Glyphosate and Conventional Herbicide Tank-mixes  
For Weed Resistance Management:

*This is not a substitute for reading product labels/Contact Agriculturist for further Information*

<table>
<thead>
<tr>
<th>PPI/PRE:</th>
<th>Nortron = 1-3 pt/A &amp; Dual Magnum = 0.5 pt/A</th>
<th>OR</th>
<th>Nortron = 6-7.5 pt/A</th>
<th>OR</th>
<th>Dual Magnum = 0.5 pt/A</th>
</tr>
</thead>
</table>

**Sugarbeets Planted Early, Waterhemp Management**

*Dual Magnum - Syngenta requires farmers to sign indemnified label for PPI/PRE application*

1st Application on 2-Leaf Sugarbeets:

| Glyphosate = 28 - 32 fl oz/A | Nortron = 4 fl oz/A | Outlook = 12 fl oz/A, OR Dual Magnum = 1 pt/A, or Warrant = 3 pt/A |

2nd Application 10-14 Days After Treatment:

| Glyphosate = 24 - 28 fl oz/A | Nortron = 4 oz/A | Outlook = 12 fl oz/A, OR Dual Magnum = 1 pt/A, or Warrant = 3 pt/A |

3rd Application 10-14 Days After Treatment:

| Glyphosate = 22 fl oz/A | Nortron = 4 fl oz/A |

**Rescue:**

| Betamix = 12 - 22 fl oz/A OR Progress = 9 - 16 fl oz/A | UpBeet = .75 – 1 oz/A | Nortron = 4 fl oz/A |

*Use following adjuvants for Glyphosate + conventional herbicide tank-mixes*

| HSMOC = 1 pt/A | AMS = 1 lb/A |

**Sugarbeets Planted Late, Waterhemp Management**

1st Application on 2-Leaf Sugarbeets:

| Glyphosate = 28 - 32 fl oz/A | Betamix = 12 fl oz/A OR Progress = 9 fl oz/A | Nortron = 4 fl oz/A | Outlook = 12 fl oz/A, OR Dual = 1 pt/A, or Warrant = 3 pt/A |

2nd Application 10-14 Days After Treatment:

| Glyphosate = 24 - 28 fl oz/A | Betamix = 16 fl oz/A OR Progress = 12 fl oz/A | Outlook = 12 fl oz/A, OR Dual = 1 pt/A, or Warrant = 3 pt/A |

3rd Application 10-14 Days After Treatment:

| Glyphosate = 22 fl oz/A | Betamix = 22 fl oz/A OR Progress = 16 fl oz/A |

**Rescue:**

| Betamix = 12 - 22 fl oz/A OR Progress = 9 – 16 fl oz/A | UpBeet = .75 – 1 oz/A | Nortron = 4 fl oz/A |

*Use following adjuvants for Glyphosate + conventional herbicide tank-mixes*

| HSMOC = 1 pt/A | AMS = 1 lb/A |

* Maximize glyphosate labeled Rates: (4.5 lb a.e example Roundup PowerMAX®)  
56 oz/A total maximum up to 8-If stage, 32 oz/A maximum single application  
44 oz/A total maximum after 8-If stage, 22 oz/a maximum single application  
96 oz/A total maximum per growing season, emergence through harvest  

* Minimum of 10 days between glyphosate applications  
*All applications are based on Broadcast Rate*  
* HSMOC adjuvant is required when tank-mixing glyphosate with Conventional herbicides to avoid antagonism  
* Always include AMS at 1 lb/A or liquid equivalent with any glyphosate application  
*Unless Mixing with Lay-by (oil), Consider using ¾ Rate.  
* The glyphosate rates below are based on using a 4.5 lb acid equivalent/gallon product such as Roundup PowerMAX®.
### ALS and Glyphosate Resistant Kochia Management

**Product Notes:**
- **Stinger**: Labeled on cotyledon to 8-If sugarbeets; total maximum per season = 10.7 fl oz/A; 45 day PHI
- **Nortron**: total maximum in season = 12 oz/A; 90 day PHI
- **Betamix & Progress**: 75 day PHI
- **Glyphosate**: 30 day PHI (see top page for in season totals)
- **UpBeet**: total maximum per season = 2.5 oz/A; 60 day PHI
- **Outlook**: total maximum in season = 24 oz/A: <21 oz/A in single app. See plantback; 60 day PHI
- **Dual Magnum & Generics** ((S- metolachlor) (see top page for pre note)): max season post <2.6 pts/A; 60 day PHI
- **Warrant**: 70 day PHI

