

The discovery of new herbicides as a continuous improvement tool



Agenda

- ❑ What is Rinskor™ active
- ❑ Milestone™ NXT with Rinskor™ active
- ❑ Restore™ NXT with Rinskor™ active

Milestone™ NXT

Rinskor™ active

HERBICIDE

Restore™ NXT

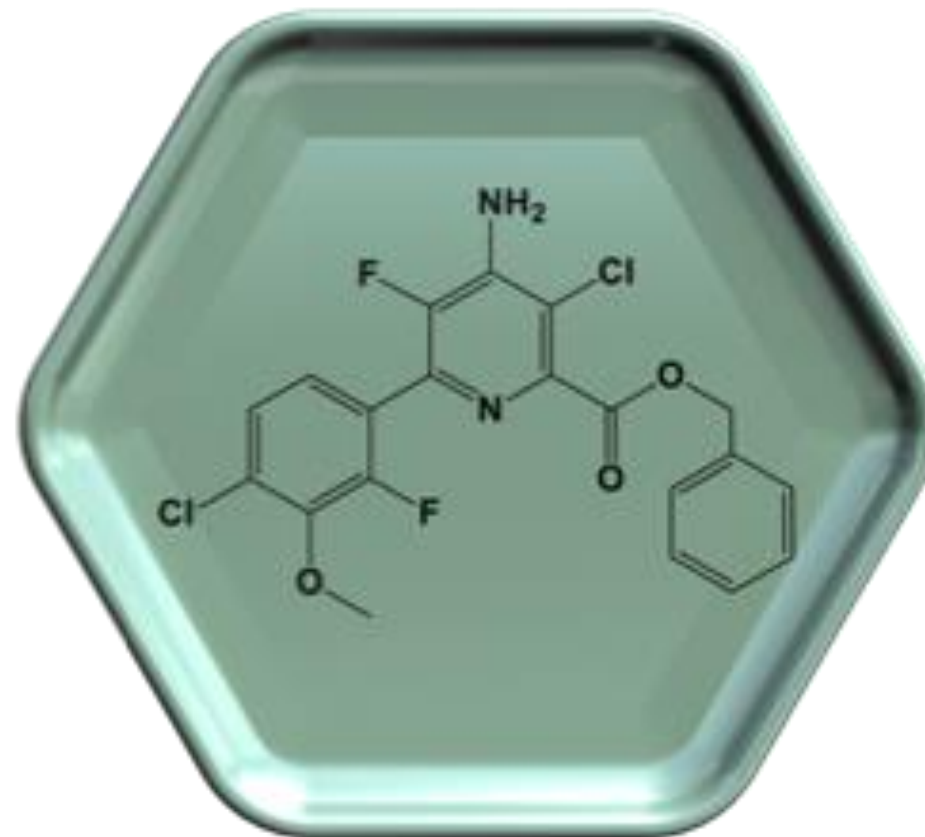
Rinskor™ active

HERBICIDE



