



Weed Management in Barley

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OHIO STATE UNIVERSITY EXTENSION

2016
OHIO, INDIANA
AND ILLINOIS

WEED CONTROL GUIDE



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10

November
2015

Information on new herbicides and traits

Each fall we provide an article and video on new herbicides to the OSU Pesticide Applicator Training group, for use in recertification by our educators. The article ends up in the annual recertification proceedings book, and can also be accessed at this link – [PAT loux 2015-16](#). Most of this information can also be found in the 2016 edition of the “Weed Control Guide for Ohio, Indiana, and Illinois”,

LINKS

[CDMS pesticide labels/MSDS](#)

[Greenbook pesticide labels/MSDS](#)

[Agrian herbicide labels](#)

[Our YouTube videos](#)

[USB Take Action on Weeds](#)

[Purdue Chat ‘n Chew Cafe](#)

<http://u.osu.edu/osuweeds/>

Weed management issues in small grains

- Establishment
 - Preplant herbicide use in no-till
- Fall/early spring weed competition
 - Winter annuals, dandelion
- Spring/summer weeds(esp spring-seeded barley)
 - Ragweeds, lambsquarters, annual grasses
- Other problem weeds
 - Canada thistle, wild garlic
- Herbicide injury
 - Timing, complexity of mixes, applying in fertilizer

No-till seeding – preplant burndown

- Glyphosate
 - Misses gly-R marestalk unless very small
 - Can add Sharpen (1 to 2 oz) + MSO
 - Sharpen has some residual activity, esp at 2 oz
- Gramoxone
 - Small annual weeds
- Dicamba
 - Allow 15 days before planting per 0.25 lb
- 2,4-D, glufosinate
 - Not labeled

Fall-seeded small grains

Winter annual weeds can interfere with wheat growth in fall and spring

- Common chickweed
- Red (purple) deadnettle
- Henbit
- Mustards
- Shepherd's-purse
- Field pennycress
- Maretail (horseweed)
- Dandelion (perennial)

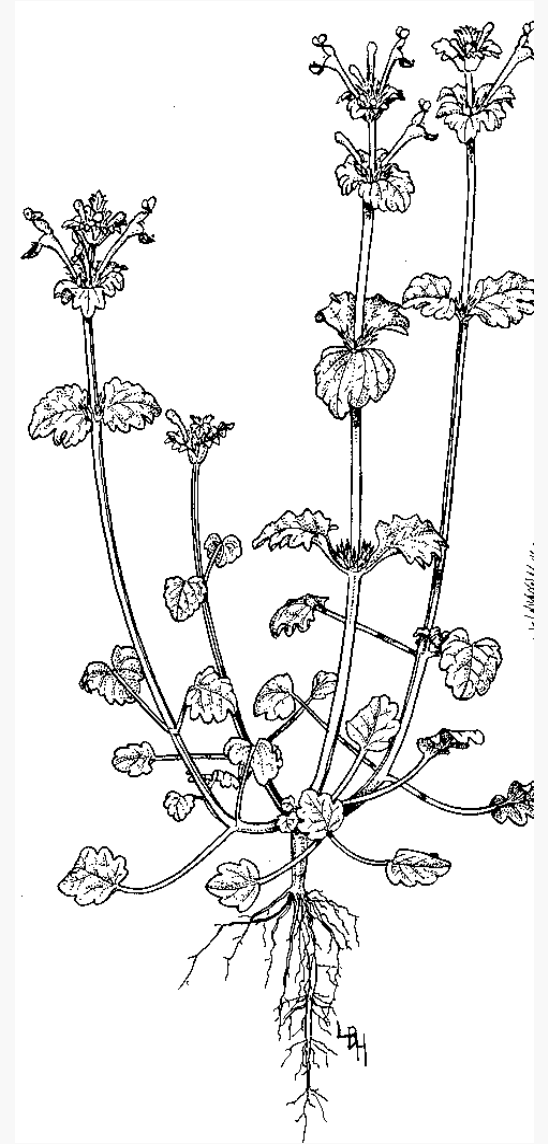


Common chickweed
(*Stellaria media*)

Purple deadnettle
(*Lamium purpureum*)



Henbit (*Lamium amplexicaule*)





Field pennycress
(*Thlaspi arvense*)

Shepherd' s-purse (*Capsella bursa-pastoris*)



Horseweed (marestail) (*Conyza canadensis*)



Wild Garlic (*Allium vineale*)



Photo by:
Dan Tenaglia
www.missouriplants.com

Strategies for Winter Annuals

- Sparse populations can be controlled in spring
- Denser populations may require late fall herbicide treatment to reduce interference with wheat growth
- Fall - less injury risk than early spring when cold/wet
- Products labeled for fall application
 - Harmony Extra, generics – after 2-leaf stage
 - dicamba – 2 to 4 oz with other products
 - Express, generics - after 2-leaf stage
 - Peak - after emergence
 - Huskie - after 1-leaf stage

Strategies for Winter Annuals

- Herbicides for control in early spring
 - Harmony Extra, Harmony GT, Express
 - Harmony Extra may be most effective on a variety of winter annuals
 - Can tank-mix with dicamba, 2,4-D
 - Can apply in fertilizer - increases risk of crop injury
 - 2,4-D has limited activity on chickweed, deadnettle
 - Dicamba must be applied before jointing, and rates too low for effective control?

