

# Invasive Plant Removal

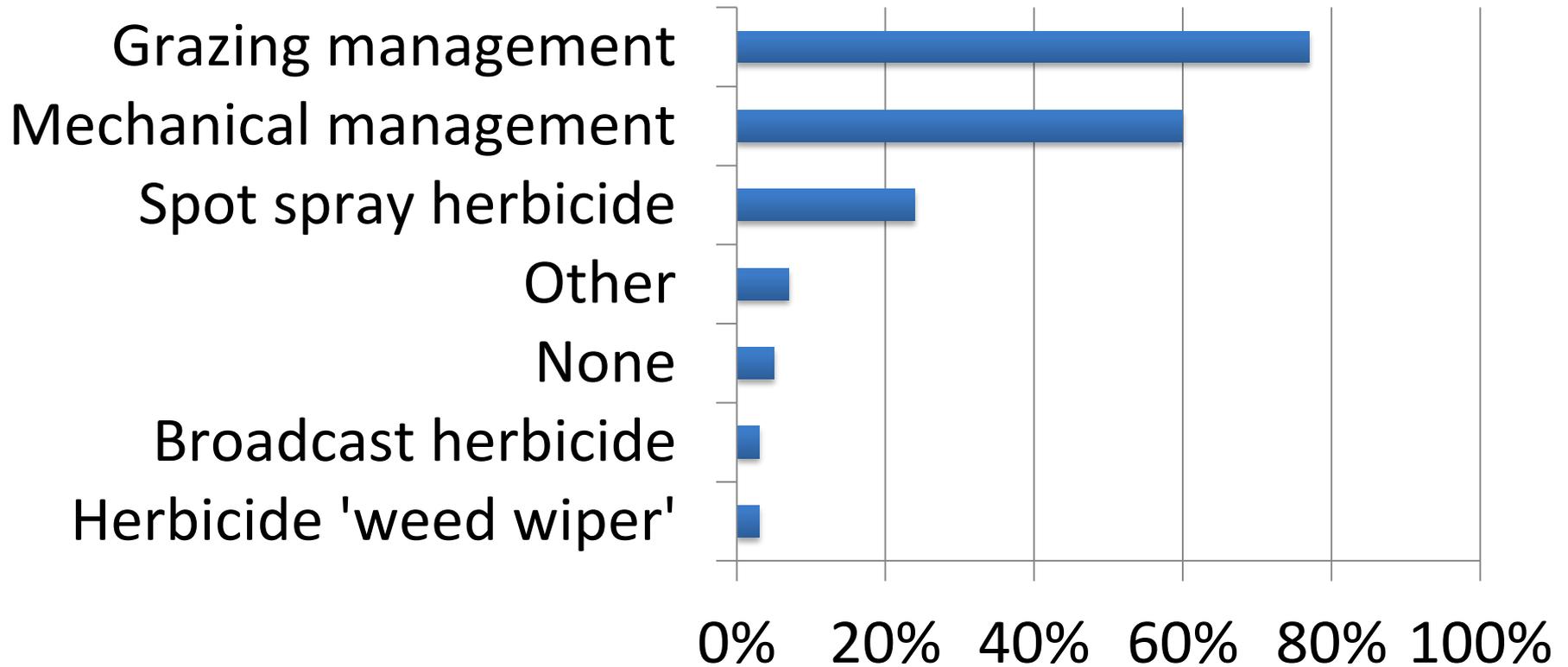


# Overview

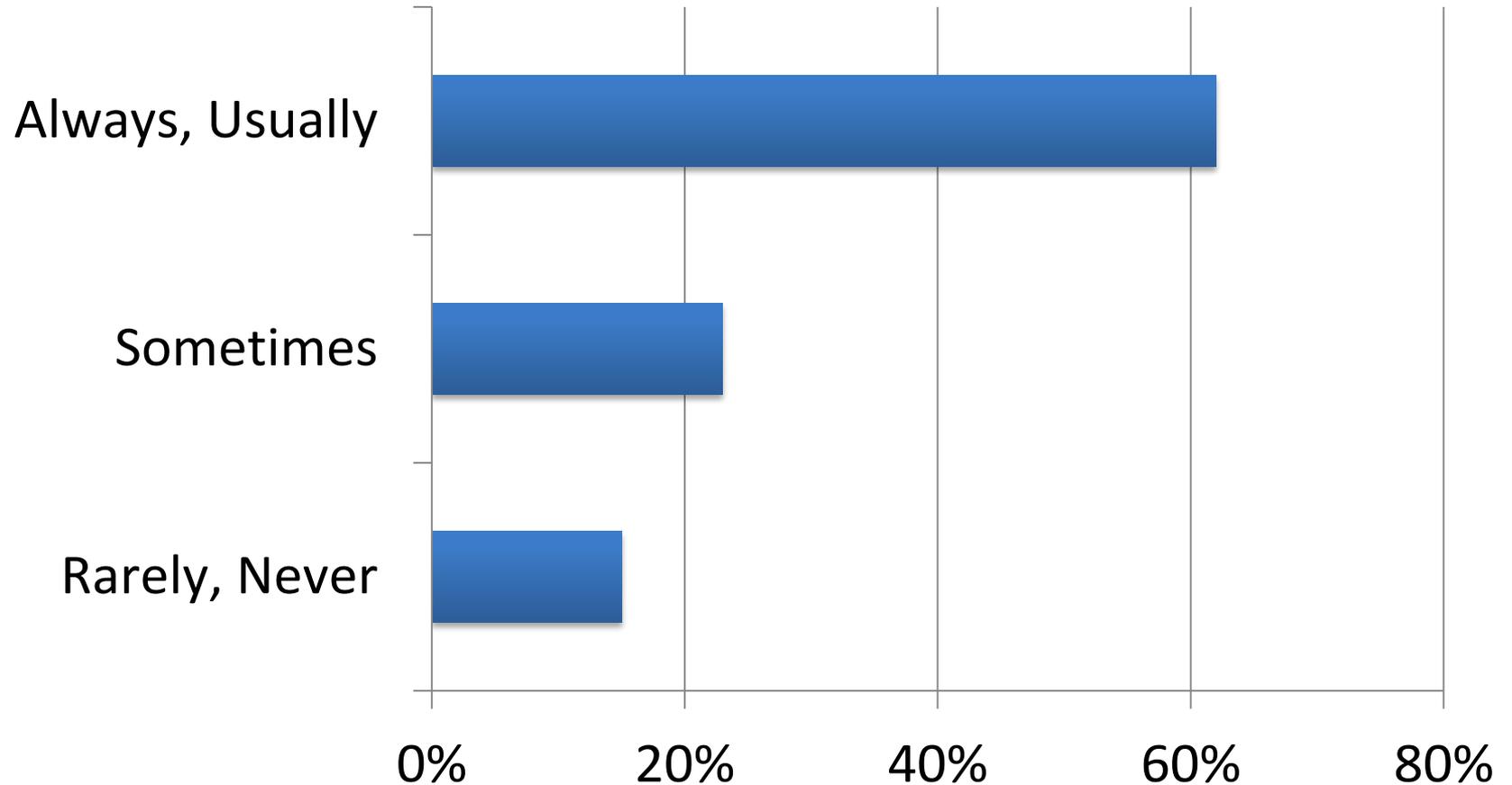
- 1.7 million acres pastures
  - 11% WI farmland
- 17,000 Beef producers
- 11,000 Dairy producers