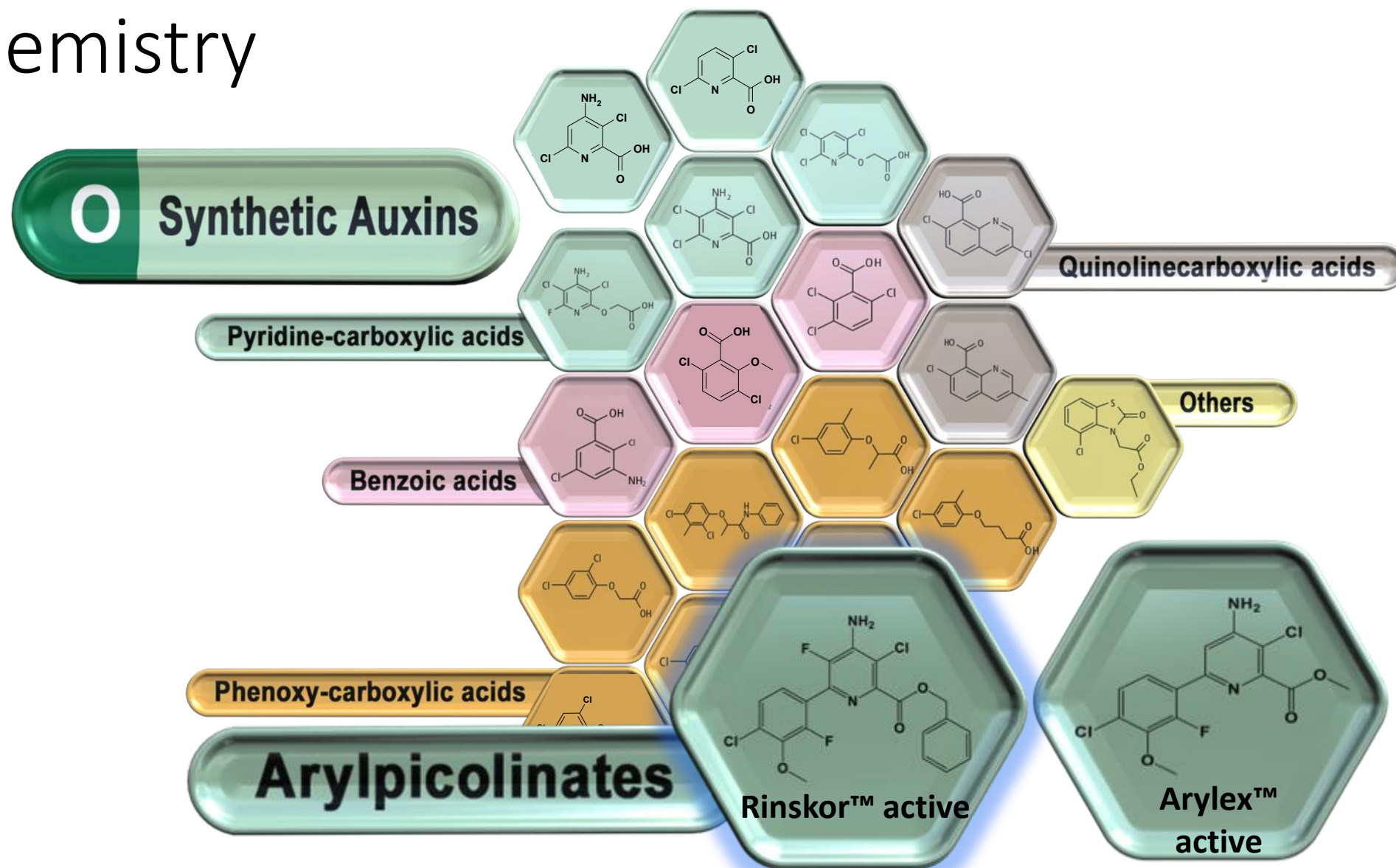
What is Rinskor™ active

Biology features of Rinskor Active



Rinskor™ active is a new herbicide discovered by and is proprietary to Corteva Agriscience™. It is labelled in Canada for broad-spectrum, post-emergence weed control in pasture and industrial applications.

