

Nebraska On-Farm Research Network

Surfactants and RyzUp SmartGrass® on Smooth Brome

Study ID: 217023201501

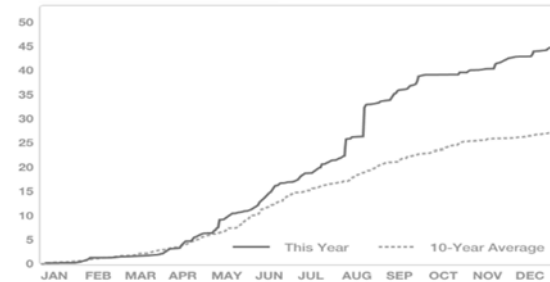
County: Butler

Soil Type: Hastings silt loam; Hastings silty clay loam

Harvest Date: 5/18/15 & 7/14/15

Reps: 4

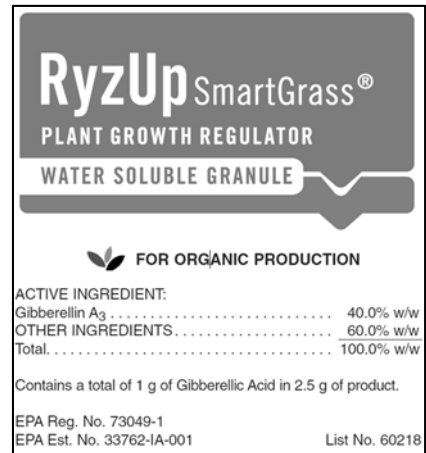
Rainfall (in.):



Soil Sample:

Ammonium Acetate ----ppm----													DTPA ----ppm----				% Base Saturation									
Soil pH 1:1	Modified WDRF BpH	Soluble	Excess	OM	FIA	0-8"	M-P3						Ca-P Sulfate ppm S					Hot	Boron ppm B	Sum of Cations me/100g						
		Salts 1:1 mmho/ cm	Lime Rating	LOI- %	Nitrate ppm N	Nitrate Lbs N/A		K	Ca	Mg	Na	Mn		Cu	H	K	Ca	Mg			Na					
5.8	6.4	0.17	NONE	5.0	0.7	2	10	325	2094	306	10	8	1.21	69.5	13.6	0.86	0.54	20.2	31	4	52	13	0			

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 on April 18 at 28 gpa 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. Field had low P and N fertility (see soil sample data above).



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

Results:

	Extended Leaf Height (in.)									
	Apr. 27		May 7		May 18		May 26		June 1	
Check	8.4	CD*	10.5	CDE	13.4	DE	14.3	AB	15.5	AB
Generate - 16 oz/ac	7.7	D	9.1	E	12.5	E	12.6	B	14.3	B
BioLink Spreader-Sticker 8 oz/100 gal	8.4	CD	9.8	DE	12.5	E	13.1	B	15.6	AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	9.5	BC	11.6	BCD	15.1	ABCD	14.3	AB	16.4	AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	9.4	BC	12.5	BC	14.9	ABCD	14.6	AB	16.2	AB
RyzUp 0.3 oz + ClassAct 1.25% NG	10.6	AB	15.0	A	16.4	AB	16.6	A	17.8	AB
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	10.2	AB	13.0	AB	15.8	ABC	15.6	AB	16.6	AB
RyzUp 0.3 oz + ClassAct 2.5% NG	11.3	A	14.8	A	16.9	A	16.9	A	18.3	A
RyzUp 0.3 oz + Chaperone 10 oz/ac	9.4	BC	11.7	BCD	14.1	CDE	13.0	B	15.5	AB
RyzUp 0.3 oz + FastTrack 0.5%	10.3	AB	12.7	B	14.4	BCDE	14.5	AB	16.1	AB
RyzUp 0.3 oz + UltraSurf AMS 2.5%	10.1	AB	13.5	AB	14.8	ABCD	14.5	AB	14.7	AB
RyzUp 0.3 oz + WetSit 0.25%	9.6	BC	12.2	BC	13.8	CDE	13.7	AB	15.9	AB
P-Value	<0.0001		<0.0001		<0.0001		0.0041		0.0765	

	Natural Height (in.)		
	May 18	May 26	June 1
Check	12.6 BCD	13.4 AB	15.1 AB
Generate - 16 oz/ac	11.2 D	11.9 B	13.6 B
BioLink Spreader-Sticker 8 oz/100 gal	11.6 CD	12.2 B	15.0 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	12.7 BCD	13.6 AB	15.9 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	13.3 ABCD	13.8 AB	15.7 AB
RyzUp 0.3 oz + ClassAct 1.25% NG	15.1 AB	15.7 A	16.9 AB
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	14.0 ABC	14.8 AB	16.1 AB
RyzUp 0.3 oz + ClassAct 2.5% NG	15.4 A	15.5 A	17.8 A
RyzUp 0.3 oz + Chaperone 10 oz/ac	12.6 BCD	12.0 B	14.9 AB
RyzUp 0.3 oz + FastTrack 0.5%	13.9 ABC	13.5 AB	15.6 AB
RyzUp 0.3 oz + UltraSurf AMS 2.5%	13.6 ABCD	13.6 AB	14.1 AB
RyzUp 0.3 oz + WetSit 0.25%	12.9 ABCD	13.0 AB	15.4 AB
<i>P-Value</i>	<i>0.0003</i>	<i>0.0027</i>	<i>0.0687</i>

	Lbs Hay/Acre		Product and Application Cost‡
	May 18	July 14	
Check	1,534 AB	3,254 A	\$0.00
Generate - 16 oz/ac	1,113 B	2,707 A	\$17.87
BioLink Spreader-Sticker 8 oz/100 gal	1,293 AB	2,785 A	\$9.88
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	1,494 AB	2,988 A	\$16.88
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	1,755 AB	3,220 A	\$21.43
RyzUp 0.3 oz + ClassAct 1.25% NG	1,958 A	3,455 A	\$19.67
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	1,662 AB	3,301 A	\$29.42
RyzUp 0.3 oz + ClassAct 2.5% NG	1,989 A	3,595 A	\$24.22
RyzUp 0.3 oz + Chaperone 10 oz/ac	1,515 AB	2,880 A	\$25.12
RyzUp 0.3 oz + FastTrack 0.5%	1,595 AB	3,210 A	Unknown
RyzUp 0.3 oz + UltraSurf AMS 2.5%	1,435 AB	2,776 A	\$22.12
RyzUp 0.3 oz + WetSit 0.25%	1,502 AB	2,919 A	Unknown
<i>P-Value</i>	<i>0.047</i>	<i>0.6738</i>	<i>N/A</i>

*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 18, none of the surfactants applied with RyzUp SmartGrass® or alone resulted in a higher yield than the untreated check. The second harvest date on July 14 resulted in no statistical yield difference between any of the treatment combinations examined.



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