks or more. Apply as a directed spray, use wetter. KQ228 will show some leaf yellowing after application. For control of green summer grass add 1.1 kg Diurex®. Note diuron at this rate cannot be applied in Burnett Mary between 1 November and 29 February and may only be applied once in any 12 month period.
	ametryn 731.5 g/kg + trifloxysulfuron sodium 18.5 g/kg e.g. Krismat® WG	1.5 – 2.0 kg	\$51 - \$67	<ul style="list-style-type: none"> Controls broadleaf weeds and suppresses nut grass and summer grass and provides residual control of most grass species. Apply when weeds are actively growing. May be applied over the top of cane up to the 6 leaf stage or as a directed spray on varieties sensitive to ametryn (KQ228). Apply to moist soil when follow-up rain or irrigation is expected within 10 days.

Larger Plant and Ratoon cane	asulam 400 g/L e.g. Rattler[®]400	8.5 L	\$166	<ul style="list-style-type: none"> • For post-emergence control of advanced grass (less than 25 cm in height) before seeding in plant and ratoon cane. Also gives residual control of grasses for 6 to 10 weeks. • Add wetter and apply in 200 to 400 L/ha water. • Optimal results with high humidity (over 80%) and the temperature above 17°C.
Ratoons and Plant Cane at Out-of-Hand stage: Broadleaf weeds and vines.	fluroxypyr 333g/L e.g. Starane Advanced + 2,4-D amine 625 g/L e.g. Amine 625	780 mL + 800 mL	\$22	<ul style="list-style-type: none"> • Control of broadleaf weeds and vines. • Apply in 100 -400 L water and add Uptake Spraying Oil at 500 mL per 100 L of spray mixture • For optimal weed control, delay application until just before the “close-in” stage. • Do not spray 2, 4-D on cane to be used for plants. • Use air-inducted nozzles that produce coarse to very coarse droplets. • Milkweed requires fluroxypyr @ 1.38 L/ha plus atrazine 900 @ 2.2 kg/ha

Fallow Management

Herbicide	Rate/ha	Cost (\$/ha)	Comments
Glyphosate 540g/L E.g. Weedmaster Argo + Amicide 700 g/L Amicide Advance	4 - 6L + 280ml -1.15L		<ul style="list-style-type: none"> Provides broader range of control than just glyphosate products alone Rate of Amicide Advance depends on weed type and size Lower rates of glyphosate can be used if cultivation is to follow herbicide application “Double Knock” method can be used for hard to kill weeds. This includes using glyphosate and Amicide product first and 7-14 days later following it with a paraquat @1.6-2L/ha or Sprayseed @1.2-3.2L/ha
Glyphosate 450g/L + Isopropylamine 2,4-D (eg. Zephyr/Zulu/Surpass)	4.7 - 8.2L + 415ml - 1.7L Rates may vary depending on strength of product		<ul style="list-style-type: none"> Do Not use 2,4-D amine formulated products MUST be Isopropylamine formulation Provides broader range of control than just glyphosate products alone Rate of Amicide Advance depends on weed type and size Lower rates of glyphosate can be used if cultivation is to follow herbicide application “Double Knock” method can be used for hard to kill weeds. This includes using glyphosate and Amicide product first and 7-14 days later following it with a paraquat @1.6-2L/ha or Sprayseed @1.2-3.2L/ha
Verdict (Haloxypop) 520 g ai	150ml		<ul style="list-style-type: none"> Works best when applied with Uptake Spray oil @500ml/100L as improves effectiveness “Double Knock” method can be used for hard to kill grasses. Use Verdict first and 7-14 days later following it with a paraquat@1.6-2.4L/ha Cane stools can be hard to control without cultivation to break them up and encourage more tillers first

Nut Grass Control

All products listed are Group B herbicides and have potential issues with plant back periods for other crops grown in rotation.

Herbicide	Rate/ha	Cost (\$/ha)	Comments
Sempra (Halosulfuron-methyl)	65– 130g	\$65-\$120	<ul style="list-style-type: none"> • Use higher rate for heavy infestations • Apply only to actively growing nut grass • Add non-ionic wetter at 200ml/100L
Krismat WG (Trifloxysulfuron sodium and Ametryn)	2kg	\$65	<ul style="list-style-type: none"> • Provides knockdown and residual control of broadleaves & vines plus suppression of grasses and nutgrass • Only apply to moist soils • Boom spray on cane up to 6-leaf stage • Directed spray for cane past 6-leaf stage • Some varieties may yellow • Do not plant other crops within 24 months • Krismat is incompatible with pH buffers eg. LI-700, Primabuff
Flame (Imazapic)	400ml/ha	\$15	<ul style="list-style-type: none"> • Gives good suppression if applied as a pre-emergent • Do not apply more than once per year
Hero (Ethoxysulfuron)	250g/ha	\$34	<ul style="list-style-type: none"> • Apply in plant and ratoon crops, up to the out-of-hand stage (i.e. when crop is less than 100 cm tall) • Do not apply by broadcast spray. Hero must be applied as a directed application, e.g. by an octopus head attached to an Irvin leg, or by appropriate dropper/nozzle configurations to minimise movement of spray off target • Addition of a non-ionic wetting agent is recommended. Apply the equivalent of 100ml/100L of a 1000g/L formulation of non-ionic wetting agent • Thorough coverage of weeds is essential for good weed control • Apply in a minimum of 250L/ha water • Do not apply more than one application of Hero or other group B herbicide to a crop in one season

Herbicide Options in Legume Crops

Herbicide	Rate/ha	Cost (\$/ha)	Comments
Verdict (Haloxypop) 520 g ai	150ml		<ul style="list-style-type: none"> • Can be used in soybean, peanut, cowpea and lablab crops • Works best when applied with Uptake Spray oil @500ml/100L as improves effectiveness • If mixing with Basagran or Blazer (broadleaf weed control herbicides) do not apply crop oil • Apply early morning or late evening to minimise leaf burn from oil
Flame (Imazapic)	300-400ml		<ul style="list-style-type: none"> • Used to control mixture of broadleaf weeds, small grasses and suppress nutgrass growth • Need to be aware of plantback period of up to 2 years for some crops after using flame • Can be used as either a pre or post emergent herbicide. When used as a post emergent herbicide an adjuvant such as Hasten crop oil @1L/100L is used • Do not apply to water logged soils • Pre-emergent weed control may be limited on Krasnozem or red brown Ferrosol soil types where moisture is not maintained in the top 5cm of the soil
Spinnaker (Imazethapyr)	140g		<ul style="list-style-type: none"> • Used to control mixture of broadleaf weeds, small grasses and suppress nutgrass growth • Need to be aware of plantback period of up to 2 years for some crops after using Spinnaker • Can be used as either a pre or post emergent herbicide. When used as a post emergent herbicide an adjuvant such as Hasten crop oil @1L/100L is used • Do not apply to water logged soils
Blazer (Acifluorfen)	2L		<ul style="list-style-type: none"> • Is a contact herbicide and therefore works on smaller weeds best • Controls legume weeds in legume crops and therefore has a high level of crop phytotoxicity (leaf burn)
Basagran (Bentazone)	1.5-2L		<ul style="list-style-type: none"> • Weed size is critical for good control