**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

<table>
<thead>
<tr>
<th>Situation</th>
<th>Herbicide</th>
<th>Rate/ha</th>
<th>Cost ($/ha)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Young Plant Cane:</strong> Annual grasses and broadleaf weeds</td>
<td>metribuzin 750g/kg e.g. Soccer® 750 WG</td>
<td>640g to 2 kg</td>
<td>$21-$65</td>
<td>• 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.</td>
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<td>pendimethalin 455 g/L e.g. Stomp® Xtra + atrazine 900 g/kg e.g. Atradex®WG</td>
<td>2.2 to 3.3 kg + 1.5 – 2.0 kg</td>
<td>$44-$63</td>
<td>• 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®)</td>
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<td></td>
<td>s-metolachlor 960 g/L e.g. Dual Gold® + atrazine 900 g/kg e.g. Atradex® WG</td>
<td>1.1 to 1.45 L + 1.5 – 2.0 kg</td>
<td>$28-$36</td>
<td>• 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.</td>
</tr>
</tbody>
</table>
| | ametryn 731.5 g/kg + trifloxysulfuron sodium 18.5 g/kg e.g. Krismat® WG | 1.5 – 2.0 kg | $50 - $67 | • 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.**

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| 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).  
- 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.  
- Crop Safety with Balance®.  
- Bayer are trialling rates of Balance® of 100g/ha with good results to date when tank mixed with Soccer®. |
| 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 | - 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 | - 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 |
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<th>Product Description</th>
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<td>Diuron 468 g/kg and hexazinone 132 g/kg (e.g. Velpar® K4 DF)</td>
<td>3.0-4.0 kg</td>
<td>$53-$71</td>
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<tr>
<td>Imazapic 25 g/L and hexazinone 125 g/L (e.g. BobCat® I-Maxx)</td>
<td>2.9-3.8 L</td>
<td>$64-$84</td>
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<td>Imazapic 25 g/L and hexazinone 125 g/L (e.g. BobCat® I-Maxx) + paraquat 250 g/L (e.g. Gramoxone® W)</td>
<td>2.9-3.8 L + 1.6 L</td>
<td>$75-$95</td>
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</table>

- 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.
- 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 5 cm of soil.
- Incorporate with 12-25 mm of rainfall or irrigation within 3-4 days of application.
- Do not plant susceptible crops for 24-36 months after application.
- 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 5 cm of soil.
- Incorporate with 12-25 mm of rainfall or irrigation within 3-4 days of application.
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## Knockdown Herbicide Options

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| 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 | • 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 | 1.2 L | $29 | • 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 | • 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 | • 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 + trifloxsulfuron sodium 18.5 g/kg e.g. Krismat® WG | 1.5 – 2.0 kg | $51 - $67 | • 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. |
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<tr>
<th>Product</th>
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<th>Volume</th>
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<td>Larger Plant and Ratoon cane</td>
<td>asulam 400 g/L</td>
<td>8.5 L</td>
<td>$166</td>
<td>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.</td>
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<tr>
<td>Ratoons and Plant Cane at Out-of-Hand stage: Broadleaf weeds and vines.</td>
<td>fluroxypyr 333g/L + 2,4-D amine 625 g/L</td>
<td>780 mL + 800 mL</td>
<td>$22</td>
<td>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-induced nozzles that produce coarse to very coarse droplets. Milkweed requires fluroxypyr @ 1.38 L/ha plus atrazine 900 @ 2.2 kg/ha</td>
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| **Glyphosate 540g/L**  
E.g. Weedmaster Argo  
+ Amicide 700 g/L Amicide Advance | 4 - 6L  
+ 280ml - 1.15L | • 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  
(e.g. Zephyr/Zulu/Surpass) | 4.7 - 8.2L  
+ 415ml - 1.7L  
Rates may vary depending on strength of product | • **Do Not** use 2,4-D amineformulated 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 (Haloxyfop)**  
520 g ai | 150ml | • 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.

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| **Sempra** *(Halosulfuron-methyl)* | 65–130g   | $65–$120   | • 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         | • 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         | • Gives good suppression if applied as a pre-emergent  
• Do not apply more than once per year                                                                                                               |
| **Hero** *(Ethoxysulfuron)*  | 250g/ha   | $34         | • 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

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| Verdict (Haloxytop) 520 g ai | 150ml   |             | • 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 |             | • 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    |             | • 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      |             | • 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  |             | • Weed size is critical for good control |