NO TRAIT. NO PROBLEM.

A pre-emergent-first herbicide guide for Confluence Non-GMO soybeans — featuring the two newest residual tools, Convintro™ and Tendovo®.

1. **The PRE does the heavy lifting.** In every trait platform, waterhemp and Palmer control are won or lost before the beans emerge.

2. **RR1 and Non-GMO now fight waterhemp with the same tools.** Glyphosate has failed on most waterhemp populations tested — Groups 12, 14 and 15 do the work in both.

3. **Two PREs raise the floor for 2027.** Convintro brings Group 12 to soybeans; Tendovo packs Groups 2, 5 and 15 in one jug.

confluence® GENETICS

FOR GROWERS AND SEED DEALERS · NOVEMBER 2026

The trait isn't what controls your waterhemp

In fields with glyphosate-resistant waterhemp or Palmer amaranth, a Roundup Ready 1 program and a Non-GMO program run on the same effective chemistry.

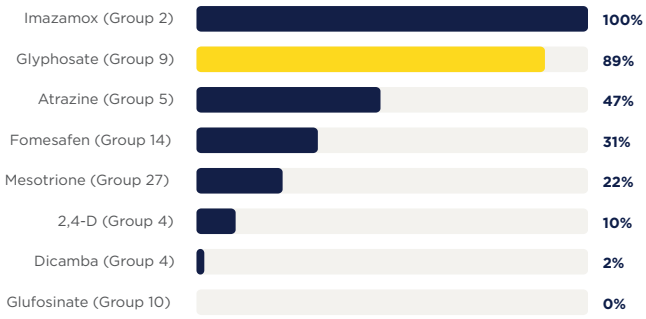
89%
of Minnesota waterhemp populations collected in 2020–21 were glyphosate-resistant.

100%
were ALS (Group 2) resistant — Group 2 POST won't rescue either system.

~25%
of 75 Iowa populations (fall 2019) had four-way resistance to Groups 2, 5, 9 and 14.

What still works on waterhemp

Share of 90 Minnesota populations resistant (seed collected 2020–21; greenhouse screening at 1× and 3× the labeled rate)



Populations came from fields where plants survived a POST spray, so these figures run higher than a random field survey — but they show where the pressure is. PPO (Group 14) resistance at 31% is the warning: protect Flexstar and Cobra with a strong PRE.

The RR1 POST pass, re-examined

RR1
~~Glyphosate (9)~~ · Cobra (14) · Outlook (15) · Select Max (1)

NON-GMO
Cobra (14) · Outlook (15) · Select Max (1)

Strike the glyphosate that resistant waterhemp shrugs off and the two passes are identical: a Group 14 contact, a Group 15 residual, and Select Max for grasses and volunteer corn.

Bottom line: If your field has glyphosate-resistant waterhemp, you are already spraying a Non-GMO program — you just paid for a trait to do it.

Pass by pass: one Moderate-pressure program, RR1 vs. Non-GMO

Moderate Option 2 · Convintro + Group 15 (full card on page 5)

Pass	Roundup Ready 1			Confluence Non-GMO			Verdict
	Product	Rate / A	SOA #	Product	Rate / A	SOA #	
Burndown	Gramoxone® SL 2.0	40 oz	22	Gramoxone® SL 2.0	40 oz	22	Identical
	COC	1%		COC	1%		
Pre-Emergence	Convintro™ [c]	About 4 fl oz	12	Convintro™ [c]	About 4 fl oz	12	Identical
	Warrant® or Enversa™	48 oz	15	Warrant® or Enversa™	48 oz	15	
	Metribuzin (75DF) [b e]	5 oz	5	Metribuzin (75DF) [b e]	5 oz	5	
Early Post (V2–V3)	Roundup PowerMAX® 3 RR1 only	30 oz	9	No glyphosate needed			Equal on waterhemp
	Cobra®	12.5 oz	14	Cobra®	12.5 oz	14	
	Outlook®	16 oz	15	Outlook®	16 oz	15	
	Select Max® vol. corn	6–16 oz [g]	1	Select Max® vol. corn	6–16 oz [g]	1	
	COC	1%		COC	1%		
Effective sites on waterhemp	5 · 12 · 14 · 15 + glyphosate (9) adds no site on resistant waterhemp			5 · 12 · 14 · 15			Identical

Select Max stays in the RR1 program: volunteer corn from glyphosate-tolerant hybrids survives glyphosate. **RR1's one small edge:** glyphosate on susceptible ragweeds, cocklebur and lambsquarters; Non-GMO covers most with the metribuzin PRE and Cobra. [c] Pre-launch Convintro rate — follow the final label. [b] Caution on high-pH soils. [g] Select Max by volunteer corn height: 6 fl oz to 12", 9 fl oz to 24", 12–16 fl oz to 36"; raise the rate 33% when tank-mixed with products other than Roundup, Cobra or Phoenix.

Build the program on the pre-emergent

Waterhemp grows up to 1 1/4 inches a day and keeps emerging into August. The PRE buys the time; the layered residual closes the window.

Burndown
Plant into a clean seedbed. Control marestail here — nothing in-crop will.

PRE · at planting
Full label rate, two or more effective sites, within 3 days of planting.

Early POST · V2–V3
Group 14 on waterhemp under 4" plus a Group 15 to layer residual.

Canopy
Narrow rows close the canopy sooner and shade out late flushes.

1. **Two effective sites per pass.** Count only groups that still work on your waterhemp — Group 2 and 9 usually don't.
2. **Activate the PRE.** Most residuals need about 1/2–1 inch of rain within 7–10 days of application.
3. **One Group 14 POST, done right.** Spray waterhemp under 4" with COC and medium droplets. There is rarely a second chance.
4. **Overlap residuals.** Apply the Group 15 layer before the first PRE runs out — roughly 3–5 weeks after planting.
5. **Match rate to soil.** Coarse, low-OM and high-pH soils change rates for metribuzin and several premixes.
6. **Scout 7–14 days after each pass.** Escapes that set seed load the bank for years.

Two pre-emergent tools for 2027

Convintro™ Bayer — Group 12 · NEW SOA

Active	Diflufenican (PDS inhibitor) — the first Group 12 herbicide registered in U.S. corn and soybeans
Timing	Preplant or pre-emergence; ground application only
Rate	About 4 fl oz/A (max 0.16 lb a.i./A; one application per year)
Targets	Waterhemp, Palmer amaranth, pigweed species
Status	EPA-registered June 2026; first commercial season 2027, state by state

Tendovo® Syngenta — Groups 2 + 5 + 15

Actives	S-metolachlor + metribuzin + cloransulam-methyl
Timing	Preplant (surface or incorporated) or pre-emergence — never after crop emergence
Rate	Coarse 1.2–1.5 · medium 1.5–2.1 · fine 1.75–2.35 qt/A
Targets	70+ weeds incl. waterhemp, Palmer, kochia, ragweeds, marestail, grasses
Residual	>90% control at 5 weeks after emergence in 89% of Syngenta trials

Partner it. Narrow spectrum — Bayer pairs it with a Group 14 or 15 for full-spectrum control. Expect brief, cosmetic bleaching on first leaves.

Fits any soybean system, including conventional. Contains metribuzin — confirm variety tolerance before you book it.

Same sites, other brands: Kyber® Pro (Corteva) = Fierce® MTZ actives (14 · 15 · 5) · Sonic Boom™ (Corteva) = Authority® MTZ actives (14 · 5) · Enversa™ (Corteva) = Warrant® active (15) · Zidua® PRO (BASF): Groups 14 + 15 plus imazethapyr (2); PRE only.

Low & moderate pressure programs

Pick your pressure, then your program. Every option starts with a full-rate PRE.

LOW PRESSURE Option 1 Tendovo Foundation

Tendovo

TIMING	PRODUCT	RATE / A	SOA #
Burndown	Roundup PowerMAX® 3	30 oz	9
	2,4-D LV6 [d]	16 oz	4
Pre-Emergence	Tendovo® [ae]	1.2–2.35 qt [a]	2 5 15
Post-Emergence	Select Max®	6–16 oz [g]	1
	Flexstar® (if escapes) [a]	12–25.6 oz	14
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
5 · 15 (+14 if escapes)

STRONGEST ON
Waterhemp / Palmer · Grasses · Morningglory · Small-seeded broadleaves

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
Tendovo carries metribuzin — confirm your variety's metribuzin tolerance and rate on high-pH or coarse soils.

LOW PRESSURE Option 2 Convintro Foundation

Convintro

TIMING	PRODUCT	RATE / A	SOA #
Pre-Emergence	Convintro™ [c]	About 4 fl oz	12
	Metribuzin (75DF) [b e]	5 oz	5
	Gramoxone® SL 2.0	40 oz	22
	COC	1%	
Post-Emergence	Cobra®	12.5 oz	14
	Select Max®	6–16 oz [g]	1
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
5 · 12 · 14

STRONGEST ON
Waterhemp / Palmer · Pigweeds · Lambsquarters · Grasses (POST)

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
Convintro has a narrow spectrum — metribuzin and Cobra broaden it. Brief bleaching on first leaves is cosmetic and grows out.