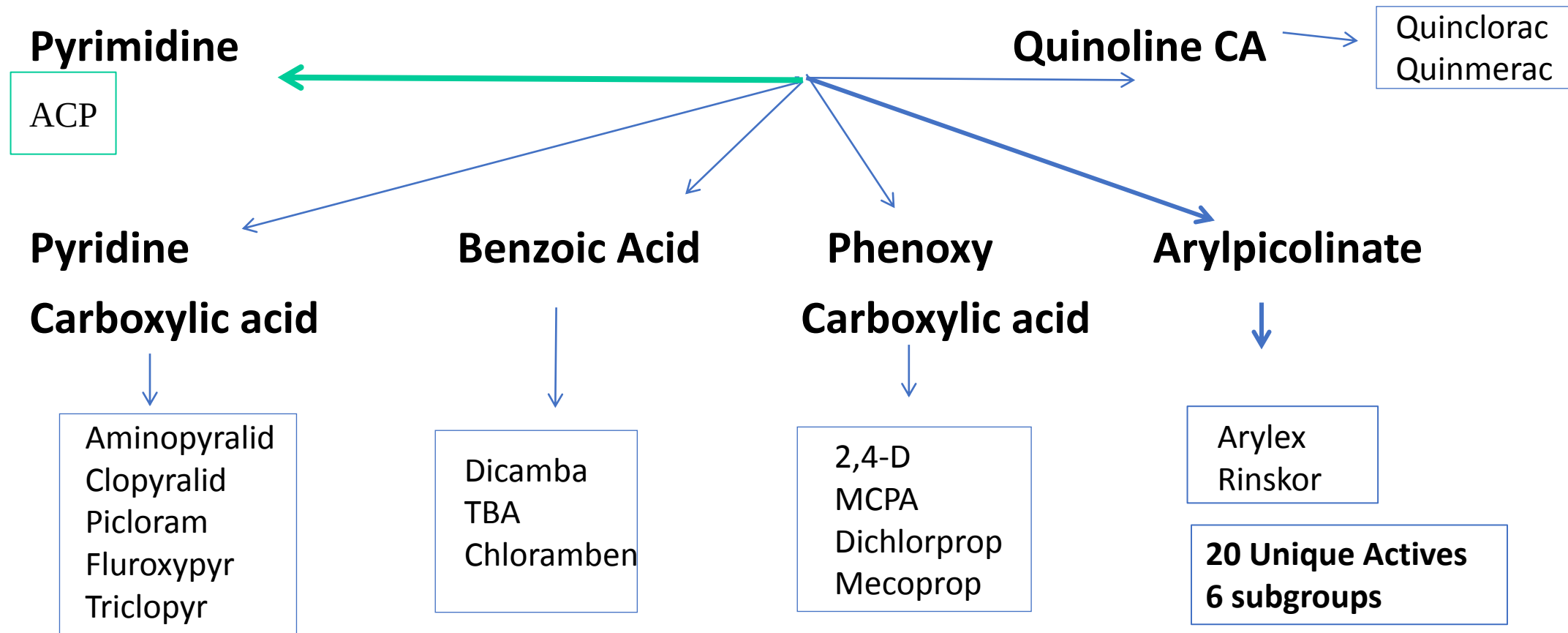
Arylpicolinates: A Brand-New Class of Chemistry



Group 4 - Synthetic AUXIN

Rinskor™ active

AUXIN Subgroups



What is Rinskor™ active?

Active name
florpyrauxifen-
benzyl

New
arylpicolinate
herbicide

Broad spectrum
Post emergence
control on
grasses, sedges,
and broadleaf
species

Low use rate

Rapid
degradation in
soil and tolerant
plant tissue

Favourable
environmental
fate, toxicology
and
ecotoxicology
profile

Degradation

- ❑ In aerobic soil, Rinskor™ active half-lives ranging from 2.5 to 34 days
- ❑ Anaerobic soil half-lives ranging from 7 to 15 days
- ❑ Rinskor™ active can be classified as immobile based on soil Koc values ranging from 23,028 to 47,763 mL/g
- ❑ In aquatic environments Rinskor™ active is short lived with half-lives ranging from 4 to 6 days in aerobic and 2 days in anaerobic conditions.
- ❑ Degradation in surface water is accelerated when exposed to sunlight as the Rinskor™ active photolytic half-life is less than 2 hours

Video: How the Arylpicolimates Work



Vegetation management



**Electric Power and
Utility Rights-of-way**



Roadsides



Grazed Areas



Non-crop Areas

A submission to register vegetation management uses under **Milestone NXT** and pasture uses under **Restore NXT** for Rinskor active has been made in Canada. The list of proposed/approved weeds and sites of use may differ from the US approved label.