**Generic Betamix products are:**
- Sugarbeet Mix
- Phen-Des 8+8

**Generic Progress Product is:**
- BnB Plus

*Note on Post Quardris Application: Quardris **SHOULD NOT** be tank-mixed with the Conventional Herbicides (includes Lay-bys) or applied right before or after a Conventional application as sugarbeet injury will occur. Optimal timing is 3 days before or 3 days after application.*

<table>
<thead>
<tr>
<th>Application</th>
<th>Glyphosate</th>
<th>Betamix</th>
<th>Progress</th>
<th>Nortron</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Application on Cotyledon Kochia:</td>
<td>28 - 32 fl oz/A</td>
<td>12 fl oz/A</td>
<td>9 fl oz/A</td>
<td>4 fl oz/A</td>
</tr>
<tr>
<td>2nd Application 10-14 Days After Treatment - Cotyledon Kochia &amp; 4 lf Sugarbeet:</td>
<td>24 – 28 fl oz/A</td>
<td>16 fl oz/A</td>
<td>12 fl oz/A</td>
<td>4 fl oz/A</td>
</tr>
<tr>
<td>3rd Application 10-14 Days After Treatment:</td>
<td>22 fl oz/A</td>
<td>22 fl oz/A</td>
<td>16 fl oz/A</td>
<td>4 fl oz/A</td>
</tr>
<tr>
<td>4th Application 10-14 Days After Treatment (if needed):</td>
<td>22 fl oz/A</td>
<td>2-3 pts/a</td>
<td>1.5-2.2 pts/a</td>
<td></td>
</tr>
</tbody>
</table>

*Use following adjuvants for Glyphosate + conventional herbicide tank-mixes*  
- HSMOC = 1 pt/A  
- AMS = 1 lb/A

### Resistant Ragweed Management

**Product Notes:**
- **Stinger**: Labeled on cotyledon to 8-If sugarbeets; total maximum per season = 10.7 fl oz/A; 45 day PHI
- **Nortron**: total maximum in season = 12 oz/A; 90 day PHI
- **Betamix & Progress**: 75 day PHI
- **Glyphosate**: 30 day PHI (see top page for in season totals)
- **UpBeet**: total maximum per season = 2.5 oz/A; 60 day PHI
- **Outlook**: total maximum in season = 24 oz/A: <21 oz/A in single app. See plantback; 60 day PHI
- **Dual Magnum & Generics** ((S- metolachlor) (see top page for pre note)): max season post <2.6 pts/A; 60 day PHI
- **Warrant**: 70 day PHI

**Generic Betamix products are:**
- Sugarbeet Mix
- Phen-Des 8+8

**Generic Progress Product is:**
- BnB Plus

*Note on Post Quardris Application: Quardris **SHOULD NOT** be tank-mixed with the Conventional Herbicides (includes Lay-bys) or applied right before or after a Conventional application as sugarbeet injury will occur. Optimal timing is 3 days before or 3 days after application.*

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<tr>
<th>Application</th>
<th>Glyphosate</th>
<th>Stinger</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Application on Cotyledon Sugarbeets:</td>
<td>28 - 32 fl oz/A</td>
<td>2 - 3 fl oz/A</td>
</tr>
<tr>
<td>2nd Application 10-14 Days After Treatment:</td>
<td>24 – 28 fl oz/A</td>
<td>3 - 4 fl oz/A</td>
</tr>
<tr>
<td>3rd Application 10-14 Days After Treatment:</td>
<td>22 fl oz/A</td>
<td>3 - 4 fl oz/A</td>
</tr>
<tr>
<td>4th Application 10-14 Days After Treatment (if needed):</td>
<td>22 fl oz/A</td>
<td>3 - 4 fl oz/A</td>
</tr>
</tbody>
</table>

*Use following adjuvants for Glyphosate + conventional herbicide tank-mixes*  
- NIS = 0.25%v/v  
- AMS =1 lb/A

### Tank-mixing Order for Glyphosate and Conventional Herbicides
1. Fill spray tank 1/2 full with clean water (warmed water is best)
2. If used - slurry UpBeet, Warrant in warm water (WDG’s)
3. Add AMS liquid or dry (water conditioner)
4. If used - Add Slurried WDG to tank
5. If used - Add Nortron (SC)
6. Fill 2/3 full of water
7. Add Betamix, Progress, or Betanex, Outlook, Dual Magnum (EC)
8. If used - Add Stinger (SL)
9. Add glyphosate
10. Add additives (NIS, COC, MSO, HSMOC and drift/deposition agents)
11. Finish filling spray tank – continue agitation
12. Spray tank empty as soon as possible