COMPARING EFFECTIVENESS OF TERRAVUE TO STANDARDS ON ROADSIDES IN WISCONSIN

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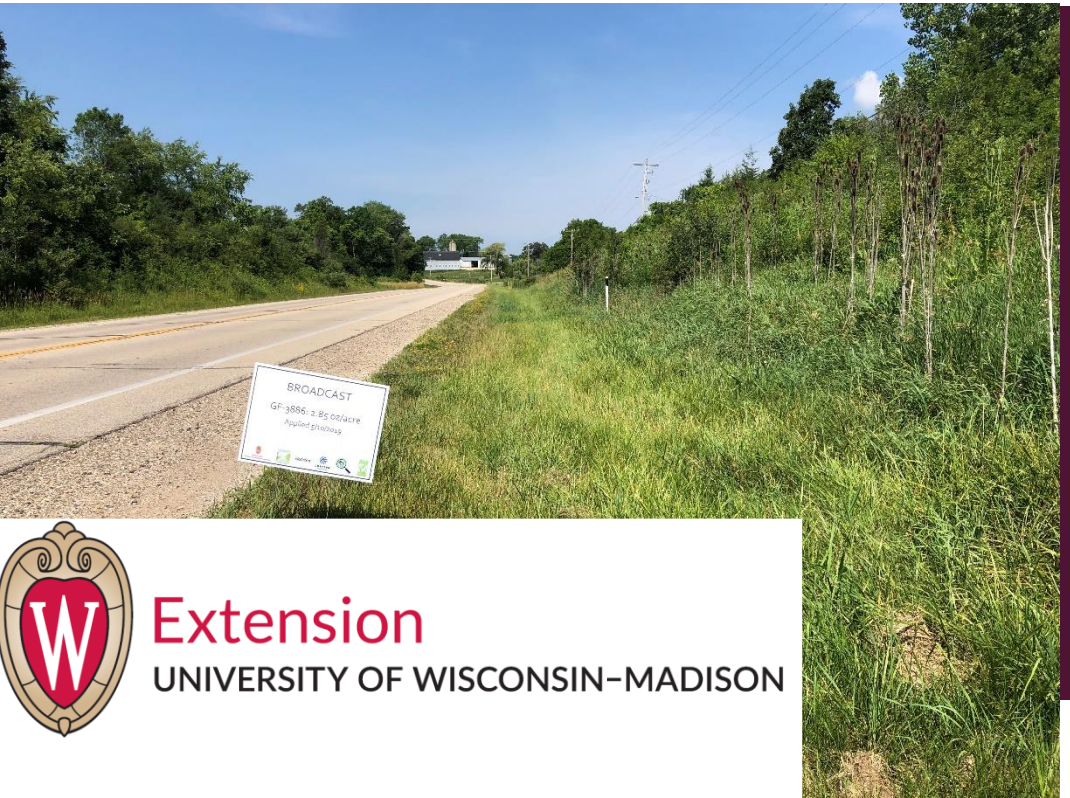
HTTPS://RENZWEEDSCIENCE.CALS.WISC.EDU/



Extension
UNIVERSITY OF WISCONSIN–MADISON

HERBICIDES ARE A KEY COMPONENT OF INVASIVE PLANT MANAGEMENT

- Positive attributes
  - Effective
  - Economical
- Negative attributes
  - Risk of non-target injury
  - Movement offsite
  - Environmental contamination

NEW HERBICIDES MINIMIZE NEGATIVE ATTRIBUTES

- TerraVue
  - Aminopyralid (Milestone)
    - No volatilization
    - Environmental impact low
    - Long residual
  - Florpyrauxifen-benzyl
    - Short-lived in environment
    - Environmental impact low

HOW EFFECTIVE IS TERRAVUE ON COMMON INVASIVE PLANTS?

- Combination of aminopyralid (Milestone) + Florpyrauxifen
  - Should provide equivalent control as Milestone

- What additional species does adding Florpyrauxifen control?
  - Verify species in carrot family are controlled with TerraVue

HOW EFFECTIVE IS TERRAVUE ON KEY INVASIVE PLANTS IN WISCONSIN?

- Species that are typically controlled with Milestone
  - Crown vetch, teasel, spotted knapweed, Canada thistle

- Species not typically controlled with Milestone
  - Wild parsnip, wild chervil, wild carrot (queen anne's lace)
  - Activity on brush (just established research in 2020)