# How are weeds managed in WI pastures?



# Do you encourage animals to eat “weeds”?

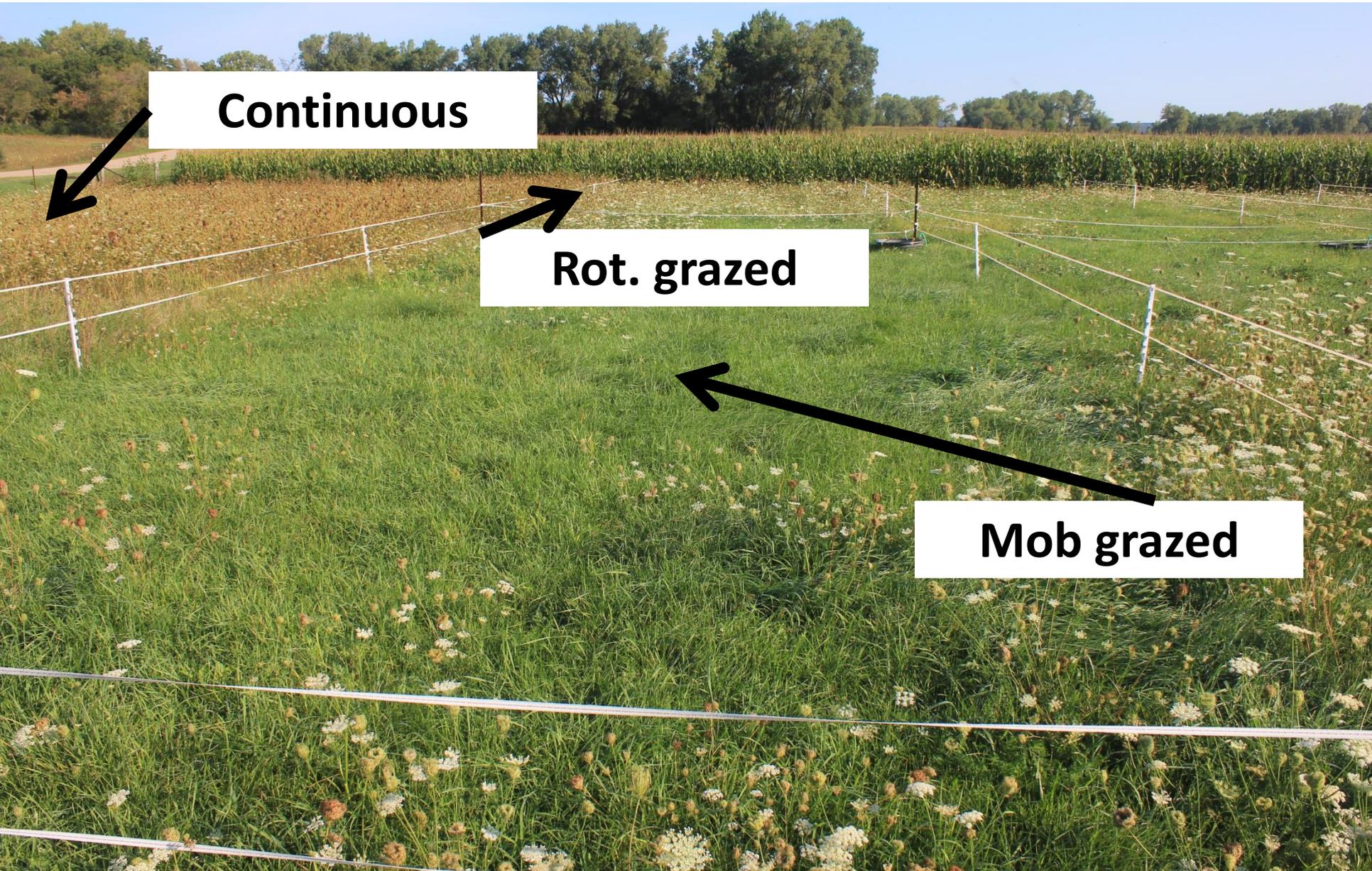


# How does grazing control invasive plants?



- Eating plant tissue
  - Leaves, stems
- Physical impact
  - Breaking stems, trampling roots
- Trampled forage= Mulch
- Promotes grass competition

# Grazing Practices can alter results



**Continuous**

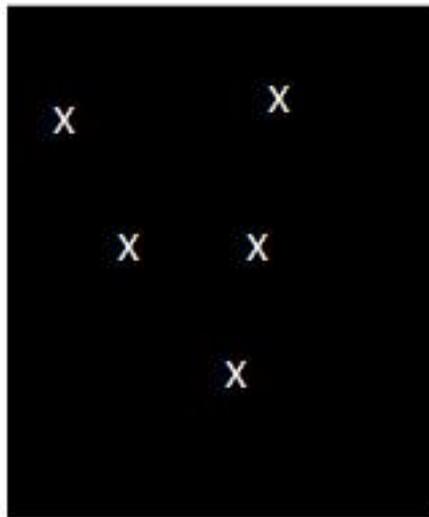
**Rot. grazed**

**Mob grazed**

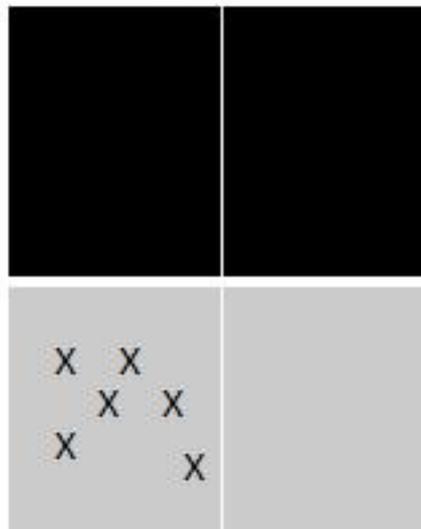
# The Grazing Spectrum

- Continuous (season-long)
- Rotational Grazing
- Mob (HILF, HISD, UHSD)

Continuous grazing



Rotational grazing



Intensive grazing



Mob

# Rotational Grazing



# Mob Grazing



# People have found rotational and mob grazing methods can provide good to excellent control

- De Bruijn and Bork 2006: “Two high-density defoliations every year, over a two to three year period almost eliminated Canada thistle stems”



# Why the differences between grazing systems?

- **Palatability** of weed varies depending on the **grazing system**
  - Continuous – only highly palatable species are eaten
  - Rotational – species with moderate palatability are eaten
  - Mob grazing – species with low palatability are eaten

# Mob in a Nutshell

As compared to rotational grazing

- Increased stocking density (lb./ac)
- Decreased time grazing
- Longer rest period
- Mature forage



# Objectives

## Goal:

Compare the effectiveness of Mob Grazing to rotational grazing in suppressing Canada thistle across three locations

## Measure:

- Forage
- **Canada thistle**
  - Utilization
  - Density
  - Cover



# Grazing Methods

- Rotational Grazing
  - Grazed when forage was 8-12 inches
    - 3-4 grazing events
  - 60,000 lbs/A
- Mob Grazing
  - Grazed when forage > 14 in and Canada thistle was at flower bud stage
    - 2 grazing events (spring, fall)
  - 400,000 lbs/A
- All plots were grazed or trampled to a 4 inch residual







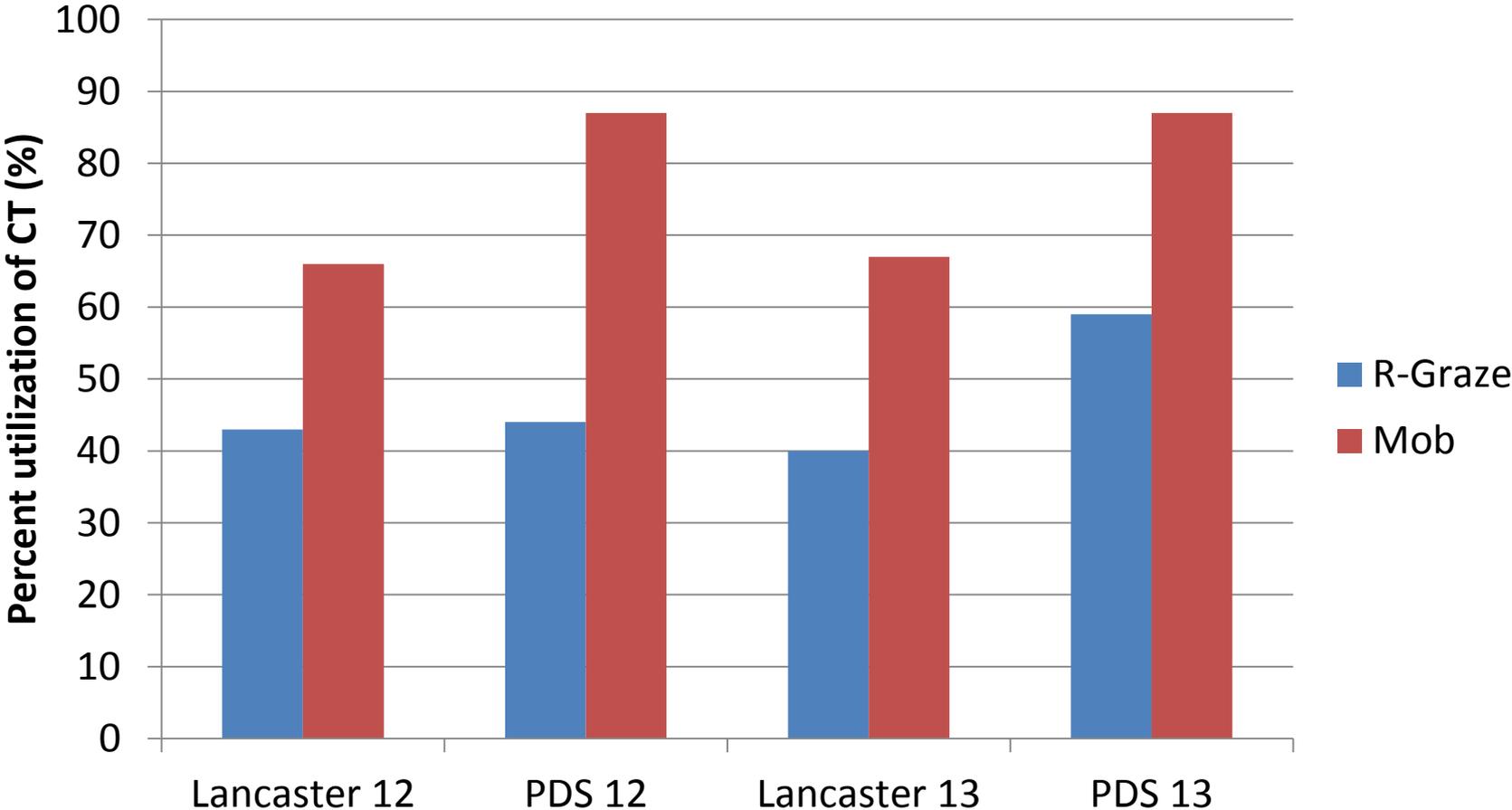
Trampled  
forage



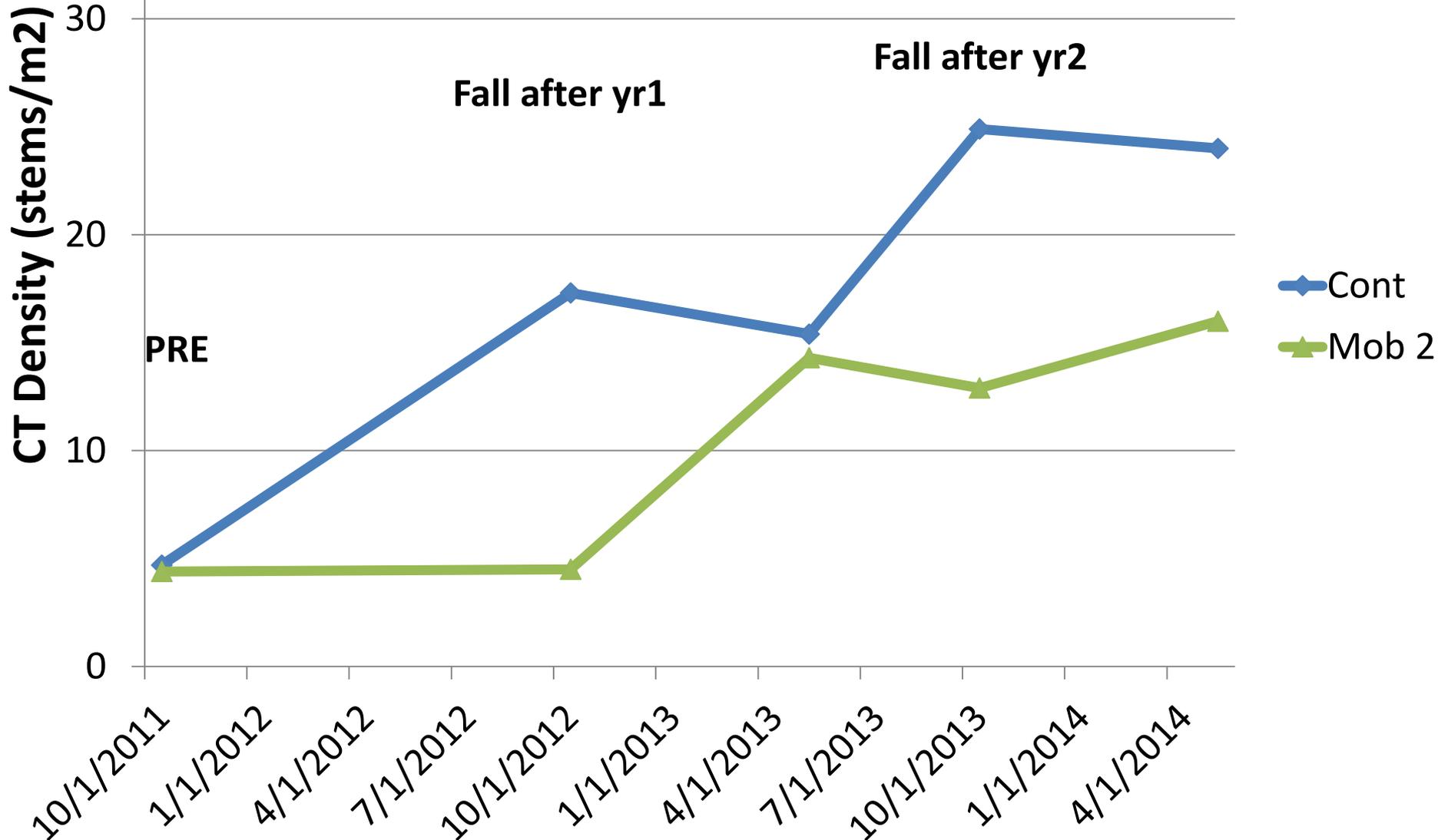
Avoiding CT



# % Utilization of Canada thistle

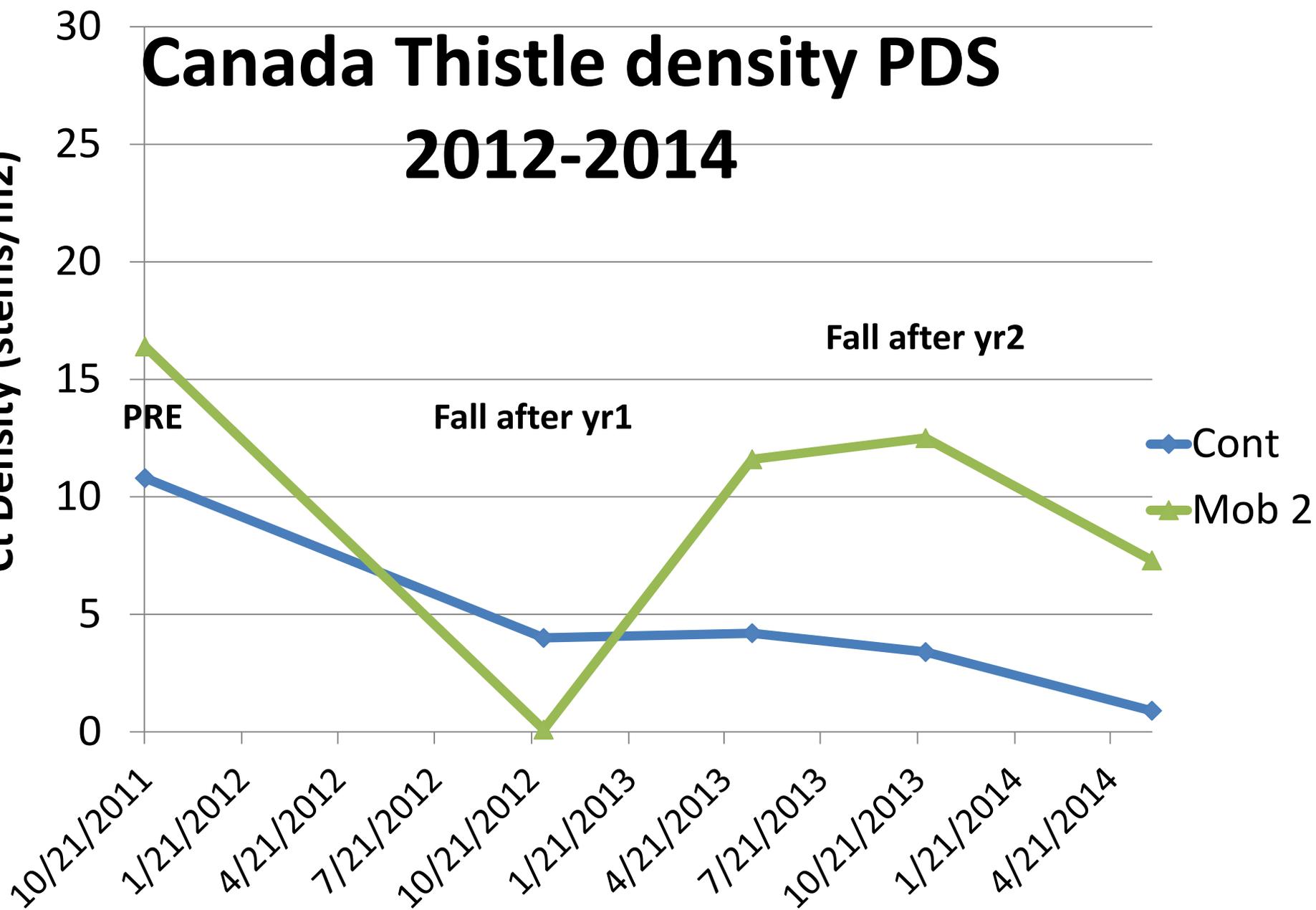


# Canada thistle density Lancaster 2012-2014



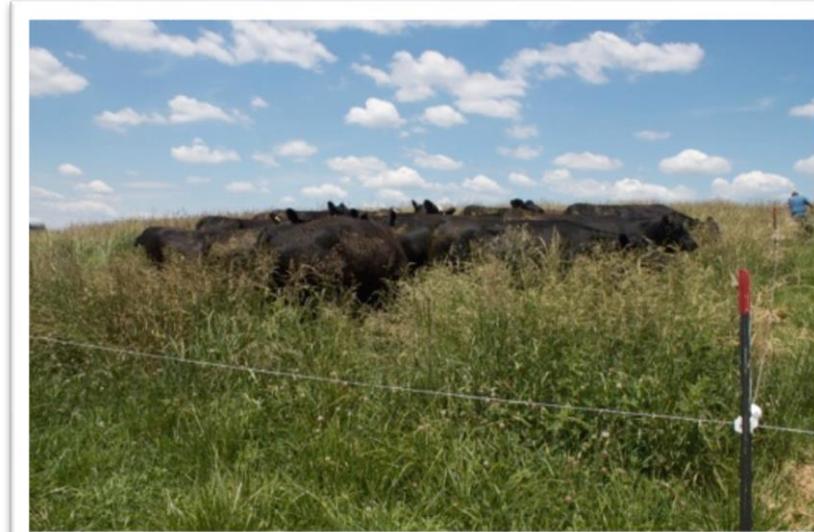
# Canada Thistle density PDS 2012-2014

Ct Density (stems/m<sup>2</sup>)



# Why the differences between locations?

- Differences in Forage Species
  - Lancaster
    - Competitive forage grass (Tall Fescue)
  - PDS
    - Not competitive forage grass (kentucky bluegrass)
    - 38-45% lower sward heights



