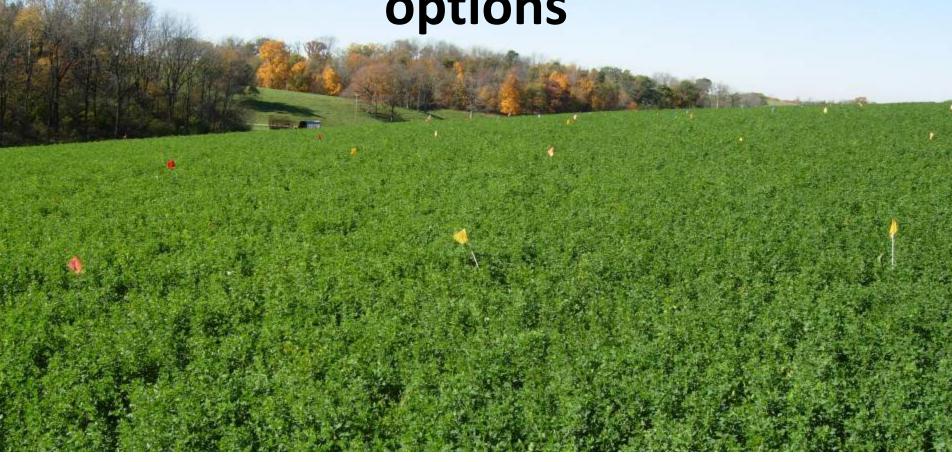
# Alfalfa stand assessment and removal options





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### Why Assess Alfalfa?

Thinning stands will not maximize alfalfa YIELD

- Count plants or stems
  - Plants = 4-5 plants / ft2
  - Stems = >55 stems / ft2

- Count this FALL AND SPRING
  - Winter-kill is not uncommon in WI

## Alfalfa stand assessment: Is this stand good enough to keep?

Dan Undersander, Craig Grau, Dennis Cosgrove, Jerry Doll, Neal Martin

**Table 2.** Stand density recommendations

stand density (stems/sq ft)	action	predicted yield potential (assuming no winterkill)
>55	stem density not limiting yield	same as current year
40-55	some yield reduction expected	if good health, same as current year; if >30% in category 4, significantly less
<39	consider replacing stand	if good health, same as current year; if >30% in category 4, significantly less

# How to remove alfalfa in preparation for following crop





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### Alfalfa removal strategies

### **Tillage**

- What factors reduce control
  - Aggressiveness of tillage
  - equipment
  - soil moisture

#### Herbicides

- What factors reduce control
  - Time of year
  - temperature
  - regrowth

### **Effectiveness of Tillage**

- Tillage alone can be effective
  - Studies across US range from 0-100% control
  - WI fall chisel plow 81% and 98% control (May)
    - Depends on how aggressive tillage is conducted

- Herbicides in combination with tillage are clearly the most effective option in terminating alfalfa
  - Research has shown even poor suppression from herbicides can improve >80% when include tillage

## What herbicides are available to remove alfalfa?

- Lots are available
  - Glyphosate (non-RR alfalfa only)
  - -2,4-D
  - Dicamba

 Need to be aware of plant-back restrictions for future crop



## What to consider when removing alfalfa

- 1. Time of year and temperature
  - Fall vs Spring (FALL BEST OPTION)
  - Temperature effects on performance of herbicides (50F ideal)
- 2. Status of the plants
  - 4 inches of regrowth and no stress
- 3. Future crops planned & management

### If spring removal consider

#### **SPRING REMOVAL AS ALFALFA GREENS-UP**

- Tillage or herbicide
  - Need 4 inches regrowth for herbicides
  - Be aware of plant-back restrictions

#### SPRING REMOVAL DURING ALFALFA HARVEST

- apply glyphosate at least 36 hours before harvest
  - Up to 1.5 lbs ae/A, can sell alfalfa

#### SPRING REMOVAL AFTER ALFALFA HARVEST

- harvest hay and let alfalfa regrow then apply a herbicide.
- Effective, but delays planting next crop.
  - Plant-back restrictions may cause further delay