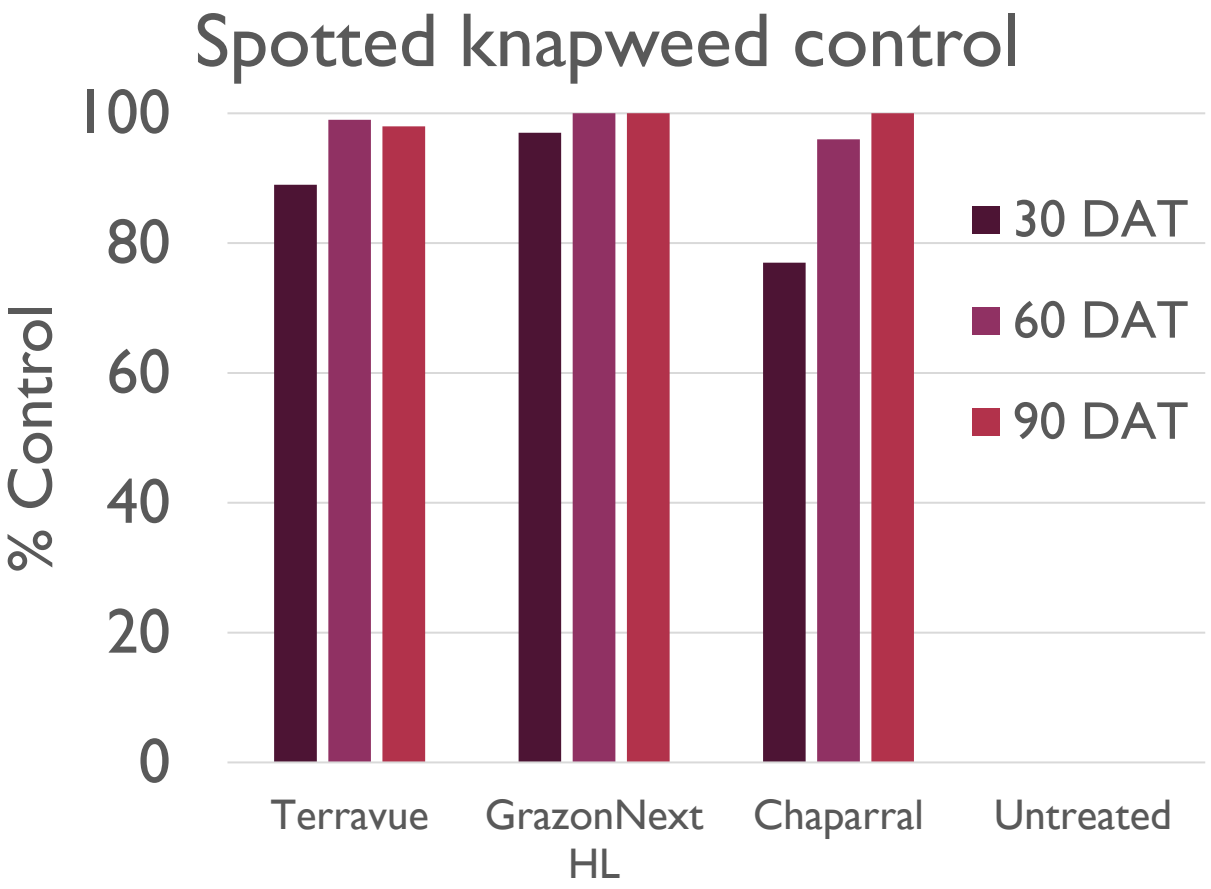
HOW WE EVALUATE HERBICIDE EFFECTIVENESS

1. Dense population of target weed species
2. Replicated trial
3. Broadcast treatments
   - 10 x 25 ft per plot
   - **20 GPA**
   - Uniform coverage/distribution
4. Evaluate results over 6-12 months

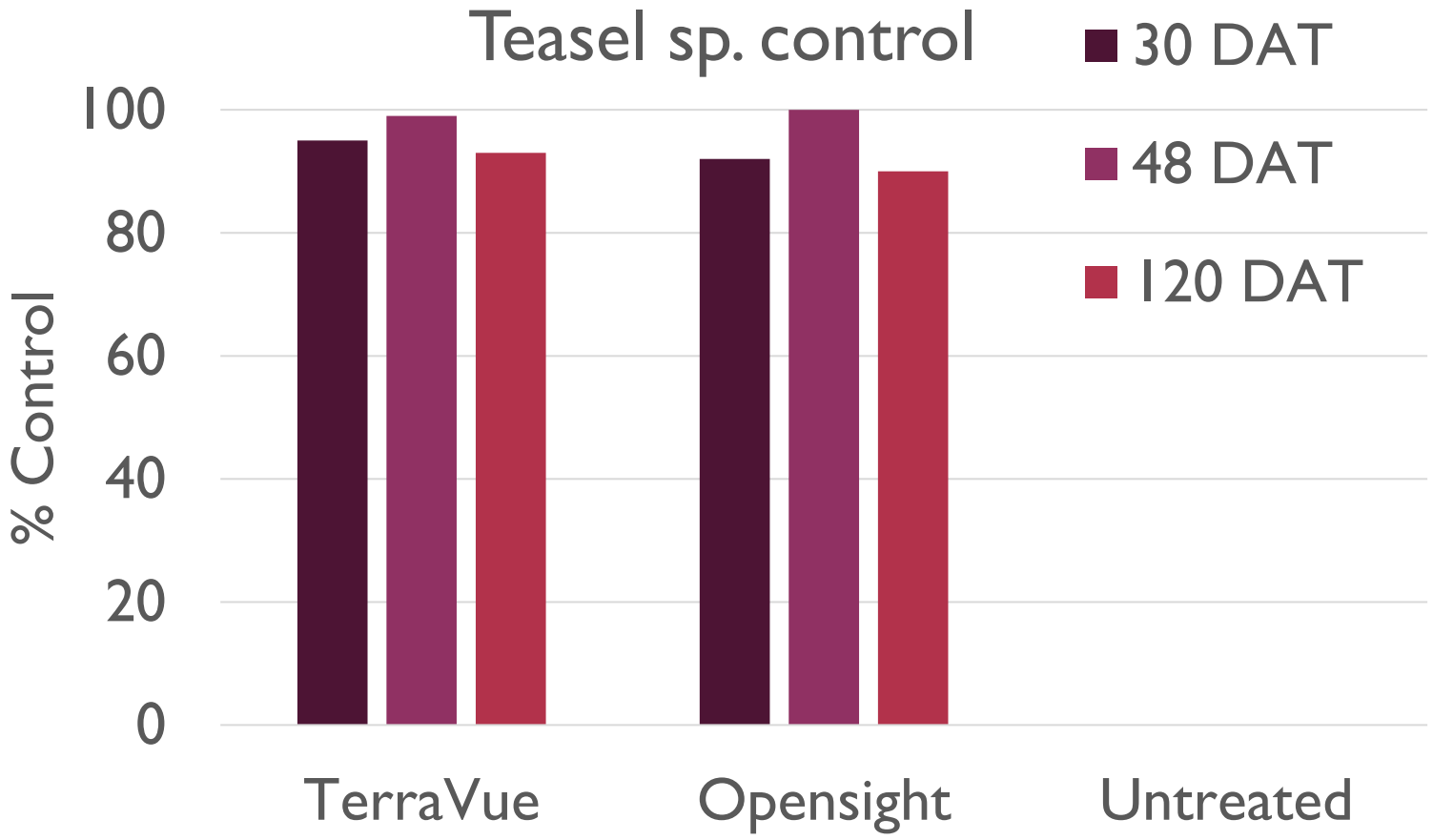
DOES TERRAVUE HAVE EQUAL CONTROL ON INVASIVE PLANTS TYPICALLY CONTROLLED BY AMINOPYRALID CONTAINING PRODUCTS?

