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Result Demonstration Report

2008 Herbicide Comparison Study

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Summary:

Herbicides have been proven to be an effective method for broadleaf weed control in forage systems for many years. Producers face many choices when selecting various products to be used in forage system for adequate control of weeds.

Objective:

The objective of this result demonstration was to compare the herbicide effectiveness on blackberry vines in warm season forage grasses.

Materials and Methods:

Material used for this experiment were as follows; Pasture Guard, Surmount, Grazon P+D plus 0.15 oz. Cimmaron Plus, Grazon Next plus 0.15 oz. Cimmaron Plus, 2, 4-D plus 8 ounce of Remedy Ulta, and Kamba Master plus 0.25 oz. Cimmaron Plus, and a control was used in each replication. The trial was a completely randomized block design replicated three times. Rate for the herbicides are listed in Table I. The plots were 25 feet wide by 50 feet long. Plots were treated with a tractor mounted spray rig calibrated for applying 18.5 gallons of spray solution per acre at 3.5 mph ground speed.

Table I. Herbicide, Rates, and Surfactant Used In Study

Plot	Herbicide	Rate	Surfactant
1	Control		
2	Surmount	3 pints/acre	1 pints/acre
3	Pasture Guard	3 pints/acre	1 pints/acre
4	Grazon P+D plus Cimmaron Plus	1 quart plus 0.15 ounces/acre	1 pints/acre
5	Control		
6	2,4-D plus Remedy Ultra	1 quart plus 8 ounces/acre	1pints/acre
7	Kamba Master plus Cimmaron Plus	1 quart plus 0.25 ounces/acre	1 pints/acre
8	Pasture Guard	3 pints/acre	1 pints/acre
9	Surmount	3 pints/acre	1 pints/acre
10	Grazon Next plus Cimmaron Plus	2.6 pints plus 0.15 ounces/acre	1 pints/acre
11	Kamba Master plus Cimmaron Plus	1 quart plus 0.25 ounces/acre	1 pints/acre
12	Grazon P+D plus Cimmaron Plus	1 quart plus 0.15 ounces per/acre	1 pints/acre
13	Pasture Guard	3 pints/acre	1 pints/acre
14	Grazon Next plus Cimmaron Plus	2.6 pints plus 0.15 ounces/acre	1 pints/acre
15	Control		
16	2,4-D plus Remedy Ultra	1 quart plus 8 ounces/acre	1 pints/acre
17	Surmount	3 pints/acre	1 pints/acre
18	Grazon Next plus Cimmaron Plus	2.6 pints plus 0.15 ounces/acre	1 pints/acre
19	Kamba Master plus Cimmaron Plus	1 quart plus 0.25 ounces/acre	1 pints/acre
20	Grazon P+D plus Cimmaron Plus	1 quart plus 0.15 ounces/acre	1 pints/acre
21	2,4-D plus Remedy Ultra	1 quart plus 8 ounces/acre	1 pints/acre

Results and Discussion:

On May 21, 2008 the herbicide trials were sprayed on the replicated plots. Weekly observations were taken for a total of six (6) weeks after treatment. The results are in Table II. The replicated plots were then averaged to get a final percent control for each herbicide treatment (Table III.). Results are as follows, Grazon P+D plus Cimmaron Plus (plots 4, 12, 20) had an average of 96 percent control, Pasture Guard (plots 3, 8, 13) had an average of 100 percent control, Surmount (plots 2, 9, 17) had a average of 100 percent control, 2,4-D plus 8 ounces of Remedy Ultra (plots 6, 16, 21) had a average of 98.3 percent control, Kamba Master plus Cimmaron Plus (plots 7, 11, 19) had a average of 67 percent control, and Grazon Next plus Cimmaron Plus (10, 14, 18) had an average of 80 percent control. Table IV. Is the total cost per acre of each herbicide treatment.

