

Herbicides in New Alfalfa Stands

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End goal: dense, vigorous alfalfa stand to compete with weeds

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“The sins of planting will haunt you all season”
- Bob Nielsen, Corn Agronomist, Purdue Univ.

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Keys to weed control in establishment

1. Control perennials before alfalfa
2. Time planting to minimize weeds
3. Do something to control weeds
4. Know weed identity and size
5. Understand herbicide options
6. Roundup Ready alfalfa
7. Organic and non-chemical options

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#1 Control perennials before planting alfalfa


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Perennial weed control with alfalfa herbicides

Control level	Field Bindweed	Dandelion	Quackgrass
Excellent	None	Glyphosate	Glyphosate
Good	Glyphosate	Velpar	Select
Fair	Chateau	Metribuzin	Kerb, Poast, Raptor
Poor to none	Everything else	Everything else	Everything else

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#2 Time planting to minimize weeds



Weed	Spring			Summer			Autumn			Winter		
	F	M	A	M	J	J	A	S	O	N	D	J
common ragweed <i>Ambrosia artemisiifolia</i>												
common lambsquarter <i>Chenopodium album</i>												
Pennsylvanian smartweed <i>Polygonum pennsylvanicum</i>												
hairy galinsoga <i>Galinsoga ciliata</i>												
redroot pigweed <i>Amaranthus retrofractus</i>												
foxtail <i>Setaria sp.</i>												
horseweed <i>Corypha canadensis</i>												
shepherd's purse <i>Capsella bursa-pastoris</i>												
field pennycress <i>Thlaspi arvense</i>												

Source: Perin State

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Is this a problem?



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#3 Do something to control weeds in the seedling crop

- Alfalfa seeding rate trial (RR)
 - Herbicides – applied once in seeding year only
 - Roundup WeatherMax (glyphosate) @ 0.75 lb/A
 - Raptor (imazamox) @ 5 oz/A
 - Non-treated check



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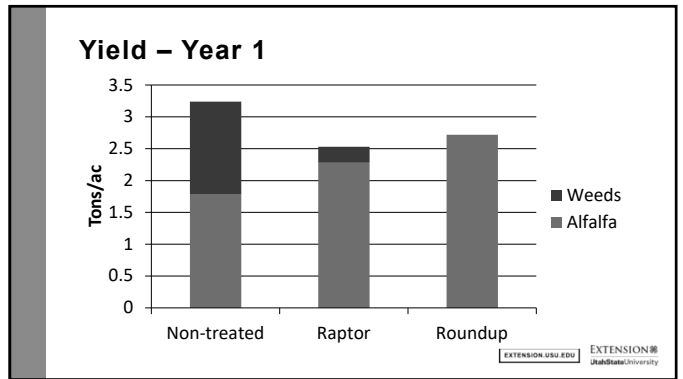
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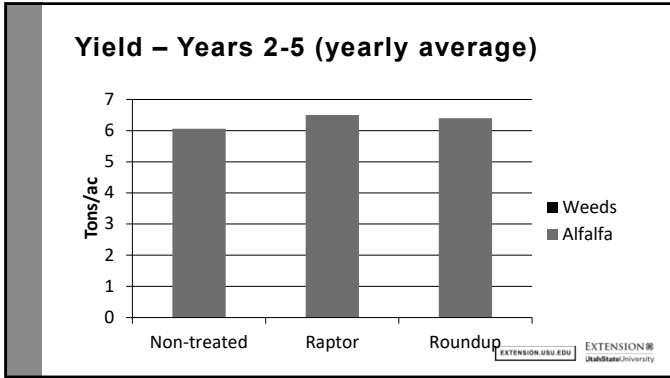
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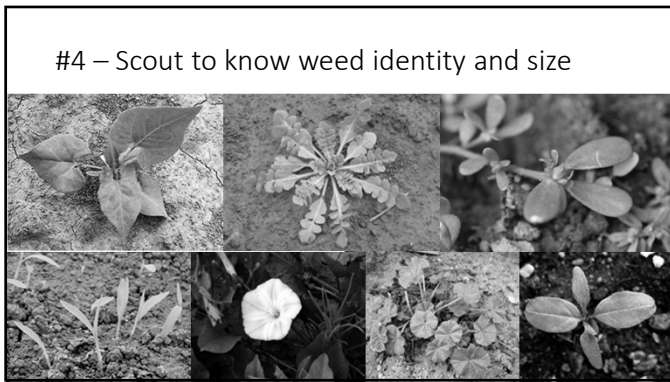


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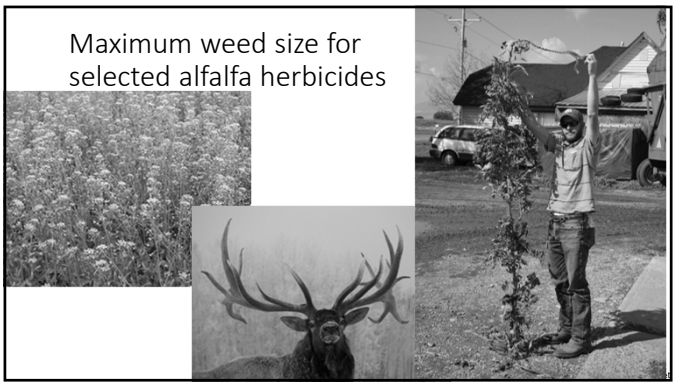
A Fact of Life...