Milestone, Chaparral, Opensight, GrazonNext HL, and MORE…..

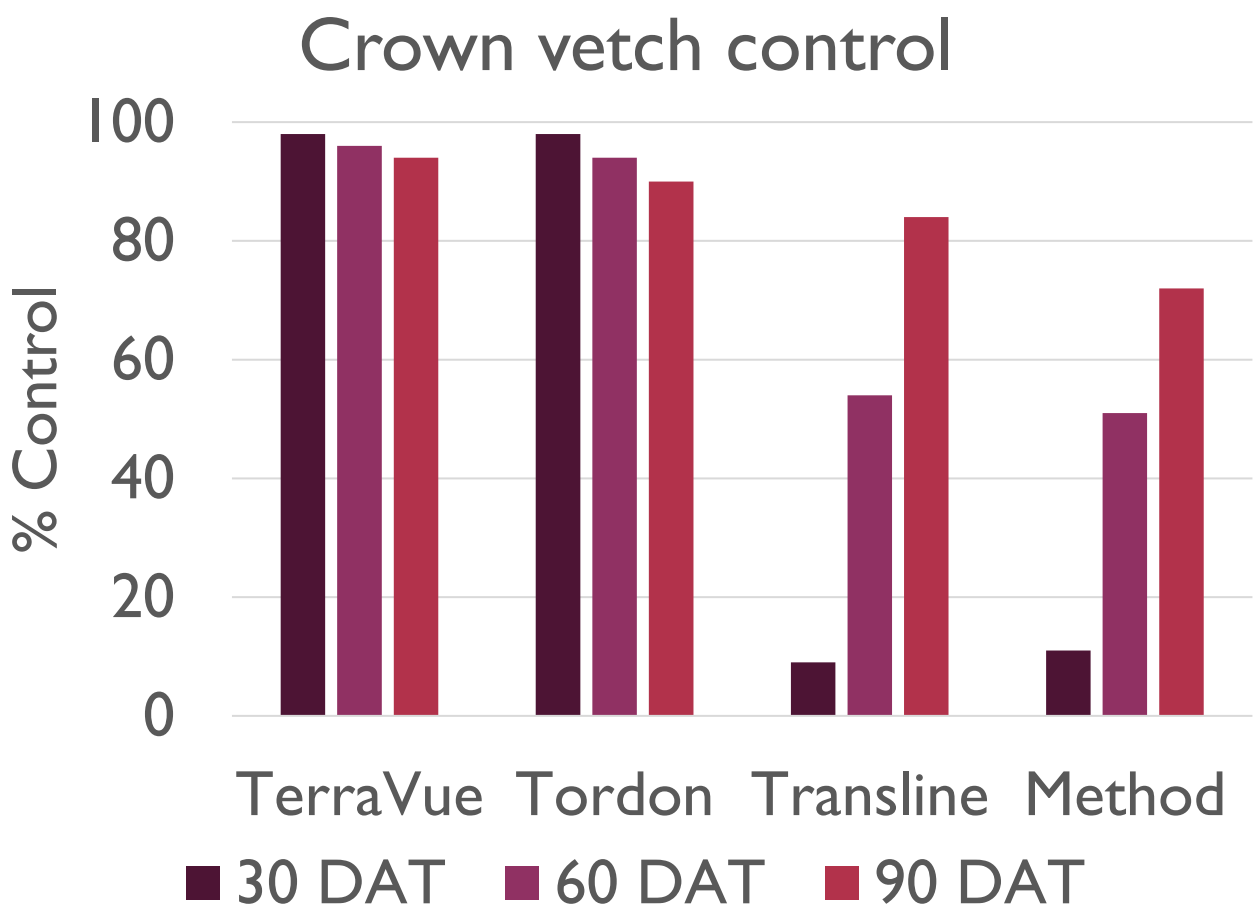
EQUAL CONTROL OF SPOTTED KNAPWEED WITH PRODUCTS THAT CONTAIN MILESTONE AT 5 FL OZ A