Aquatic uses registered in the US under ProcellaCOR SC (EPA# 67690-79)



TABLE 3. Vascular aquatic plant control with in-water application

Vascular Aquatic Plants Controlled: In-Water Application	
Common name	Scientific name
Floating Plants	
Mosquito fern	<i>Azolla</i> spp.
Water hyacinth	<i>Eichhornia crassipes</i>
Emerald Plants	
Alligatorweed	<i>Alternanthera philoxeroides</i>
American lotus	<i>Nelumbo lutea</i>
Floating heart	<i>Nymphoides</i> spp.
Spikerush, slender or creeping	<i>Eleocharis baldwinii</i>
Water pennywort	<i>Hydrocotyle umbellata</i>
Water primrose	<i>Ludwigia</i> spp.
Watershield	<i>Brasenia schreberi</i>
Submersed Plants	
Baby Tears	<i>Micranthemum</i> spp.
Bacopa	<i>Bacopa</i> spp.
Coontail ¹	<i>Ceratophyllum demersum</i>
Hydrilla	<i>Hydrilla verticillata</i>
Hygrophila	<i>Hygrophila polysperma</i>
Limnophila	<i>Limnophila sessiliflora</i>
Rotala	<i>Rotala</i> spp.
Spikerush, slender or creeping	<i>Eleocharis baldwinii</i>

TABLE 4. Vascular aquatic plant control with foliar application

Vascular Aquatic Plants Controlled: Foliar Application	
Common name	Scientific name
Floating Plants	
Mosquito fern	<i>Azolla</i> spp.
Water hyacinth	<i>Eichhornia crassipes</i>
Emerald Plants	
Alligatorweed	<i>Alternanthera philoxeroides</i>
American lotus	<i>Nelumbo lutea</i>
Floating heart	<i>Nymphoides</i> spp.
Parrotfeather (emersed)	<i>Myriophyllum aquaticum</i>
Water pennywort	<i>Hydrocotyle umbellata</i>
Water primrose	<i>Ludwigia</i> spp.
Watershield	<i>Brasenia schreberi</i>

A submission to register aquatic uses, under ProcellaCor FX Herbicide, for Rinskor active has been made in Canada. The list of proposed pests differs from the US approved label.



Milestone™ NXT and Restore™ NXT

Milestone™ NXT Herbicide and Restore™ NXT Herbicide

Minimum spray
volume of 100
LPH

Should be applied
with MSO at 0.5-
1% v/v or Gateway
from 0.25-0.5% v/v



Milestone™ NXT with Rinskor™ active

Milestone™ NXT with Rinskor™ active

Milestone™ NXT

Rinskor™ active

HERBICIDE

- ☐ Group 4
 - ☐ Pyridine
 - ☐ Arylpicolinate
- ☐ Wettable Granule (WG)
- ☐ Aminopyralid 60% and Florpyrauxifen 4.77%
- ☐ 200 g/Ha/Year
- ☐ Rate range 100 – 200 g/Ha
- ☐ Surfactants
 - ☐ Gateway 0.25% - 0.5% v/v
 - ☐ MSO 0.5% - 1% v/v
- ☐ Back pack rate: 2 g / 10 L and 50 ml surfactant

Milestone™ NXT with Rinskor™ active

Milestone™ NXT

Rinskor™ active

HERBICIDE

☐ New additions to the label

- ☐ Poison Hemlock
- ☐ Wild Chervil
- ☐ Wild Parsnip
- ☐ Wild Caraway
- ☐ Cleavers
- ☐ Annual sowthistle
- ☐ Common Waterhemp
- ☐ Velvet Leaf

