

# USING HERBICIDES OR MOWING TO CONTROL WILD PARSNIP, TEASEL, AND WILD CHERVIL



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# FEW TOOLS AVAILABLE FOR LARGESCALE USE

## MOWING



VS

## HERBICIDE



# WHICH TREATMENTS THAT WE EVALUATED WERE YOU IMPRESSED WITH?

Why?

What restrictions and obstacles prevent you from adopting?

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# HOW DOES MOWING CONTROL BIENNIALS/SHORT-LIVED PERENNIALS?

## HOW DOES IT WORK?

**Timely** mowing does two things

1. Prevents the initial growth from producing viable seeds
2. Is done late enough in the season or multiple times to prevent resprouting plants from producing viable seeds

## WHAT HAPPENS TO THE PLANTS

- Biennials/monocarpic perennials die after they flower
  - Teasel, Wild Parsnip
- Perennials will persist for multiple years after flowering
  - Wild chervil
  - Spotted knapweed

*To work need to repeat until plant dies and prevent seed production*

# HOW LONG

## PREVENT SEED PRODUCTION

### Species specific

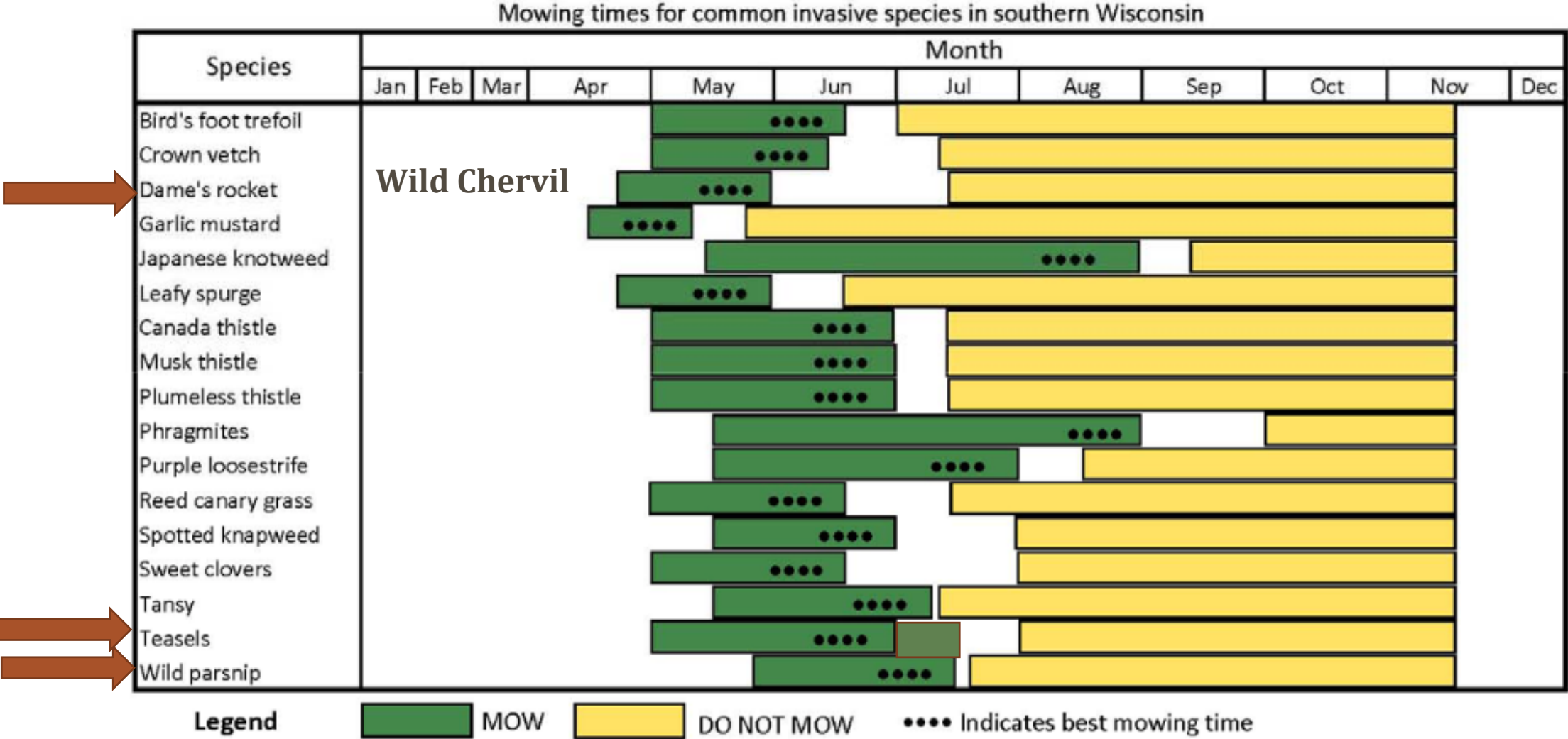
- Wild Parsnip: 2-4 years
- Teasel: < 6 years, most in first 2 years
- Wild Chervil: 1-3 years (?)
- Spotted knapweed: 5-7 years