EQUAL CONTROL OF TEASEL WITH PRODUCTS THAT CONTAIN MILESTONE



PRODUCTS THAT CONTAIN MILESTONE CONTROL CROWN VETCH



SUMMARY

- TerraVue provides similar control of invasive plants typically targeted for control with aminopyralid (Milestone)

Wild chervil

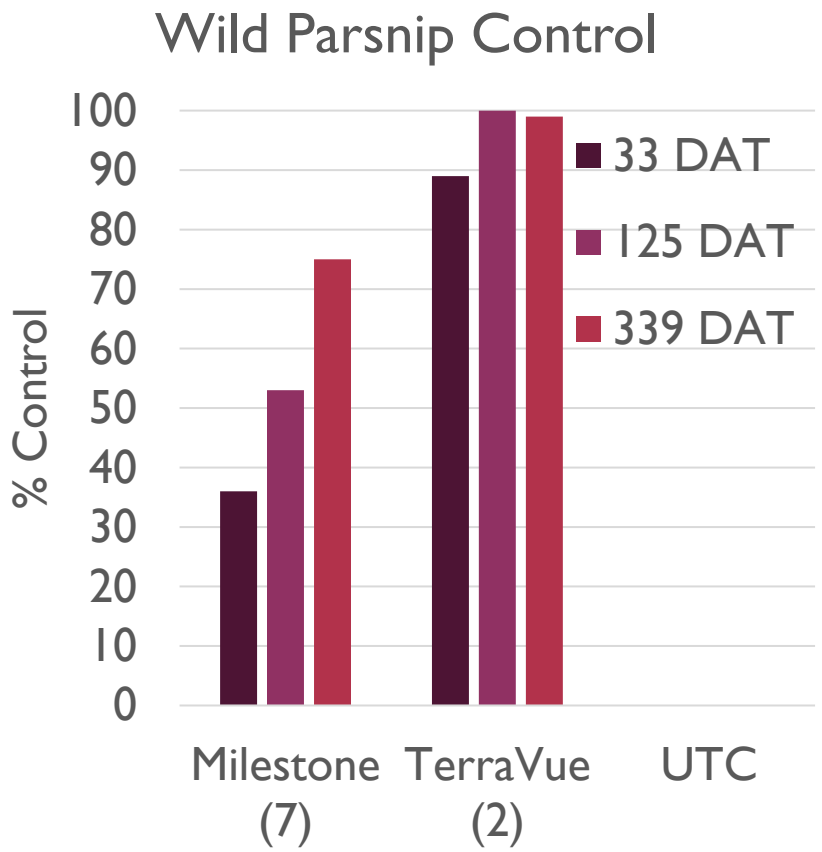
Wild parsnip (*Pastinaca sativa*)

DOES TERRAVUE PROVIDE HIGH LEVELS OF CONTROL TO COMMON INVASIVE PLANTS NOT WELL CONTROLLED BY AMINOPYRALID?

WILD PARSNIP, NOT CONTROLLED BY MILESTONE BUT IS WITH TERRAVUE

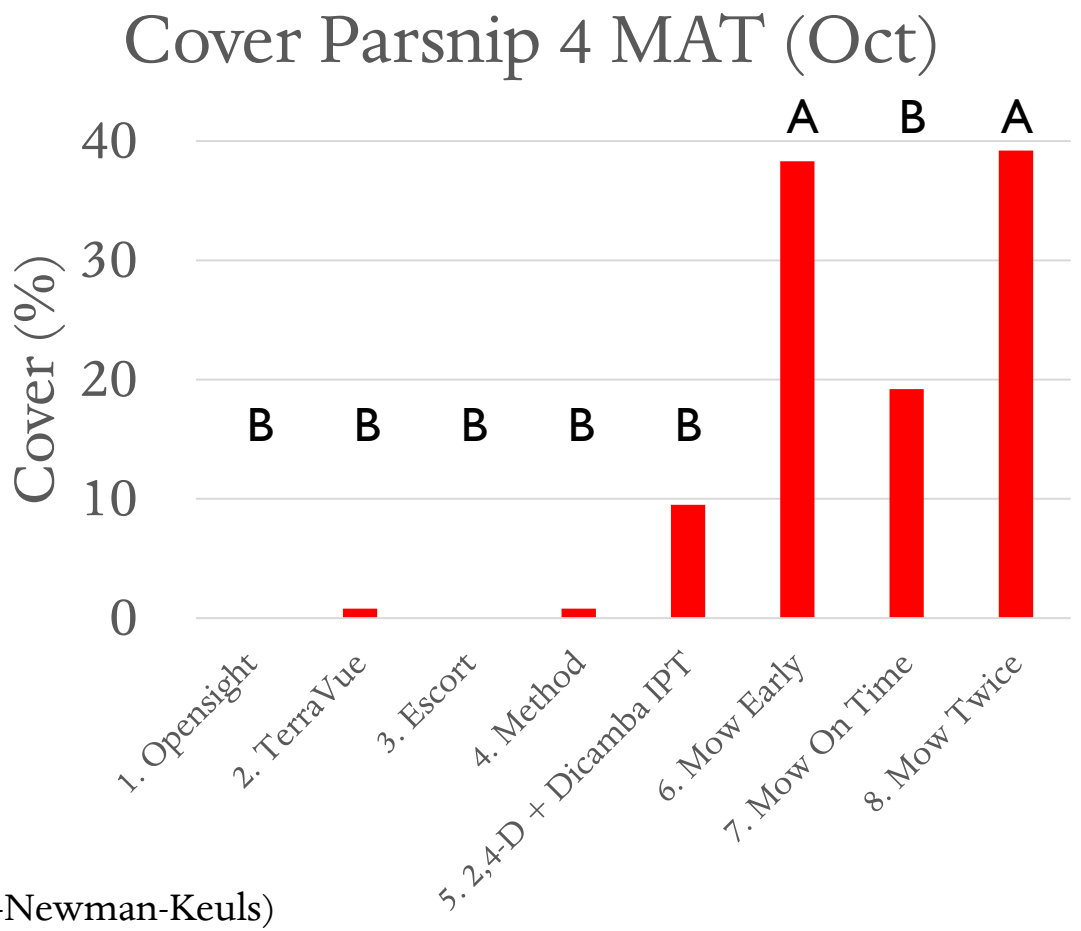
- Milestone = 25-75% control
- TerraVue = 90-100% control