Trial 2023: Milestone NXT

Wild Parsnip

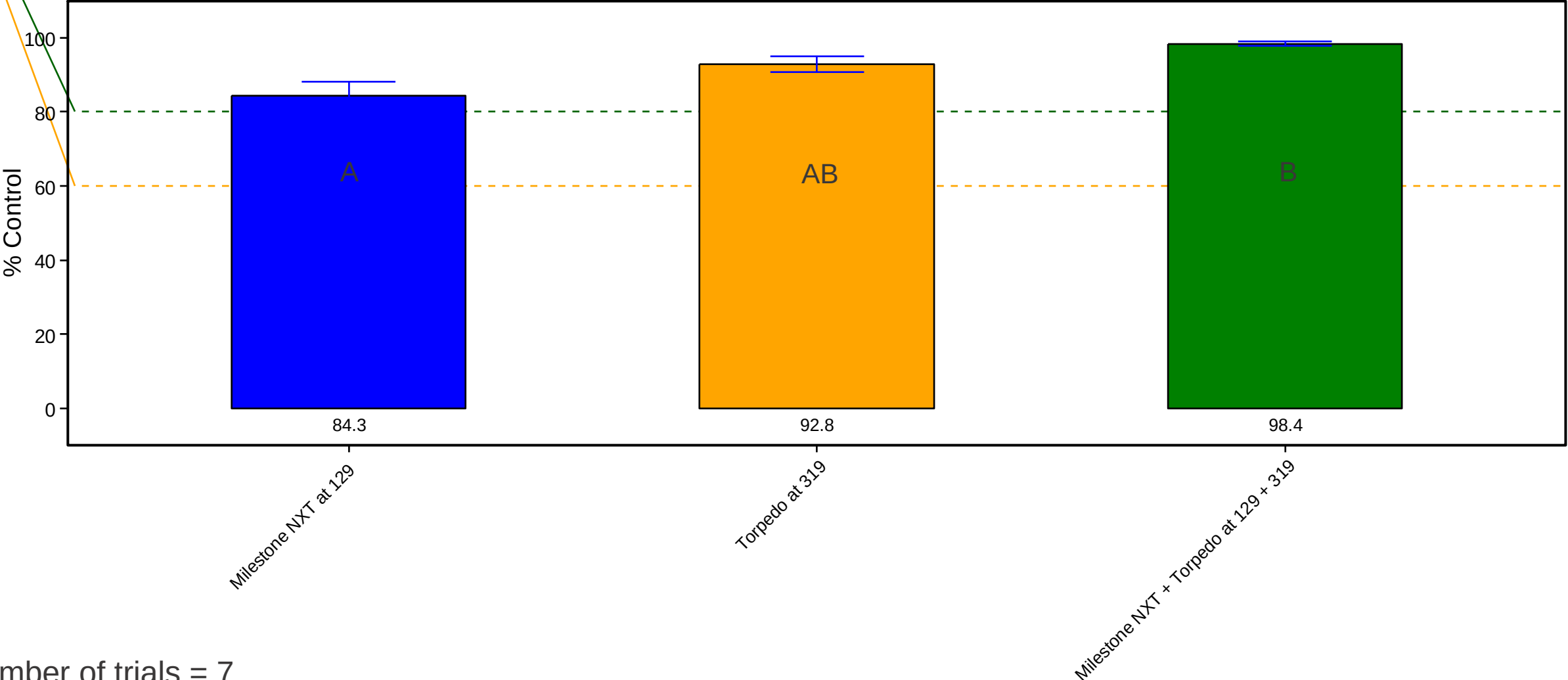
Rate 200 g/Ha

Water volume 200 L/Ha



Milestone™ NXT and Torpedo® Herbicide Kochia control 4-5 weeks after application