## KILL ADULT PLANT

### Species specific

- Wild Parsnip: once it flowers
- Teasel: once it flowers
- Wild Chervil: 2-3 years (?)
- Spotted knapweed: 5-7 years (?)

# GRAPHIC OF MOWING TIMINGS





# SPECIFIC INFORMATION ON FACSTHEETS

## WILD PARSNIP

When secondary  
seedheads flower



## TEASEL

Just prior to petal emergence



## WILD CHERVIL

Unknown, sometime between  
flowering and green fruit





# WHAT HAPPENS IF YOU MOW EARLY?

**MOWED 6/14  
PICTURE TAKEN 6/25**

- Plants readily resprout and flower
- Mowing as late as possible to reduce resprouting
  - Some species if timed correctly only need 1 mowing per year (wild parsnip) others may need multiple mowings





# WHAT HAPPENS IF YOU MOW LATE?

- Spread seed to along roadside
  - Teasel dispersal on roadsides
    - Most seed 10-30 ft but some > 50 ft
    - In Illinois, population spread 800% if mowed within two years
- Illegal with regulated species





# I HAVE BEEN MOWING ON-TIME BUT POPULATIONS PERSIST WHY?

- Eliminate seed production from area mowed for 3-4 years
- Ensure seed from nearby infestations doesn't land in area





# HERBICIDES

Herbicide	Active ingredient
Opensight	Metsulfuron + aminopyralid
Escort	Metsulfuron
Milestone	Aminopyralid
Method	Aminocyclopyrachlor
Esplanade	Indazaflam
2,4-D	2,4-D
Banvel	dicamba
Roundup Pro	Glyphosate
Plateau (PGR)	imazapic





# HERBICIDES

Herbicide	Active ingredient	Selectivity	Soil Residual
Opensight	Metsulfuron + aminopyralid	Safe to established grasses	months – a year
Escort	Metsulfuron	Safe to established grasses	Months
Milestone	Aminopyralid	Safe to established grasses	Up to 1 year
Method	Aminocyclopyrachlor	Safe to established grasses	Can be > 1 year
Esplanade	Indazaflam	Safe to <b>some</b> established grasses	Up to 1 year
2,4-D	2,4-D	Safe to established grasses	Days
Banvel	dicamba	Safe to established grasses	Weeks
Roundup Pro	Glyphosate	Non selective	None
Plateau (PGR)	imazapic	Safe to <b>some</b> grasses	months