- Standards also effective (90-100%)
  - Escort (metsulfuron) 0.5-0.75 oz/A
  - Method (aminocyclopyrachlor) 4-8 oz/A



WILD PARSNIP CONTROL ROADSIDE TRIALS 2 LOCATIONS IN WI

- Spring applications (early – mid may)
- Known effective control
  - Metsulfuron (Escort, Opensight)
  - Aminocyclopyrachlor (Method)
  - 2,4-D
  - Dicamba
  - On-time mowing?



Bars labelled with the same letter do not significantly differ at P=0.05 (Student-Newman-Keuls)

2.5 MAT

July 2019, Portage County

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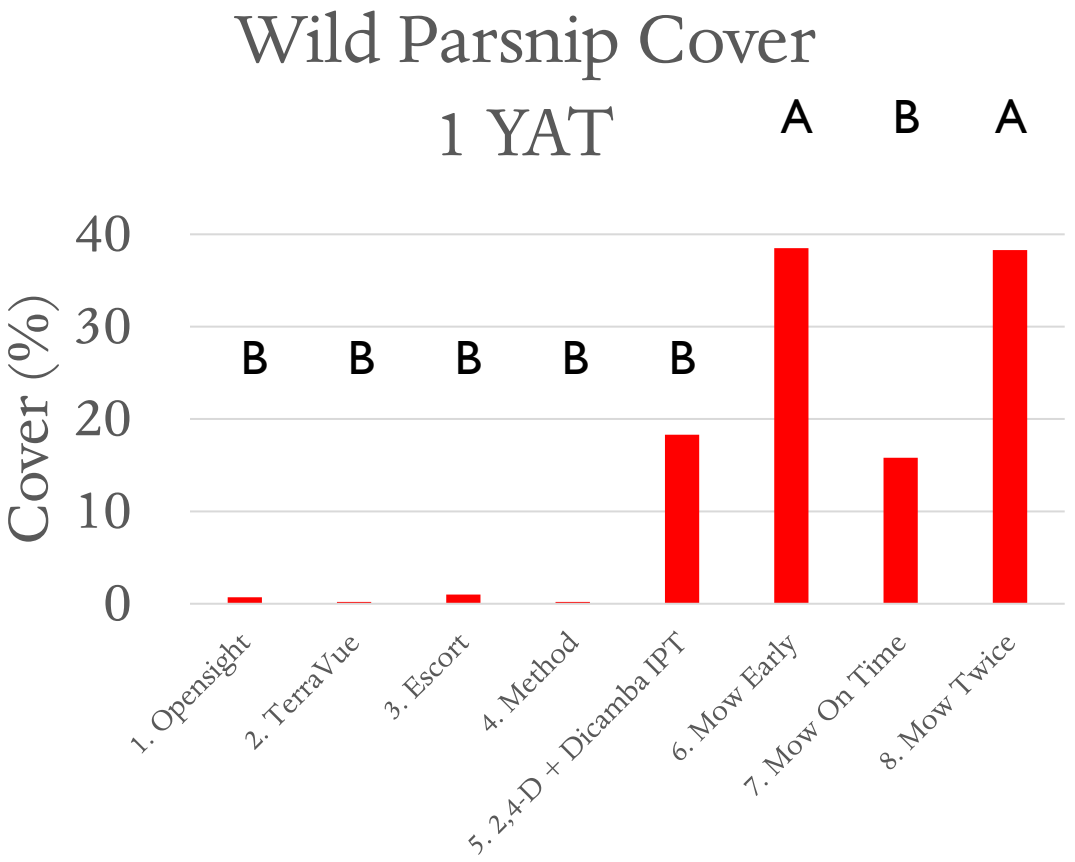