Mean values below box. Number of observations above box

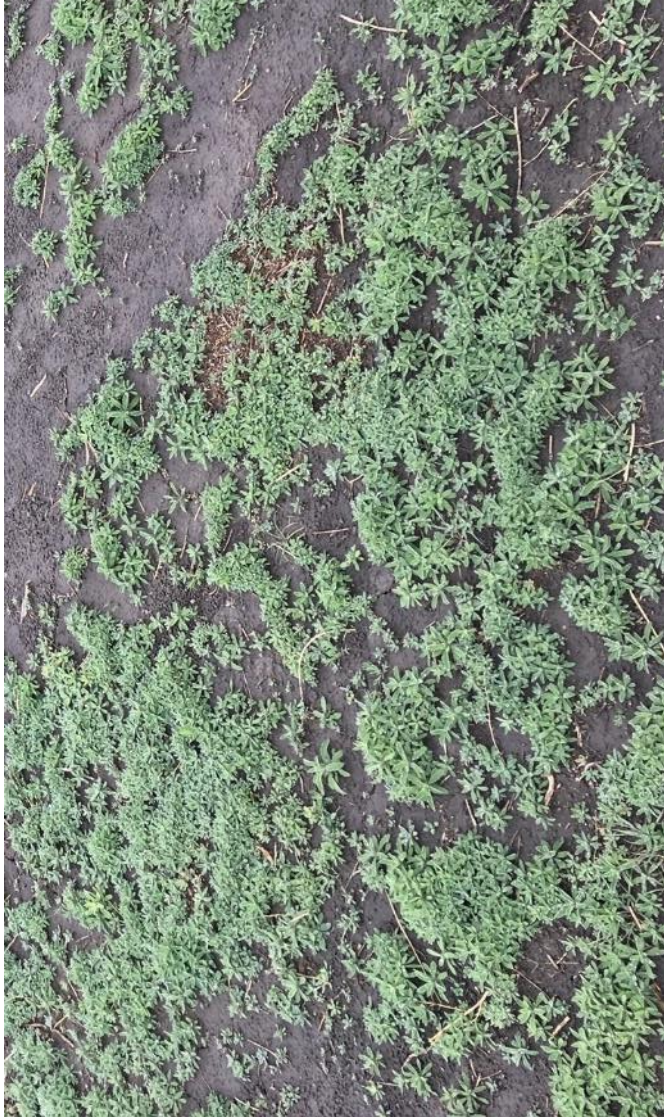


Number of trials = 7
Glyphosate added to all treatments
Gateway adjuvant included at 0.25% v/v

Treatments (g ae/ai/ha)