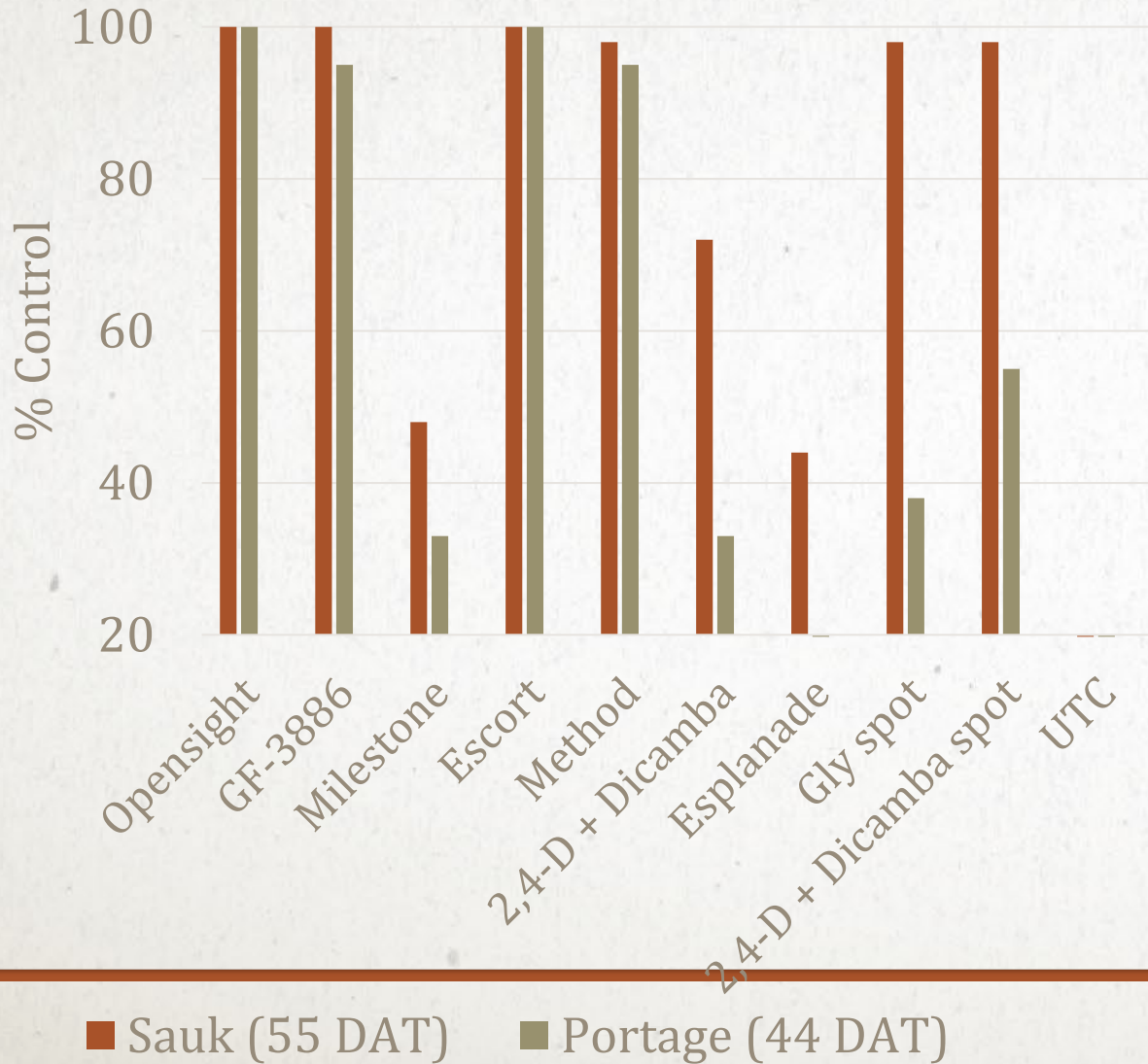
# WHAT ELSE SHOULD I KNOW ABOUT HERBICIDES?