A field can look pretty darn good from the seat of your pickup tooling down the blacktop.

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Maximum weed size for selected alfalfa herbicides

Product	Weed size
Prowl	Before weed emergence
Velpar	Alfalfa dormant to 2 inches in regrowth
Metribuzin	Less than 2 inches
Pursuit	Less than 3 inches
Raptor	Less than 3 inches
Butyrac 200	1-3 inches, depending on species
Buctril	Less than 2 inches
Poast	Less than 4-8 inches
Select	Less than 6-8 inches

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Herbicides for alfalfa stand establishment


PRE PLANT INCORPORATED <ul style="list-style-type: none"> □ EPTC (Eptam) □ Trifluralin (Treflan) 	POSTEMERGENCE <ul style="list-style-type: none"> □ 2,4-DB (Butyrac) □ Imazethapyr (Pursuit) □ Imazamox (Raptor) □ Sethoxydim (Poast) □ Clethodim (Select) □ Bromoxynil (Buctril)
POST CROP/PRE WEEDS <ul style="list-style-type: none"> □ Pendimethalin (Prowl) □ Acetochlor (Warrant) 	

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#5 – PPI herbicide options (Eptam, Treflan)

- Must mechanically incorporated.
 - Often not perfect, so some weed escapes
- Some stunting and stand loss expected
 - Made worse by cool, wet conditions
- Eptam is volatile. Don't apply to wet soil
- Treflan is broken down by sunlight




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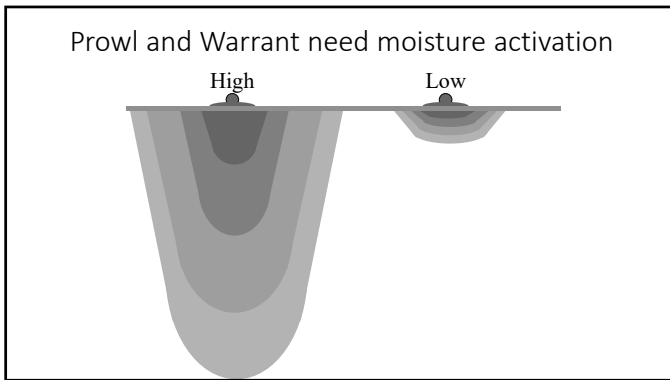
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#6 – POST alfalfa/PRE weed herbicide options (Prowl and Warrant)

- Narrow use window with crop emerged but weeds not
 - Plant in one month and weed problem in another
 - If you know you have dodder, Prowl can protect seedlings
 - Warrant for green foxtail in spring seeded
- Moisture incorporated/activated



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#6 – POST herbicide options

- Butyrac (2,4-DB) –
 - Environmental conditions - do not apply when you can have wet plants (delay irrigation 7-10 days) – Beta oxidation can happen on leaves.
 - Be aware of adjuvant and tank mix restrictions
- Post/Select –
 - Requires COC, will generally increase injury of any tank mix partners
 - EC formulation – often requires different PPE
- Bromoxnil –
 - Do not apply when temps exceed 80F on or 3 days after application
- Raptor/Pursuit
 - Plant back issues - Pursuit especially – Raptor more effective on grasses.
 - Any kind of plant stress enhances injury
 - Lots of required additives - Can do NIS and under drought

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Beyond and Raptor labels are now combined

Beyond® Xtra

Herbicide

For use only on alfalfa, beans (dry), chicory, Clearfield® canola, Clearfield lentils, Clearfield rice, Clearfield and Clearfield® Plus sunflower, and Clearfield and Clearfield Plus wheat, clover grown for nonfood and nonfeed, clover grown for seed, edamame, lima bean (succulent), peas (dry), peas (English), snap bean, soybean, and Vangro™ canola

Active Ingredient:
ammonium salt of imazamoc: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-3-pyridinecarboxylic acid 12.1%
Other Ingredients: 87.9%
Total: 100.0%

* Equivalent to 11.4% 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-3-pyridinecarboxylic acid.
1 gallon contains 1.0 pound of active ingredient as the free acid, formulated as a soluble liquid.

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#6 Roundup Ready alfalfa



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#7 Organic or non-chemical options

1. Companion crops
2. Early mowing
3. Stale seedbed with flaming or cultivation



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Standard disclaimer about herbicides...

- Remember to ALWAYS read and follow label directions!!!
 - Many different formulations, label updates, special exceptions, unique circumstances on your farm, etc.
 - Labels often change
- Really nice database at www.cdms.net

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Thank You!

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