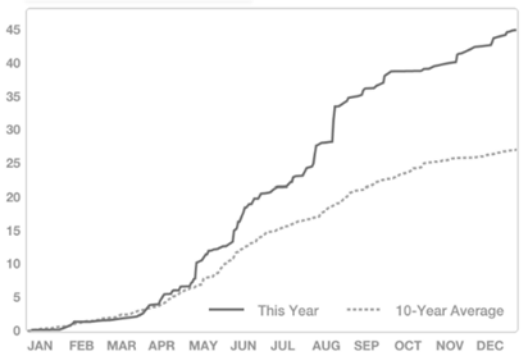
Nebraska On-Farm Research Network

Surfactants and RyzUp SmartGrass® on Smooth Brome

Study ID: 216023201501
County: Butler
Soil Type: Sharpsburg silty clay loam;
Harvest Date: 5/29/15 & 6/29/15
Fertilizer: Fertilizer applied broadcast prior to study initiation. Don't have the formulation or amount/acre readily available at this time.
Reps: 4

Irrigation: None
Rainfall (in.):

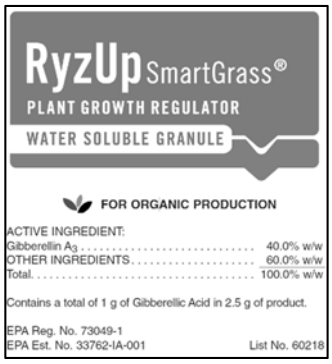


Soil Sample:

								Ammonium Acetate -----ppm-----					DTPA ----ppm----						% Base Saturation				
Soil pH 1:1	Modified WDRF BpH	Soluble Salts 1:1 mmho/cm	Excess Lime Rating	OM LOI-%	FIA Nitrate ppm N	0-8" Nitrate Lbs N/A	M-P3 ppm P	K	Ca	Mg	Na	Ca-P Sulfate ppm S	Zn	Fe	Mn	Cu	Hot Water Boron ppm B	Sum of Cations me/100g	H	K	Ca	Mg	Na
5.8	6.6	0.25	NONE	5.8	8.5	20	7	502	2352	505	14	17	1.90	84.5	9.2	0.91	0.79	21.8	21	6	54	19	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 29 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 Height (in.)		
	May 8	May 19	May 29
Check	11.6 F*	17.4 D	21.8 B
Generate - 16 oz/ac	12.6 EF	18.0 CD	22.7 AB
BioLink Spreader-Sticker 8 oz/100 gal	17.0 AB	17.0 D	23.3 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	14.4 BCDE	19.4 ABCD	23.5 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	17.0 AB	22.0 AB	25.6 A
RyzUp 0.3 oz + ClassAct 1.25% NG	15.1 ABCD	18.9 BCD	23.0 AB
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	16.5 AB	21.0 ABC	24.8 AB
RyzUp 0.3 oz + ClassAct 2.5% NG	17.8 A	22.4 A	24.9 AB
RyzUp 0.3 oz + Chaperone 10 oz/ac	13.5 CDEF	18.6 BCD	22.4 AB
RyzUp 0.3 oz + FastTrack 0.5%	17.0 AB	21.1 ABC	25.4 AB
RyzUp 0.3 oz + UltraSurf AMS 2.5%	16.3 AB	21.9 AB	25.2 AB
RyzUp 0.3 oz + WetSit 0.25%	15.4 ABC	20.3 ABCD	24.2 AB
P-Value	*<0.0001*	*<0.0001*	*0.0241*

	Natural Height (in.)	
	May 19	May 29
Check	16.4 AB	20.8 B
Generate - 16 oz/ac	16.5 AB	21.8 AB
BioLink Spreader-Sticker 8 oz/100 gal	15.8 B	22.2 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	17.8 AB	22.8 AB
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	19.0 A	24.4 A
RyzUp 0.3 oz + ClassAct 1.25% NG	16.6 AB	21.9 AB
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	19.1 A	23.6 AB
RyzUp 0.3 oz + ClassAct 2.5% NG	18.7 A	23.3 AB
RyzUp 0.3 oz + Chaperone 10 oz/ac	16.5 AB	21.3 AB
RyzUp 0.3 oz + FastTrack 0.5%	19.1 A	24.1 AB
RyzUp 0.3 oz + UltraSurf AMS 2.5%	18.6 A	24.1 AB
RyzUp 0.3 oz + WetSit 0.25%	17.7 AB	22.9 AB
P-Value	*0.0008*	*0.0309*

	Lbs Hay/Acre		Product and Application Cost‡
	May 29	June 29	
Check	2,970 B	6,265 A	$0.00
Generate - 16 oz/ac	3,166 AB	6,289 A	$17.87
BioLink Spreader-Sticker 8 oz/100 gal	3,432 AB	6,680 A	$9.88
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz./100 gal	3,573 AB	6,790 A	$16.92
RyzUp 0.3 oz + BioLink Spreader-Sticker 8 oz/100 gal + ClassAct NG 1.25%	3,628 AB	7,017 A	$21.43
RyzUp 0.3 oz + ClassAct 1.25% NG	3,103 AB	6,156 A	$19.67
RyzUp 0.3 oz + ClassAct 1.25% NG + Generate 16 oz/ac	3,941 AB	6,328 A	$29.42
RyzUp 0.3 oz + ClassAct 2.5% NG	3,675 AB	7,252 A	$24.22
RyzUp 0.3 oz + Chaperone 10 oz/ac	3,197 AB	6,187 A	$25.12
RyzUp 0.3 oz + FastTrack 0.5%	4,168 A	7,009 A	Unknown
RyzUp 0.3 oz + UltraSurf AMS 2.5%	3,980 AB	7,111 A	$22.12
RyzUp 0.3 oz + WetSit 0.25%	3,604 AB	6,657 A	Unknown
P-Value	*0.0314*	*0.677*	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 29, the RyzUp SmartGrass® applied with Fast Track resulted in a higher yield than the untreated check. There was no difference between the untreated check and any of the other surfactant combinations examined. The second harvest date on June 29 showed large variations in yield and resulted in no statistical yield difference between any of the treatment combinations examined.

In Partnership with: