

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



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