- Cost
  - Use restrictions
  - Non-target issues
  - And much more.....
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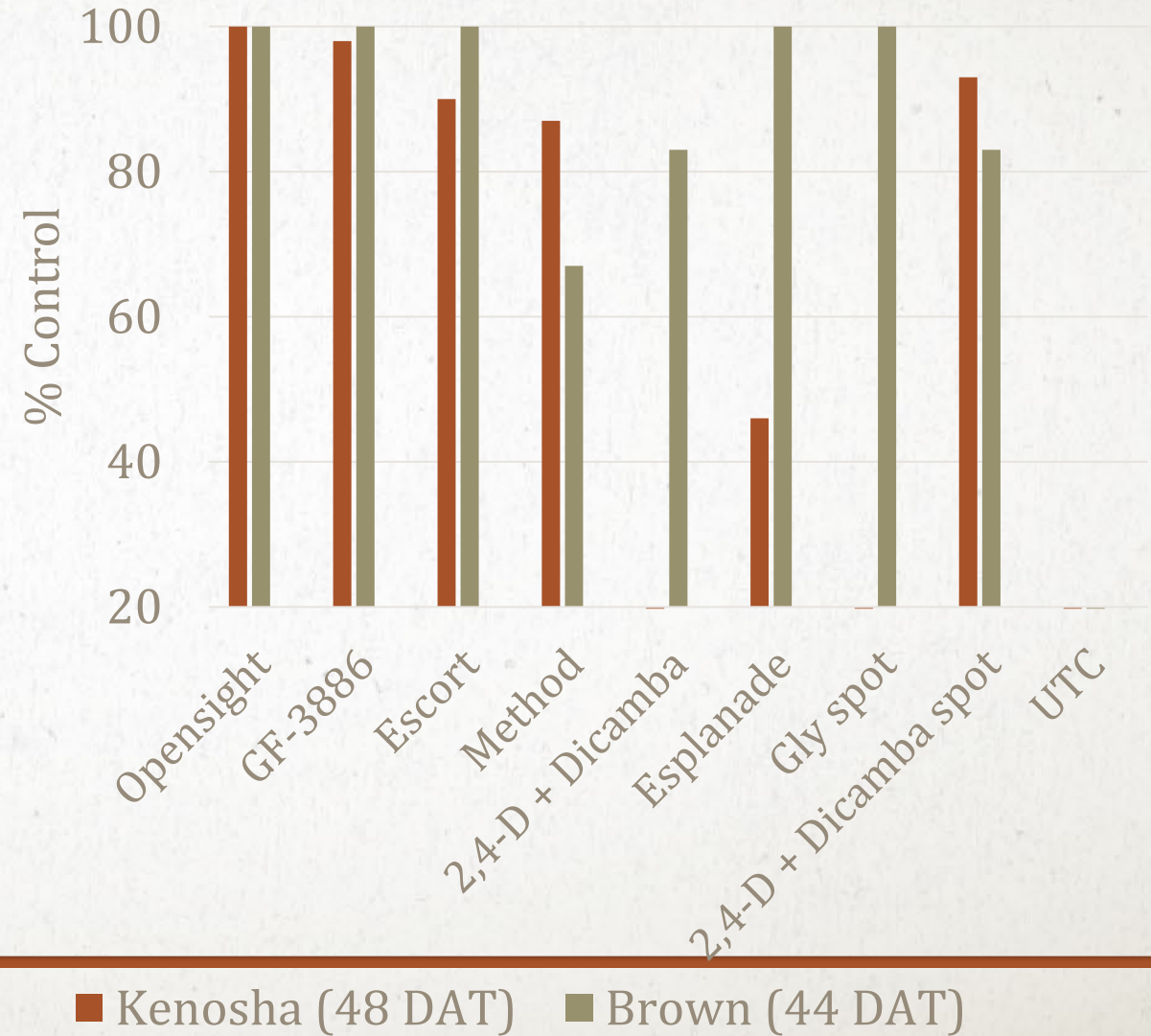


# RESULTS 1.5- 2 MONTHS AFTER TREATMENT (SMALLSCALE DEMONSTRATIONS)

Wild Parsnip Control



Teasel Control





# **BROADCAST APPLICATIONS IN SPRING CAN PREVENT SEED PRODUCTION FOR 2 YEARS**

**WILL LEAVE DEMONSTRATIONS  
LABELED SO YOU CAN VIEW RESULTS  
NEXT SPRING.....**





# HOW DO I DETERMINE WHICH HERBICIDE TO USE AND WHEN?

- What to use
    - What stage to apply
    - What rate and method of application
    - Any restrictions
    - costs
  - Concerns to be aware of
    - Applications near water
    - Weather conditions
    - Potential for drift/persistence
  - Look at resources
    - Factsheets
    - labels
  - Ask for help from experts
    - Can give critical info on
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# HERBICIDE LABELS: CRITICAL THAT YOU READ!

## OPENSIGHT

### Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

## ESCORT

### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. This herbicide is injurious to plants at extremely low concentrations. Nontarget plants may be adversely effected from drift and run-off.

## PLATEAU

### ENVIRONMENTAL HAZARDS

For terrestrial use only. **DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark.

**DO NOT** contaminate water when disposing of equipment washwaters or rinsate.



# WHAT ABOUT SPOT TREATMENT VS BROADCAST?

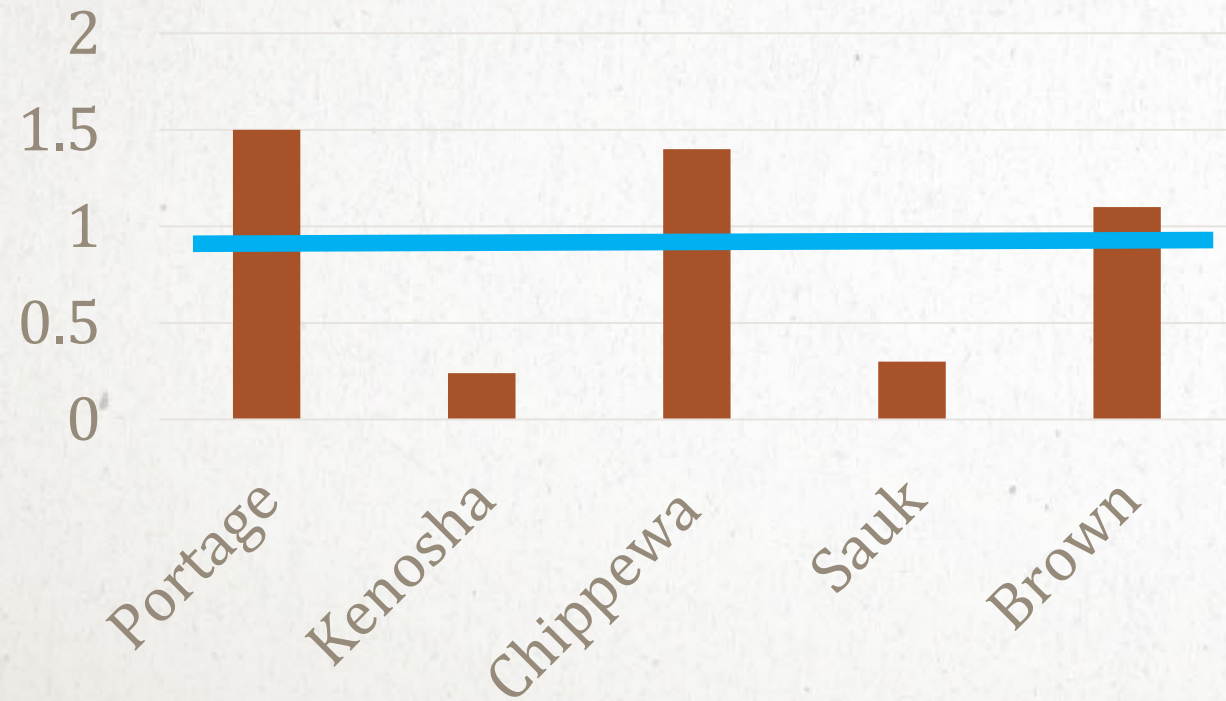
- Both are effective
- Selectivity is greater with spot trt
- Herbicide use
  - Consistent with broadcast
  - Varies depending on plant density
- Application costs
  - Consistent with broadcast
  - Varies depending on plant density