MODERATE PRESSURE Option 1 Tendovo + Layered Residual

Tendovo

TIMING	PRODUCT	RATE / A	SOA #
Burndown	Roundup PowerMAX® 3	30 oz	9
	2,4-D LV6 [d]	16 oz	4
Pre-Emergence	Tendovo® [ae]	1.2–2.35 qt [a]	2 5 15
Early Post (V2–V3)	Flexstar® [a]	12–25.6 oz	14
	Warrant® or Enversa™	48 oz (Enversa 3 pt)	15
	Select Max®	6–16 oz [g]	1
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
5 · 14 · 15

STRONGEST ON
Waterhemp / Palmer · Marestail (burndown) · Kochia · Grasses

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
Warrant or Enversa must reach the soil to extend the residual — spray before the canopy intercepts it, ideally by V3.

Moderate & heavy pressure programs

MODERATE PRESSURE — Option 2 Convintro + Group 15

Convintro

TIMING	PRODUCT	RATE / A	SOA #
Burndown	Gramoxone® SL 2.0	40 oz	22
	COC	1%	
Pre-Emergence	Convintro™ [c]	About 4 fl oz	12
	Warrant® or Enversa™	48 oz (Enversa 3 pt)	15
	Metribuzin (75DF) [b e]	5 oz	5
Early Post (V2–V3)	Cobra®	12.5 oz	14
	Outlook®	16 oz	15
	Select Max®	6–16 oz [g]	1
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
5 · 12 · 14 · 15

STRONGEST ON
Waterhemp / Palmer · Pigweeds · Grasses · Lambsquarters

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
Four effective sites on waterhemp. COC improves Cobra control, but expect leaf bronzing that the crop typically grows out of.

MODERATE PRESSURE — Option 3 Proven Standard (benchmark)

TIMING	PRODUCT	RATE / A	SOA #
Pre-Emergence	Authority® MTZ [b e]	12–16 oz	5 14
	or Sonic Boom™ (Corteva) [b e]	16–21 oz	5 14
	Gramoxone® SL 2.0	40 oz	22
	COC	1%	
Post-Emergence	Warrant® Ultra [a]	48–65 oz	14 15
	Select Max®	6–16 oz [g]	1
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
5 · 14 · 15

STRONGEST ON
Waterhemp / Palmer · Marestail · Grasses · Morningglory

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
Uses Group 14 twice. Warrant Ultra contains fomesafen, which carries an extended crop-rotation interval.

HEAVY PRESSURE — Option 1 Four-Way PRE: Kyber Pro + Prowl H2O

Tendovo · Convintro

TIMING	PRODUCT	RATE / A	SOA #
Burndown	Roundup PowerMAX® 3	30 oz	9
	2,4-D LV6 [d]	16–22 oz	4
Pre-Emergence	Kyber® Pro or Fierce® MTZ [b e h]	16 oz (1 pt)	5 14 15
	Prowl® H2O [a]	1.0–3.2 pt	3
Early Post (V2–V3)	Flexstar® [a]	12–25.6 oz	14
	Outlook®	16 oz	15
	Select Max®	6–16 oz [g]	1
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
3 · 5 · 14 · 15

STRONGEST ON
Waterhemp / Palmer · Lambsquarters · Small-seeded broadleaves · Grasses

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
No Convintro needed, so use it where Convintro isn't registered yet. Prowl is the weakest of the four sites on waterhemp, so don't skip the Outlook layer.

Heavy pressure programs

HEAVY PRESSURE

Option 2 Fierce MTZ + Convintro

Convintro

TIMING	PRODUCT	RATE / A	SOA #
Burndown	Gramoxone® SL 2.0	40 oz	22
	COC	1%	
Pre-Emergence	Fierce® MTZ or Kyber® Pro [b e h]	16 oz (1 pt)	5 14 15
	Convintro™ [c f]	About 4 fl oz	12
Early Post (V2–V3)	Cobra®	12.5 oz	14
	Warrant® or Enversa™	48 oz (Enversa 3 pt)	15
	Select Max®	6–16 oz [g]	1
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
5 · 12 · 14 · 15

STRONGEST ON
Waterhemp / Palmer · Marestail · Pigweeds · Grasses

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
Uses Group 14 at PRE and POST. Where PPO-resistant waterhemp is confirmed, choose Heavy Option 1 instead.

HEAVY PRESSURE

Option 3 Authority Supreme + Convintro

Convintro

TIMING	PRODUCT	RATE / A	SOA #
Pre-Emergence	Authority® Supreme	8 oz	14 15
	or Zidua® PRO (BASF) [h]	4.5–6 fl oz	2 14 15
	Convintro™ [c f]	About 4 fl oz	12
	Metribuzin (75DF) [b e]	5 oz	5
	Gramoxone® SL 2.0	40 oz	22
	COC	1%	
Post-Emergence	Prefix® [a]	32 oz	14 15
	Select Max®	6–16 oz [g]	1
	COC	1%	

EFFECTIVE SITES ON WATERHEMP
5 · 12 · 14 · 15

STRONGEST ON
Waterhemp / Palmer · Marestail · Lambsquarters · Grasses

DROPLET SIZE (POST)
MEDIUM

WATCH-OUT
To get full value from Prefix, the residual must reach the soil surface — don't wait for canopy.

Footnotes

a. Use rate depends on geography, soil texture and organic matter.

b. Caution on high-pH soils (metribuzin).

c. Convintro: approximate rate from pre-launch information; follow the final label. Registered state by state — confirm it's labeled in yours.

d. Plant-back restriction — check the 2,4-D label interval before planting.

e. Contains metribuzin — confirm your Confluence variety's tolerance.

f. Confirm both labels allow the tank mix and run a jar test.

g. Select Max: annual grasses 9–16 fl oz; volunteer corn 6 fl oz to 12", 9 to 24", 12–16 to 36". Raise 33% when tank-mixed with products other than Roundup, Cobra or Phoenix.

h. Same sites, other brands: Kyber Pro (Corteva) = Fierce MTZ actives; Sonic Boom (Corteva) = Authority MTZ actives; Enversa (Corteva) = Warrant active. Zidua PRO (BASF) adds imazethapyr (Group 2, not counted); PRE only, not on coarse soils ≤2% OM within 30 days of planting.

Rates reflect common label rates; several program structures are adapted from Beck's Practical Farm Research NonGMO recommendations, with Convintro and Tendovo programs added by Confluence Genetics. **SOA #** = WSSA site-of-action group. **Effective sites on waterhemp** counts in-crop groups only and excludes Group 2 and 9, which most populations resist.

Three things to tell a grower

1

"You're already running a Non-GMO program."

If glyphosate quit on your waterhemp, your PRE, Flexstar and Group 15 are doing the work. The trait isn't.

2

"The new PREs close the gap."

Convintro adds a site of action waterhemp has never seen in soybeans. Tendovo puts three groups in one jug for any trait — including none.

3

"The premium is the difference."

Same weed control, same herbicide budget give or take a grass product, and a Non-GMO contract premium on top.[1]

Before you spray: the Non-GMO checklist

- ☐ Confirm the variety's metribuzin tolerance with your Confluence agronomist.
- ☐ Check Convintro's registration status in your state for 2027.
- ☐ Map last year's escapes and set pressure level field by field.
- ☐ Book PRE and layered-residual products together so the second pass isn't late.
- ☐ Clean the sprayer thoroughly between Non-GMO and trait fields.
- ☐ Keep application records — identity-preserved contracts may ask for them.

Ask your Confluence representative for

- Variety metribuzin tolerance ratings
- A field-by-field pressure plan
- Non-GMO premium contract options

Sources

1. Non-GMO premiums vary by contract, delivery point and year. USDA AMS weekly Non-GMO report: food-grade soybeans, East, about $2.70/bu over CBOT (Aug 28, 2026).

2. Beck's Hybrids, Practical Farm Research — Soybean Herbicide Program Recommendations (NonGMO platform), accessed Oct 2026.

3. Bayer Crop Science — Convintro product page and EPA approval release (July 2026); Minnesota Dept. of Agriculture diflufenican review (Aug 2026); UNL CropWatch, new herbicides for corn and soybeans; Farm Progress, new herbicide products.

4. Syngenta — Tendovo product information; Mississippi Soybean Promotion Board, "Tendovo: Tri-Mix Herbicide."

5. Sarangi et al., Weed Science 72(6), 2024 — Profile and extent of herbicide-resistant waterhemp in Minnesota (90 populations; seed collected 2020–21; screened at 1× and 3× the labeled rate).

6. Iowa State University Extension — Herbicide programs for waterhemp control in soybean (2021).

7. Corteva Agriscience — Kyber Pro specimen label (EPA Reg. 59639-236); Sonic Boom and Enversa product information. BASF — Zidua PRO specimen label (EPA Reg. 7969-365).

8. Valent U.S.A. — Select Max herbicide, cotton and soybeans quicksheet.

Always read and follow label directions. Not all products are registered in all states. Rates shown are guides; consult the product label for rates by soil type, rotational restrictions and tank-mix partners. Product names are trademarks of their respective owners. This guide is not a substitute for the product label or local agronomic advice.