# What will happen as treatments continue?

- Measurements continuing through spring 2014 (2015?)
  - Lancaster CT density is decreasing
  - PDS: CT populations appear stable
- Practitioners of Mob grazing state at least 3 years are needed to get rid of weed species

# Summary and applicability

- Grazing is another option for invasive plant management
  - If desirable pasture species and fencing present, graziers may pay for right to graze
- Do not recommend continuous grazing unless palatable species
  - E.G. crown vetch
- If palability of weed is an issue consider the following:
  - 1. Graze at a period when it is palatable
  - 2. Increase stocking density to increase palability

# DO NOT ATTEMPT MOB GRAZING WHEN POISONOUS PLANTS ARE PRESENT

- Lack of selectivity may allow uptake and ingestion
- EXAMPLE Whorled Milkweed
  - Never eaten in continuous or rotationally graze pastures
  - May be ingested in MOB grazing
    - Fatal if 0.1% to 0.5% of body weight ingested



# Grazing for Woody Plant Suppression in Grasslands

- Initiating this winter
  - Team of 3 graduate students and 4 UW professors
  - 5 year study
- Evaluating the following:
  - Effectiveness in suppression
  - Forage gained by grazing
  - **Impact to wildlife**
- **If interest/opinions contact one of us!**

# Questions?

