

Transplanted Leek Herbicide Efficacy 2019 - Muck Soil

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Location: Jack's Pride Farm, Randolph WI

Plot Information:

Soil Type: Houghton Muck, 51% sand - 30% silt - 18 % clay, OM 19.9%, pH 6.6

Variety: 'Lancelot'

Date Transplanted: 5-4-2019 Emergence: N/A

Row Spacing: 6' wide raised be with 2 rows spaced 24" apart centered in plot

Plant Spacing: 6" in row

Date Harvested: 8-15-2019

Plot Size-Design: 6' x 15', 3 reps

Rating Dates: 5-15, 5-23, 6-3, 6-11, 7-12

Phytotoxicity (PHYGEN) Rating Scale: 0% = no crop injury, 100% = dead crop plants

Phytotoxicity (PHYSTU) Rating Scale: % stunting relative to Handweeded Check

Weed Control Rating Scale: 0% = no control, 100% = complete control

Application Equipment: Backpack CO2 pressure sprayer. GPA 20, PSI 27, MPH 3.3,

Nozzle - XR8003VS, Nozzle spacing 18", Height 18".

Herbicide Application Data:

Date	5-4-19	6-4-19	6-26-19
Time	6:00 pm	8:15 AM	3:45 PM
Treatment	POSTRA	POSTRA+25d	POSTRA+50d
Application Timing	A	B	C
Soil Moisture			
SF	dry	dry	dry
1"	moist	moist	moist
3"	moist	moist	moist
Soil Temp (F°)			
SF	69.0	66.9	91.8
3"	60.3	60.8	87.5
Air Temp (F°)	71.8	67.1	87.6
Wind (mph/dir.)	0.9 SW	1.7 SW	2.6 W
%RH	34.8%	61.3%	50.1%
Sky Condition (% clouds)	0%	90%	100%
Crop Stage	TRANSPL	3-LF	6 LF
Weed & Size	-----	-----	-----

Summary: Transplanted leeks have minimal herbicide options registered. Injury ratings were collected at all ratings however no injury was observed from any treatment and therefore the data is not presented here. All treatments were handweeded prior to the later applications as none of the herbicides in this trial have any post-emergence activity. The weed escapes were light as can be seen from the weed control ratings. The crop safety and efficacy of Zidua containing treatments suggest the herbicide has definite utility in leek production.

Notes: Entire trial was handweeded prior to 6-4 & 6-26 applications (minimal weeds however a normal practice)

Weed Abbreviations

RRPW = Redroot Pigweed LASW = Ladysthumb Smartweed
COLQ = Common Lambsquarter LACG = Large Crabgrass
TAMU = Tansy Mustard

Treatments may include both registered and currently unregistered applications.
Always consult a current label prior to making any pesticide application.

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Trt No.	Treatment Name	Rate	Appl Unit	Timing	% Weed Control 6-11-2019			
					COLQ	RRPW	LASW	TAMU
1	Handweeded Check				100 -	100 a	100 -	100 a
2	Zidua	2.5 oz/a		POSTTRA	93.3 -	100 a	98.9 -	99.8 ab
	Outlook	18 oz/a		POSTTRA+25d				
	Dual Magnum	1 pt/a		POSTTRA+50d				
3	Zidua	3.75 oz/a		POSTTRA	97 -	100 a	97.1 -	99.8 ab
	Outlook	18 oz/a		POSTTRA+25d				
	Dual Magnum	1 pt/a		POSTTRA+50d				
4	Zidua	5 oz/a		POSTTRA	99.3 -	100 a	100 -	99.8 ab
	Outlook	18 oz/a		POSTTRA+25d				
	Dual Magnum	1 pt/a		POSTTRA+50d				
5	Prowl H2O	2 pt/a		POSTTRA	100 -	96.7 ab	98.9 -	93.5 cd
	Zidua	2.5 oz/a		POSTTRA+25d				
	Dual Magnum	1 pt/a		POSTTRA+50d				
6	Prowl H2O	2 pt/a		POSTTRA	80 -	100 a	96.8 -	96 bc
	Zidua	3.75 oz/a		POSTTRA+25d				
	Dual Magnum	1 pt/a		POSTTRA+50d				
7	Prowl H2O	2 pt/a		POSTTRA	100 -	100 a	99.4 -	91 cd
	Zidua	5 oz/a		POSTTRA+25d				
	Dual Magnum	1 pt/a		POSTTRA+50d				
8	Prowl H2O	2 pt/a		POSTTRA	99.3 -	93.3 b	99.4 -	82.2 d
	Outlook	18 oz/a		POSTTRA+25d				
	Dual Magnum	1 pt/a		POSTTRA+50d				

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

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Trt No.	Treatment Name	Rate	Appl Unit	Timing	% Weed Control 7-12-2019				Yield
					COLQ	RRPW	LASW	LACG	8/15/2019 tons/A
1	Handweeded Check				100 -	100 -	100 -	100 a	4.682 b
2	Zidua	2.5 oz/a		POSTTRA	97.7 -	100 -	100 -	100 a	5.539 ab
	Outlook	18 oz/a		POSTTRA+25d					
	Dual Magnum	1 pt/a		POSTTRA+50d					
3	Zidua	3.75 oz/a		POSTTRA	99.3 -	100 -	100 -	97.7 ab	6.065 a
	Outlook	18 oz/a		POSTTRA+25d					
	Dual Magnum	1 pt/a		POSTTRA+50d					
4	Zidua	5 oz/a		POSTTRA	100 -	100 -	100 -	98.3 a	5.752 ab
	Outlook	18 oz/a		POSTTRA+25d					
	Dual Magnum	1 pt/a		POSTTRA+50d					
5	Prowl H2O	2 pt/a		POSTTRA	98.3 -	100 -	100 -	96.7 ab	6.096 a
	Zidua	2.5 oz/a		POSTTRA+25d					
	Dual Magnum	1 pt/a		POSTTRA+50d					
6	Prowl H2O	2 pt/a		POSTTRA	98.3 -	100 -	100 -	93.3 b	6.082 a
	Zidua	3.75 oz/a		POSTTRA+25d					
	Dual Magnum	1 pt/a		POSTTRA+50d					
7	Prowl H2O	2 pt/a		POSTTRA	100 -	100 -	100 -	96 ab	6.008 a
	Zidua	5 oz/a		POSTTRA+25d					
	Dual Magnum	1 pt/a		POSTTRA+50d					
8	Prowl H2O	2 pt/a		POSTTRA	98.3 -	100 -	100 -	100 a	5.679 ab
	Outlook	18 oz/a		POSTTRA+25d					
	Dual Magnum	1 pt/a		POSTTRA+50d					

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).