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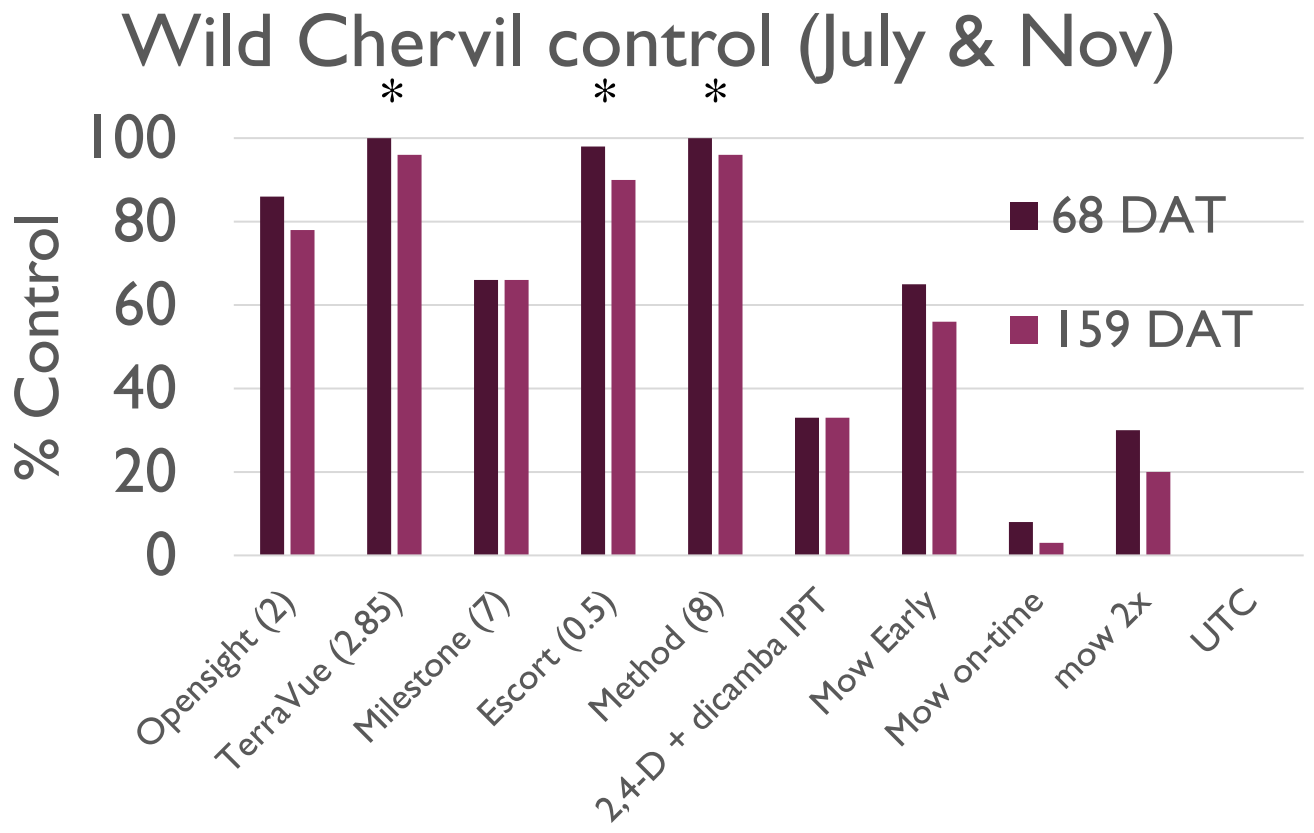
WILD CHERVIL, A PROBLEM ON OUR ROADS WITH LIMITED INFO ON EFFECTIVE HERBICIDES

- Spreading throughout WI, due to early development
- Reports that metsulfuron is effective, limited info on other products

WILD CHERVIL CONTROL ROADSIDE TRIALS 1 LOCATIONS IN WI

- Spring applications (mid may)
- Known effective control
  - Metsulfuron (Escort, Opensight)



- * indicates different than UTC P< 0.05

TerraVue 2.85 oz/A

Milestone 7 fl oz/A

WHAT WE KNOW ABOUT TERRAVUE EFFICACY ON INVASIVE PLANTS

- If controlling with aminopyralid (Milestone), TerraVue is equally effective
  - Canada thistle, spotted knapweed, crown vetch, biennial thistles, teasel
- TerraVue controls many species milestone does not
  - wild parsnip, wild chervil, wild carrot
  - Control equal to standard treatments

Herbicide Treatments with >90% control on all target species (rate)	**Cost**
Escort (0.5 oz/A) + NIS** (0.25% v/v)	$
Opensight (2 oz/A) + MSO* (1% v/v)	$$
TerraVue (2.85 oz/A) + MSO* (1% v/v)	$$
Method (8 fl oz/A) + MSO* (1% v/v)	$$$

CAN IT ALSO BE USED ON WOODY PLANTS?