Table II. Percent Control for 1-6 Weeks After Treatment

Plot	Before Treatment	1 WAT	2WAT	3 WAT	4 WAT	5WAT	6WAT
1	Control						
2	100	85	98	100	100	100	100
3	100	60	75	95	100	100	100
4	75	Wilting/discoloration	30	60	85	90	92
5	Control						
6	75	20	60	75	90	90	95
7	85	discoloration	Discoloration	discoloration	20	50	60
8	95	85	98	98	100	100	100
9	95	40	80	98	100	100	100
10	90	burning	15	20	30	55	80
11	80	burning	Burning	20	30	45	80
12	50	burning	30	65	90	95	100
13	30	45	60	90	98	100	100
14	80	burning	10	20	30	40	50
15	Control						
16	75	20	75	80	95	100	100
17	95	60	80	85	95	100	100
18	35	Wilting/ discoloration	Burning	30	40	80	100
19	50	Wilting/ discoloration	Burning	30	40	50	60
20	90	Wilting/ discoloration	10	30	55	70	95
21	65	40	70	80	90	95	100

Table III. 2008 Average Percent Control of Three Replications of Chemicals

Plots	Chemical	Average Percent Control
2, 9, 17	Surmount	100
3, 8, 13	Pasture Guard	100
4, 12, 20	Grazon P+D plus Cimmaron Plus	96
6, 16, 21	2, 4-D plus Remedy Ultra	98
7, 11, 19	Kamba Master plus Cimmaron Plus	67
10, 14, 18	Grazon Next plus Cimmaron Plus	80

Table IV. 2008 Blackberry Control Demonstration Cost Per Acre

Chemical (s) and Rates*	Cost ($) Per Acre
Pasture Guard (3 pints/acre)	$20.53
Surmount ^ (3pints/acre)	$20.83
Grazon P+D ^ (1 quart/acre) plus Cimmaron Plus (0.15 ounce/acre)	$9.53
Kamba Master (1quart/acre) plus Cimmaron Plus (0.25 ounces/acre)	$8.13
2,4-D^ (1 quart/acre) plus Remedy Ultra (8ounces/acre)	$8.68
Grazon Next (2.6 pints/acre) plus Cimmaron Plus (0.15 ounces/acre	$12.70

*All rates plus 1 pint/acre surfactant (additional cost of $1.50) - Chemicals donated by Red River Specialties, Tyler

^ Restricted Use Product

Table V. Three Year Average Percent Control for 2006, 2007, and 2008

Herbicide	2006	2007	2008	Average
Surmount	100	100	100	100
Pasture Guard	100	98	100	100
Grazon P+D plus 0.1 oz. Metasulfuron Methyl	90	22	80	64
Kamba Master plus 0.2 oz. Meatsulfuron Methyl	60	17	67	48
***2,4-D plus Remedy		85	98.3	92
****Grazon Next plus Metasulfuron Methyl			80	80
**Grazon P+D plus 0.2 oz. Metasulfuron Methyl	85			85

** Used in 2006 only
*** Used in 2007 and 2008 only
**** Used in 2008 only

Table VI. Cost Per Acre for 2006, 2007, and 2008

Herbicide Cost Per Acre	2006	2007	2008
Surmount	$36.31 ^	$21.19	$20.83
Pasture Guard	$33.38 ^	$20.53	$20.53
Grazon P+D plus 0.1 oz. per acre metasulfuron Methyl	$8.10	$9.50	$9.53
Kamba Master plus 0.2 oz. metasulfuron methyl	$9.34	$9.48	$8.13
**2,4-D plus Remedy	0.00	$8.58	$8.68
***Grazon Next plus Metasulfuron Methyl	0.00	0.00	$12.70
****Grazon P+D plus 0.2 oz. Metasulfuron Methyl	$10.10	0.00	0.00

** Herbicide used in 2007 and 2008
*** Herbicide used in 2008 only
**** Herbicide used in 2006 only
^ 5 pint per acre rate

Conclusion:

This is the third year of a three year multi-county research trail. Very positive results have occurred. Herbicides have proven to be an effective way of controlling blackberry and dewberries in forage systems.

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