



Nebraska On-Farm Research Network

Surfactants and RyzUp SmartGrass® on Smooth Brome

Study ID: 218023201501

County: Butler

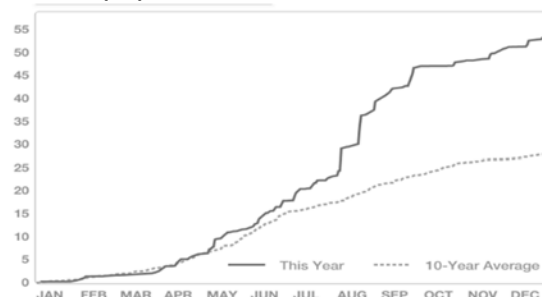
Soil Type: Hastings silty clay loam; Ponca-Crofton

Choose Soil Texture;

Harvest Date: 5/1/15 & 6/24/15

Reps: 4

Rainfall (in.):



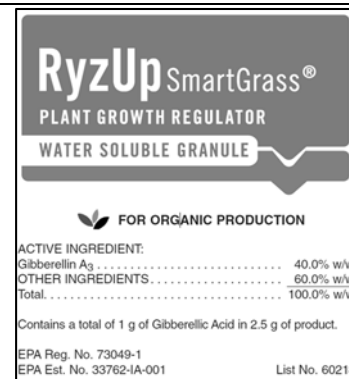
Soil Sample:

Ammonium Acetate ----ppm----										DTPA ----ppm----						% Base Saturation									
Soil	Modified	Soluble	Excess	OM	FIA	0-8"	M-P3					Ca-P					Hot	Boron	Sum of						
pH	WDRF	Salts 1:1	Lime	LOI-	Nitrate	Nitrate	ppm					Sulfate					Water	ppm	Cations						
1:1	BpH	mmho/ cm	Rating	%	ppm N	N/A	P	K	Ca	Mg	Na	ppm S	Zn	Fe	Mn	Cu	B	me/100g	H	K	Ca	Mg	Na		
5.7	6.6	0.18	NONE	5.2	1.7	4	9	227	2213	409	38	18	0.73	73.4	12.8	0.87	0.74	19.4	22	3	56	18	1		

Introduction: The objective of this study was to evaluate the effect of RyzUp SmartGrass® applied in combinations with various surfactants on plant growth and forage production. RyzUp SmartGrass® was applied at a rate of 0.3 oz/ac with flat fan nozzles. Treatment combinations are listed in the results table below. RyzUp SmartGrass® active ingredients are shown at right. This is a small plot study conducted on-farm.

Product information from:

<http://www.valent.com/agriculture/products/ryzupsmartgrass/label-msds.cfm>



Results:	Extended Leaf Height (in.)				
	April 30	May 11	May 21	May 27	June 2
Check	8.2 E*	11.1 C	15.0 D	16.8 A	19.6 B
Generate - 16 oz/ac	8.1 E	11.6 C	15.9 CD	16.6 A	20.8 AB
BioLink Spreader-Sticker 8 oz/100 gal	8.5 DE	11.9 C	16.1 CD	17.5 A	22.6 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	9.3 CDE	13.6 BC	18.0 ABCD	18.7 A	23.3 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	11.4 ABC	17.5 AB	21.0 AB	21.4 A	24.6 AB
RyzUp 0.3 oz + ClassAct 1.25% NG	11.8 A	17.1 AB	20.0 ABC	21.0 A	23.8 AB
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	10.4 ABCD	15.2 ABC	18.1 ABCD	19.7 A	21.9 AB
RyzUp 0.3 oz + ClassAct 2.5% NG	10.9 ABC	17.2 AB	19.6 ABCD	20.3 A	23.7 AB
RyzUp 0.3 oz + Chaperone 10 oz/ac	10.0 ABCDE	15.3 ABC	18.6 ABCD	18.9 A	22.5 AB
RyzUp 0.3 oz + FastTrack 0.5%	10.1 ABCDE	14.9 ABC	18.7 ABCD	19.8 A	24.3 AB
RyzUp 0.3 oz + UltraSurf AMS 2.5%	11.5 AB	18.6 A	22.4 A	20.5 A	25.6 A
RyzUp 0.3 oz + WetSit 0.25%	9.5 BCDE	13.2 BC	16.7 BCD	18.5 A	22.3 AB
P-Value	<0.0001	<0.0001	0.0006	0.0401	0.0515

	Natural Height (in.)		
	May 21	May 27	June 2
Check	13.9 B	16.0 AB	18.5 B
Generate - 16 oz/ac	13.9 B	15.7 B	19.7 AB
BioLink Spreader-Sticker 8 oz/100 gal	14.7 AB	16.9 AB	21.8 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	16.8 AB	18.2 AB	22.4 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	18.9 A	20.1 A	23.5 AB
RyzUp 0.3 oz + ClassAct 1.25% NG	18.7 A	19.7 AB	22.5 AB
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	16.3 AB	19.1 AB	20.6 AB
RyzUp 0.3 oz + ClassAct 2.5% NG	17.2 AB	19.5 AB	22.3 AB
RyzUp 0.3 oz + Chaperone 10 oz/ac	16.3 AB	18.3 AB	21.2 AB
RyzUp 0.3 oz + FastTrack 0.5%	16.1 AB	19.2 AB	22.9 AB
RyzUp 0.3 oz + UltraSurf AMS 2.5%	19.2 A	19.6 AB	24.2 A
RyzUp 0.3 oz + WetSit 0.25%	15.8 AB	17.6 AB	21.4 AB
P-Value	0.0038	0.0292	0.0509

	Lbs Hay/Acre		Product and Application Cost†
	May 21	June 24	
Check	1,620 B	4,475 A	\$0.00
Generate - 16 oz/ac	1,646 B	4,810 A	\$17.87
BioLink Spreader-Sticker 8 oz/100 gal	1,801 AB	5,408 A	\$9.88
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	2,172 AB	4,396 A	\$16.88
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	2,409 A	4,954 A	\$21.43
RyzUp 0.3 oz + ClassAct 1.25% NG	2,464 A	4,970 A	\$19.67
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	2,311 AB	5,262 A	\$29.42
RyzUp 0.3 oz + ClassAct 2.5% NG	2,189 AB	5,275 A	\$24.22
RyzUp 0.3 oz + Chaperone 10 oz/ac	2,270 AB	5,014 A	\$25.12
RyzUp 0.3 oz + FastTrack 0.5%	2,341 AB	5,529 A	Unknown
RyzUp 0.3 oz + UltraSurf AMS 2.5%	2,461 A	5,399 A	\$22.12
RyzUp 0.3 oz + WetSit 0.25%	1,940 AB	5,155 A	Unknown
P-Value	0.0018	0.6546	N/A

*Values with the same letter are not significantly different at a 90% confidence level.

†Product and Application Cost calculated assuming \$8.12/ac ground application cost and \$7.00/ac RyzUp 0.3 oz. cost. Surfactant costs vary.

Summary: At the first harvest date on May 21, the RyzUp SmartGrass® applied with ClassAct 1.25%, UltraSurf AMS 2.5%, and Biolink 8 oz/100 gal + ClassAct 1.25% were higher yielding than the untreated check. There was no difference between the untreated check and any of the other surfactant combinations or surfactants applied alone.

The second harvest date on June 24 showed large variations in yield and resulted in no statistical yield difference between any of the treatment combinations examined.



In Partnership with:



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