CURRENTLY EVALUATING ON
Autumn olive and common buckthorn

- Initial results look promising
- YAT evaluation critical

1. TerraVue (0.228 oz/Gal) @ 3 MAT on autumn olive

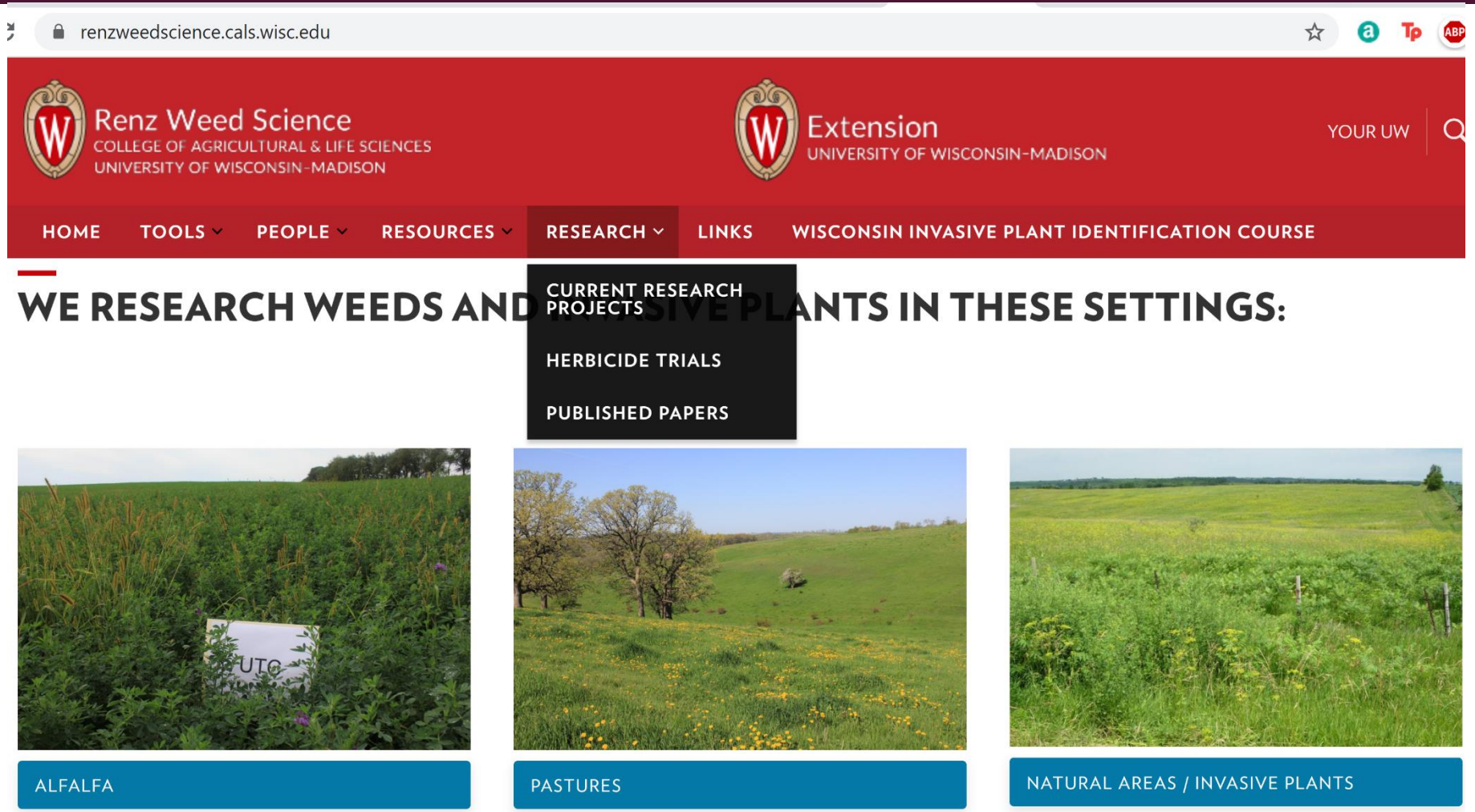
2. DuraCor (0.71% v/v) @ 3 MAT on buckthorn

WHAT NATIVE/DESIRABLE SPECIES ARE SENSITIVE?

- Next talk will summarize what is known by Corteva
- trials in Wisconsin
  - Tolerant: Smooth penstemon, pale indian plantain
  - Sensitive: Wild bergamot