Winter annual control in wheat 2009-10 – South Charleston

% control – May 12

Applied November 24

Chick

Deadnettle

Express 0.33 oz/dicamba 4 oz

100

90

Express 0.33 oz/dicamba 2 oz

100

78

HarmonyXtra 0.5 oz/dicamba 4 oz

100

85

HarmonyXtra 0.3 oz/dicamba 4 oz

100

47

Brash 1.3 pts

63

10

Applied April 14

Express 0.33 oz/2,4-D 1 pt

100

55

Curtail 2.67 pts

90

53

Curtail/Express

100

47

Brash 1.3 pts

100

47

Dandelion control in wheat 2007-08 - Darke County

	% control	
Applied November	4/23	5/13
Express 0.33 oz/dicamba 4 oz	99	97
Brash 1.33 pts	78	63
WideMatch 1.3 pts	88	75
WideMatch/Express	99	96
Applied April 9		
Express 0.33 oz/2,4-D 1 pt	47	65
Curtail 2.67 pts	23	45
Curtail/Express	50	63
WideMatch/Express/2,4-D	60	75

Fall-seeded small grains

Summer annual weeds can become a problem in spring, esp if non-uniform stand:

maretail (horseweed)

common and giant ragweed

lambsquarters

Perennial weeds also

Canada thistle

wild garlic

Spring-seeded small grains

Summer annual weeds are likely to be a problem and should be planned for:

annual grasses – foxtails, barnyardgrass

common and giant ragweed

lambquarters

pigweeds

smartweeds

velvetleaf

Seeding earlier in spring can reduce weed problems

POST broadleaf herbicides labeled for barley in Ohio

- 2,4-D, MCPA
- Aim
- Bromoxynil
- Cleansweep (3-way premixes)
- Dicamba - Clarity etc
- Huskie
- Orion
- Peak
- Pulsar
- Starane
- Thifensulfuron/tribenuron premixes
- Tribenuron – Express etc
- WideMatch

Labels that specifically mention spring barley

- 2,4-D, MCPA
- Bromoxynil – Moxy etc
- Dicamba – Clarity etc
- Huskie
- Peak
- Pulsar
- Starane

Generics gone wild - wheat herbicides

Tribenuron-methyl

- Express TotalSol 50% WDG
 - 1/4 - 1/2 oz
- Nuance 75% WDG
 - 1/6 - 1/3 oz

Tribenuron-methyl + thifensulfuron premix

- Harmony Extra TotalSol 50% WDG
 - 0.45 - 0.9 oz
- Nimble, TNT Broadleaf 75% WDG
 - 0.3 - 0.6 oz

POST grass herbicides labeled for barley in Ohio (but no specific mention of spring-seeded on labels)

- Axial TBC, Axial XL, Axial Star
 - Annual ryegrass, foxtails, barnyardgrass
- Axial TBC
 - Chickweed, mustards, shepherdspurse
- Axial Star
 - Common and giant ragweed
- Axial XL
 - No broadleaf control

Tips to reduce risk of injury from herbicides

- Follow label with regard to timing, rate, adjuvants
 - Check growth stage/size parameters
- Check with seed supplier/buyer for info on herb tolerance
- Use minimum number of active ingredients necessary
 - Spring seeding – grass + broadleaf control
 - Fall seeding – broadleaf control
- Avoid early spring apps when cold and wet
 - Fall app safer than early spring app
- Crop stage/size
 - Smaller is generally better
 - Make sure minimum growth stage has been reached
- Applying in fertilizer increases risk of injury
 - Especially if pushing max growth stage

Herbicide application and wheat growth stage

dicamba	before jointing
MCPA	before jointing
2,4-D	varies with label – some before jointing and some before early boot
Curtail	until jointing
Stinger	until early boot
bromoxynil	before boot
Peak	before second node visible

Harmony GT, Harmony Extra, Express
before flag leaf visible

Applying herbicides in fertilizer (topdress)

- Most labels allow application in fertilizer
 - Specific directions may be vague
- Harmony Extra, Express, generics
 - Applying in fertilizer increases risk of injury
 - Higher risk in cold, saturated soils
 - Adjust surfactant use when applying in fertilizer
 - Application in mix of water/fertilizer can reduce risk, but may have to make a second fertilizer application

2003 OSU Fall-applied Herbicide Trial - wheat

Herbicide		Yield
Harmony Extra	0.6 oz	64
Harmony Extra	0.3 oz	68
2,4-D Ester	1 pt	52
Dicamba	4 oz	66
Weedmaster	1 pt	64
Curtail	2 pt	62
Stinger	1/3 pt	68
Harmony Extra	0.3 oz	65
+ metribuzin	2 oz	
Harmony Extra	0.3 oz	65
+ Stinger	3 oz	
Untreated		62

2002/2003 OSU Wheat Study

		Yield (bu/A)			
		after joint		after boot	
	carrier	2002	2003	2002	2003
2,4-D amine	water	61	66	54	64
	28%	66	63	47	67
Harmony Extra	water	62	66	62	62
	28%	65	70	44	54
Har Xtra + 2,4-D	water	61	68	54	60
	28%	68	66	40	52
Bromoxynil	water	60	68	62	64
	28%	65	68	45	61

LSD (0.05) 2002 = 8 2003 = 9

Wheat yields – fall/spring herbicides South Charleston

Applied November 24	2009A	2009B	2010
Express 0.33 oz/dicamba 4 oz	99	96	77
Express 0.33 oz/dicamba 2 oz	100	92	77
HarmonyXtra 0.5 oz/dicamba 4 oz	101	96	79
HarmonyXtra 0.3 oz/dicamba 4 oz	100	95	77
Brash 1.3 pts	88	89	62
Applied April 14			
Express 0.33 oz/2,4-D 1 pt	96	94	80
Curtail 2.67 pts	93	91	75
Curtail/Express	101	94	76
Brash 1.3 pts	95	99	77
LSD (0.05)	7	11	10

OSU C.O.R.N. Newsletter

<http://corn.osu.edu/>

OSU Weed Science Website

<http://u.osu.edu/osuweeds>

Weed Control Guide for OH/IN

OSU Extension Bulletin 789

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