

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



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

* Maximize glyphosate labeled Rates: (4.5 lb a.e example Roundup PowerMAX®)	56 oz/A total maximum up to 8-lf stage, 32 oz/A maximum single application 44 oz/A total maximum after 8-lf 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®.	

## Sugarbeets Planted Early, Waterhemp Management

<b>PPI/PRE:</b>	Nortron = 1-3 pt/A & Dual Magnum = 0.5 pt/A	<u>OR</u>	Nortron = 6-7.5 pt/a	<u>OR</u>	Dual Magnum = 0.5 pt/A
*Dual Magnum - Syngenta requires farmers to sign indemnified label for PPI/PRE application					
<b>1st Application on 2-Leaf Sugarbeets:</b>					
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	
<b>2nd Application 10-14 Days After Treatment:</b>					
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	
<b>3rd Application 10-14 Days After Treatment:</b>					
Glyphosate = 22 fl oz/A		Nortron = 4 fl oz/A			
<b>Rescue:</b>	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

<b>1st Application on 2-Leaf Sugarbeets:</b>					
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					
<b>2nd Application 10-14 Days After Treatment:</b>					
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					
<b>3rd Application 10-14 Days After Treatment:</b>					
Glyphosate = 22 fl oz/A		Betamix = 22 fl oz/A OR Progress = 16 fl oz/A			
<b>Rescue:</b>	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

## ALS and Glyphosate Resistant Kochia Management

<b>PPI/PRE:</b>	Nortron = 6-7.5 pt/A	
<b>1st Application on Cotyledon Kochia:</b>		
Glyphosate = 28 - 32 fl oz/A	Betamix = 12 fl oz/A OR Progress = 9 fl oz/A	Nortron = 4 fl oz/A
<b>2nd Application 10-14 Days After Treatment - Cotyledon Kochia &amp; 4 If Sugarbeet:</b>		
Glyphosate = 24 - 28 fl oz/A	Betamix = 16 fl oz/A OR Progress = 12 fl oz/A	Nortron = 4 fl oz/A
<b>3rd Application 10-14 Days After Treatment:</b>		
Glyphosate = 22 fl oz/A	Betamix = 22 fl oz/A or Progress = 16 fl oz/A	Nortron = 4 fl oz/A
<b>4th Application 10-14 Days After Treatment (if needed):</b>		
Glyphosate = 22 fl oz/a	Betamix = 2-3 pts/a OR Progress = 1.5-2.2 pts/a	
*Use following adjuvants for Glyphosate + conventional herbicide tank-mixes	HSMOC = 1 pt/A	AMS = 1 lb/A



## Resistant Ragweed Management

<b>1st Application on Cotyledon Sugarbeets:</b>	Glyphosate = 28 - 32 fl oz/A	Stinger = 2 - 3 fl oz/A
<b>2nd Application 10-14 Days After Treatment:</b>	Glyphosate = 24 - 28 fl oz/A	Stinger = 3 - 4 fl oz/A
<b>3rd Application 10-14 Days After Treatment:</b>	Glyphosate = 22 fl oz/A	Stinger = 3 - 4 fl oz/A
<b>4th Application 10-14 Days After Treatment (if needed):</b>	Glyphosate = 22 fl oz/A	Stinger = 3 - 4 fl oz/A
*Use following adjuvants for Glyphosate + conventional herbicide tank-mixes	NIS = 0.25%v/v	AMS = 1 lb/A



### **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

<b>Generic Betamix products are:</b>	Sugarbeet Mix	&	Phen-Des 8+8
<b>Generic Progress Product is:</b>	BnB Plus		

Note on Post Quadris Application: Quadris **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.

### **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