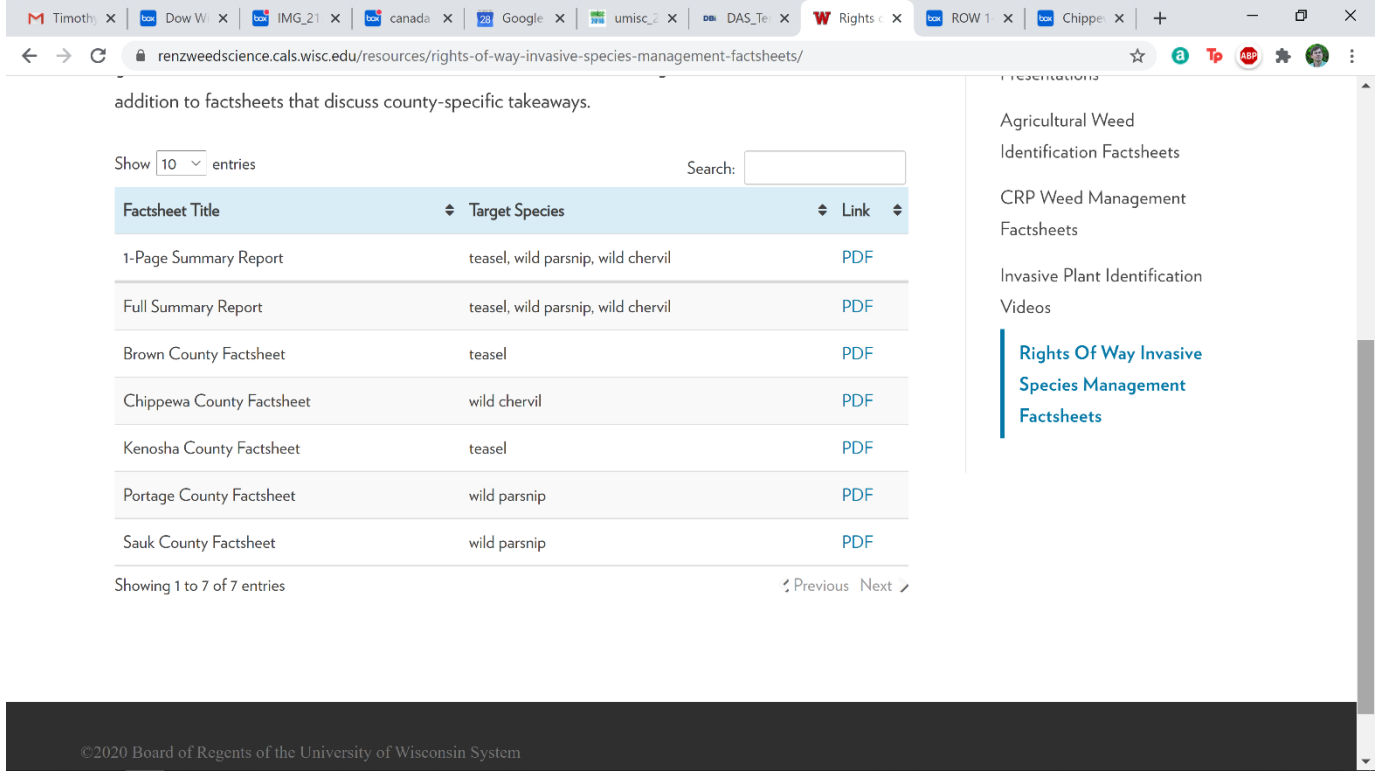
pale indian plantain 2 MAT wild bergamot

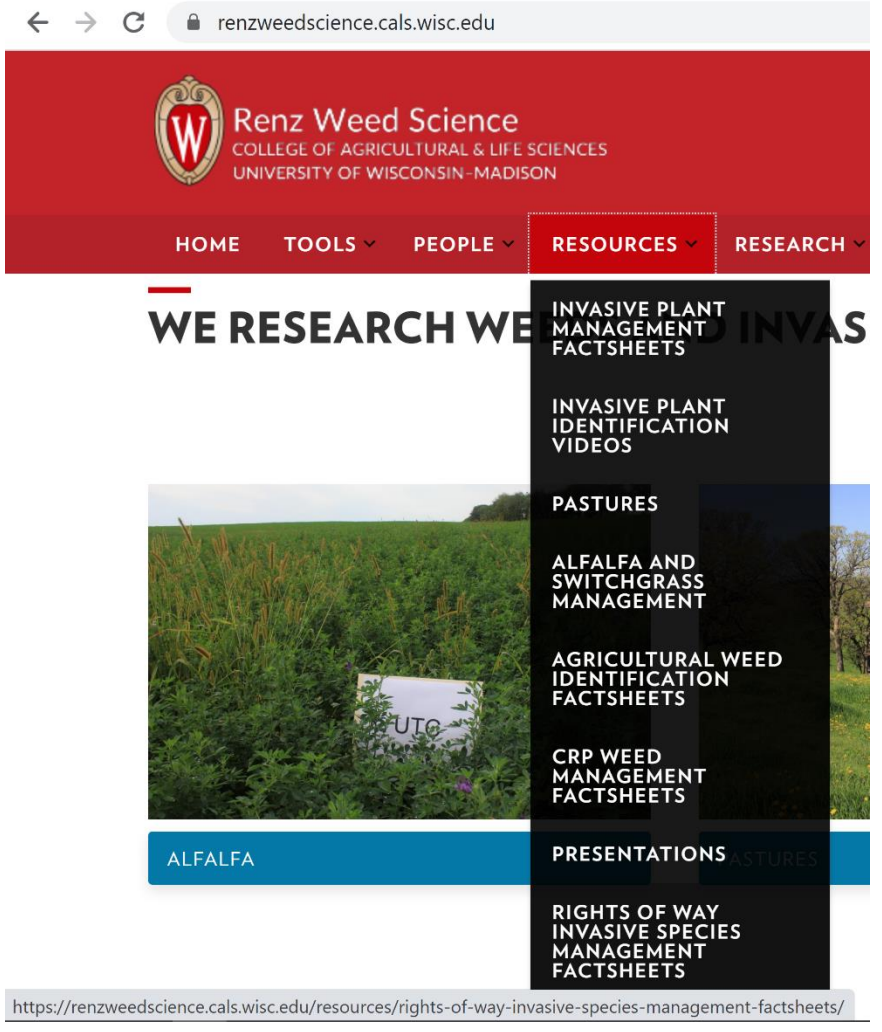
WHERE CAN YOU FIND SUMMARIES OF THESE EXPERIMENTS?



WHERE CAN YOU FIND SUMMARIES OF THESE EXPERIMENTS?

- www.renzweedscience.cals.wisc.edu
- Factsheets/summaries available for roadside trials





THANK YOU TO ALL WHO HELPED!