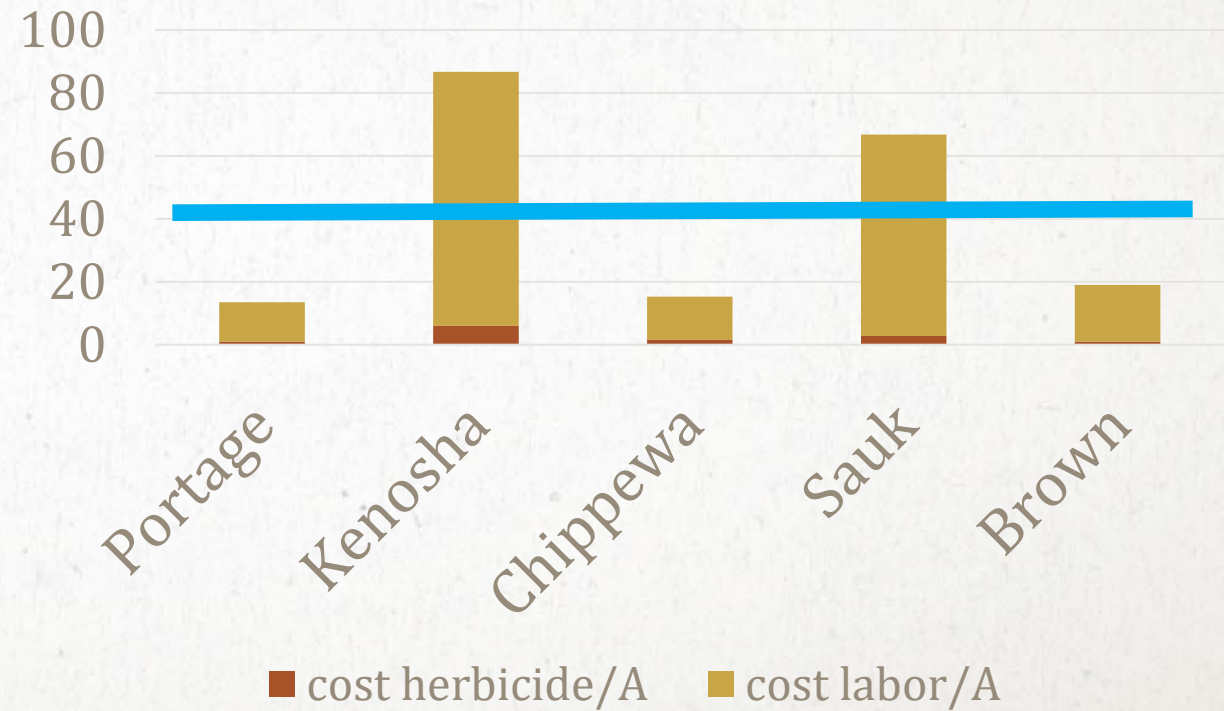


# COSTS FOR SPOT TREATMENT LARGESCALE DEMONSTRATIONS

Acres treated per hour



Cost treatment \$/A





# PLANT GROWTH REGULATOR TREATMENT

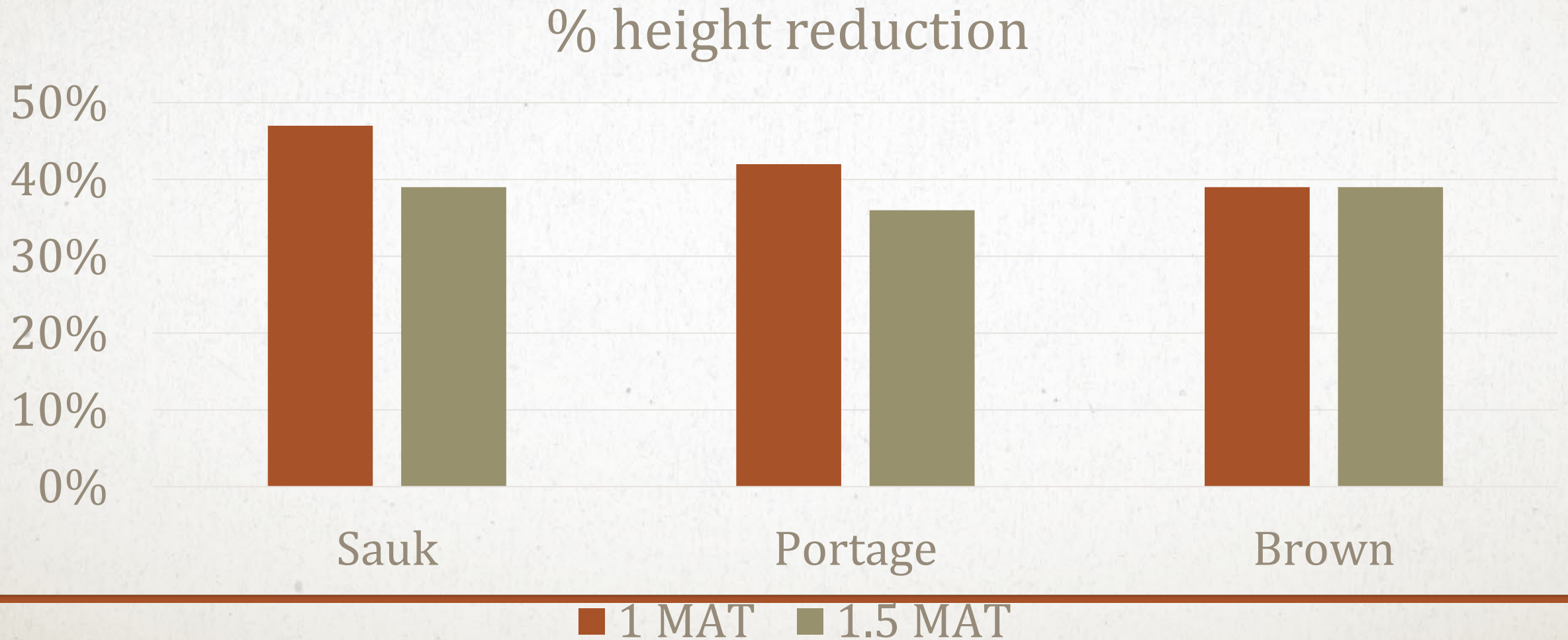
- Plateau (4 fl oz/A) + Escort (0.75 oz/A)
- low rates of herbicides to reduce growth of grasses for 1-3 months
  - Prevent seedhead production
- Have activity on some invasive plants
  - VERY EFFECTIVE: Wild parsnip, Wild chervil
  - EFFECTIVE: Teasel





# RESULTS OVER 3 LOCATIONS

APPLIED MIDDLE TO LATE MAY





# PLANT GROWTH REGULATOR TREATMENT

## BENEFITS

- Can reduce the miles you mow in a year
  - Likely save you \$\$\$\$
- Can provide some invasive plant suppression
  - Species specific

## CONSEQUENCES

- More pesticide used on roads
    - Negative public perception
  - Need to purchase equipment or hire to get accomplished
    - \$\$\$
  - Not all locations approved for use
  - Long-term impact to annual applications unknown
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# IN REALITY YOU WILL NEED AN INTEGRATED APPROACH TO MANAGEMENT.....