---internal use---

Site sprayed: April 26, 2019
Pictures taken: May 24, 2019



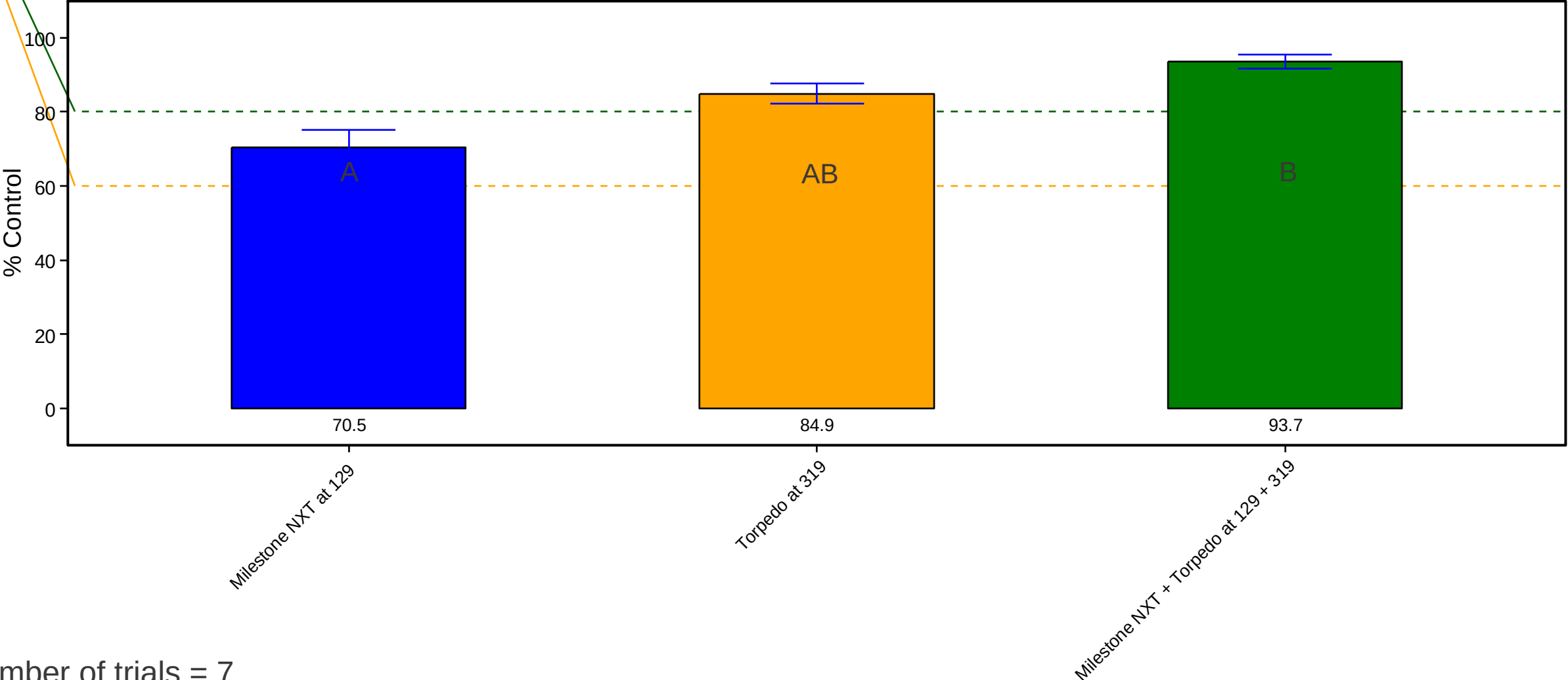
Untreated



Pictures: Smith,
2019
MilestoneTM NXT +

Milestone™ NXT and Torpedo® Herbicide Kochia control 6-8 weeks after application

Mean values below box. Number of observations above box

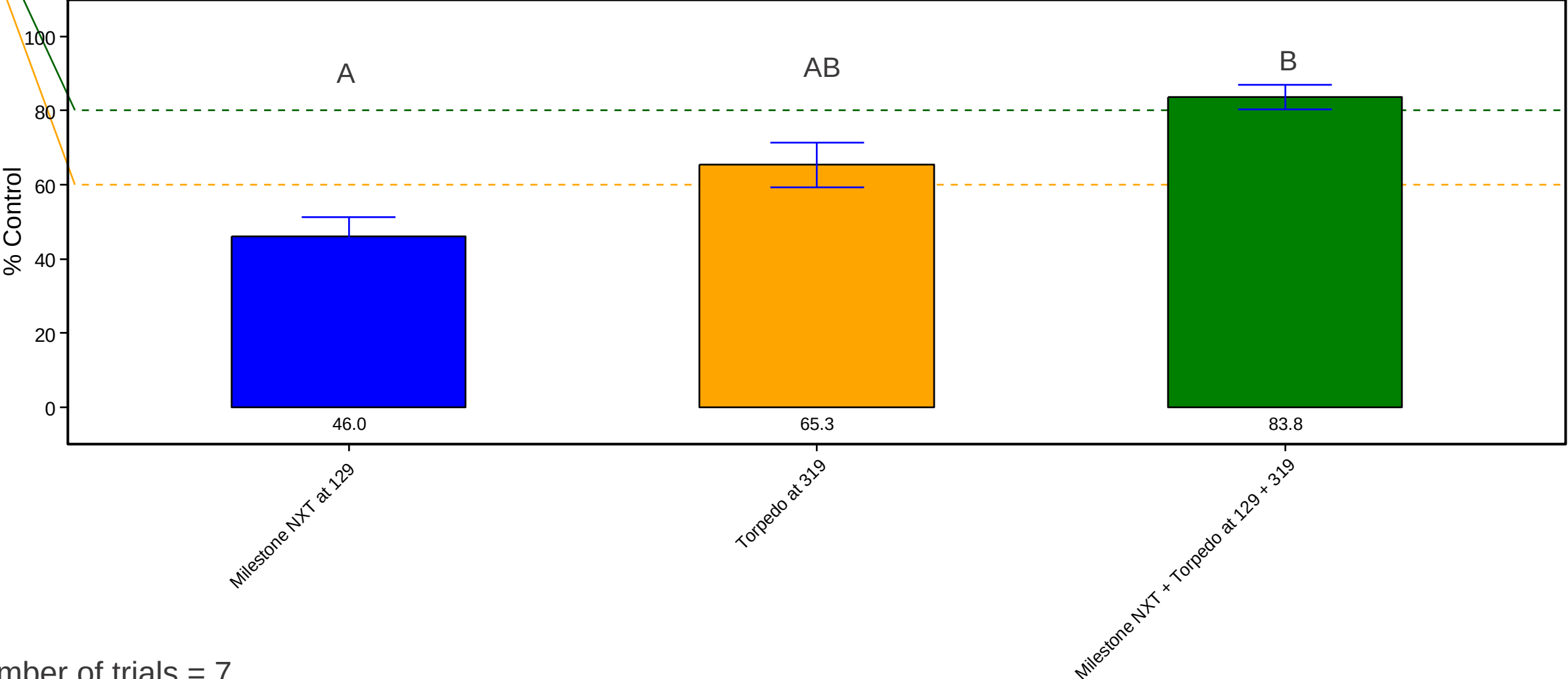


Number of trials = 7
Glyphosate added to all treatments
Gateway adjuvant included at 0.25% v/v

Treatments (g ae/ai/ha)

Milestone™ NXT and Torpedo® Herbicide
Kochia control 11-13 weeks after application

Mean values below box. Number of observations above box



Number of trials = 7

Glyphosate added to all treatments

Gateway adjuvant included at 0.25% v/v

Treatments (g ae/ai/ha)



Restore™ NXT with Rinskor™ active



Restore™ NXT with Rinskor™ active

Restore™ NXT

Rinskor™ active

HERBICIDE

- ❑ Group 4
 - ❑ Pyridine
 - ❑ Arylpicolinate
- ❑ Aminopyralid 80% and Florpyrauxifen 6.36%
- ❑ Rate range 0.75 – 1.5 L / Ha
- ❑ Surfactants
 - ❑ Gateway 0.25% - 0.5% v/v
 - ❑ MSO 0.5% - 1% v/v
- ❑ Backpack rate: 15 ml / 10 L and 50 ml surfactant
- ❑ 1.5 L / Ha / Year

Restore™ NXT with Rinskor™ active

Restore™ NXT

Rinskor™ active

HERBICIDE

☐ New additions to the label

- ☐ Poison Hemlock
- ☐ Wild Chervil
- ☐ Wild Parsnip
- ☐ Wild Caraway
- ☐ Cleavers
- ☐ Mullein
- ☐ Orange Hawkweed
- ☐ Purple loosestrife

☐ 2,4-D addition additional weeds

Trial 2023: Restore NXT Wild Parsnip

Rate 1.5 L / Ha
Water volume 200 L / Ha



Roadside Wild Parsnip



Trial 2023 Control Wild Parsnip





Questions

Non-profit industry stewardship organization

- Cleanfarms is the Canadian leader in agricultural plastic recycling and recovery, contributing to a sustainable future.

~200 members

- Pesticide, fertilizer, seed, animal health medication, peat, animal bedding, feed, ag plastics, maple syrup tubing industries

