



## Nebraska On-Farm Research Network

### Surfactants and RyzUp SmartGrass® on Big Bluestem

**Study ID:** 222109201501

**County:** Lancaster

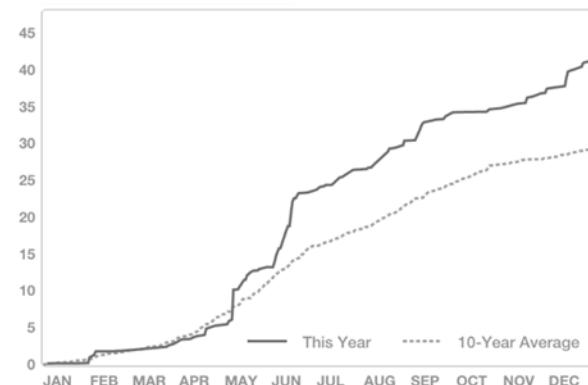
**Soil Type:** Aksarben silty clay loam;

**Reps:** 4

**Fertilizer:** 100 lbs/acre of actual N applied broadcast prior to study initiation as 34-0-0, this was due to low N on soil test.

**Irrigation:** None

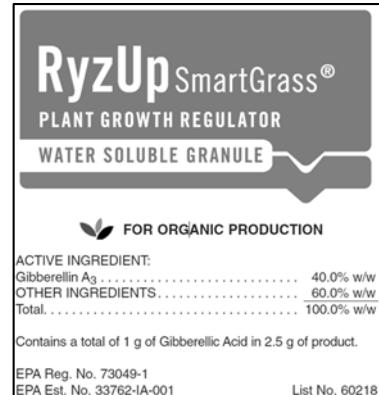
**Rainfall (in.):**



#### Soil Sample:

Soil 1:1	Modified BpH	Soluble						0-8"						Ammonium Acetate -----ppm-----						DTPA -----ppm-----						% Base Saturation					
		WDRF cm	Salts 1:1 mmho/ Rating	Excess Lime	OM %	FIA ppm N	Nitrate N/A	Lbs P	M-P3 ppm	Ca-P Sulfate ppm S						Hot Water Boron ppm B						Sum of Cation me/ 100g									
		pH 1:1	BpH cm	Lime Rating	LOI- %	Nitrate ppm N	N/A	P	ppm	K	Ca	Mg	Na	Zn	Fe	Mn	Cu	H	K	Ca	Mg	Na									
6.4	6.8	0.21	NONE	4.1	0.8	2	4	377	3145	779	13	9	0.55	37.6	11.2	1.41	0.75	25.0	7	4	63	26	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 and 0.9 oz/ac in combination with surfactants. 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:

		Forage Height (in.)							
		May 21	May 28	June 3	June 10	June 17	June 26	July 2	July 8
Check		7.3 A	9.6 A	12.4 A	17.1 B	22.2 B	27.6 A	28.8 A	31.5 A
RyzUp SmartGrass 0.3 oz/ac + ClassAct NG 2.5%		7.2 A	10.5 A	12.5 A	17.6 AB	23.5 AB	28.0 A	29.9 A	33.5 A
RyzUp SmartGrass 0.9 oz/ac + ClassAct NG 2.5%		7.8 A*	10.5 A	13.5 A	18.8 A	24.7 A	27.9 A	29.4 A	32.0 A
RyzUp SmartGrass 0.3 oz. + BioLink Surfactant and Penetrant		7.8 A	9.6 A	13.0 A	17.4 B	23.7 AB	28.7 A	29.3 A	34.0 A
RyzUp SmartGrass 0.3 oz. + BioLink Spreader Sticker		7.5 A	9.9 A	12.9 A	18.1 AB	24.4 AB	28.8 A	29.5 A	32.2 A
<i>P-Value</i>		0.2321	0.1444	0.2201	0.0388	0.1142	0.672	0.8871	0.2412

	Extended Leaf Height (in.)							
	May 21	May 28	June 3	June 10	June 17	June 26	July 2	July 8
Check	10.8 AB	13.2 A	17.0 A	22.8 A	28.9 A	36.5 A	39.5 A	42.1 A
RyzUp SmartGrass 0.3 oz/ac + ClassAct NG 2.5%	10.1 B	14.1 A	17.7 A	23.7 A	30.6 A	36.6 A	38.9 A	45.7 A
RyzUp SmartGrass 0.9 oz/ac + ClassAct NG 2.5%	11.3 A	13.6 A	19.1 A	24.8 A	31.4 A	37.0 A	37.2 A	44.5 A
RyzUp SmartGrass 0.3 oz. + BioLink Surfactant and Penetrant	11.3 A	12.7 A	18.1 A	23.6 A	29.9 A	37.0 A	39.4 A	46.1 A
RyzUp SmartGrass 0.3 oz. + BioLink Spreader Sticker	11.0 AB	13.7 A	17.4 A	24.2 A	31.6 A	36.9 A	40.2 A	44.8 A
P-Value	0.0353	0.338	0.1924	0.2551	0.134	0.9413	0.7853	0.3654
Lbs Hay/Acre – July 15								Product and Application Cost‡
Check	2,329 AB					\$0.00		
RyzUp SmartGrass 0.3 oz/ac + ClassAct NG 2.5%	2,440 AB					\$24.22		
RyzUp SmartGrass 0.9 oz/ac + ClassAct NG 2.5%	2,385 AB					\$38.22		
RyzUp SmartGrass 0.3 oz. + BioLink Surfactant and Penetrant	2,240 B					\$17.75		
RyzUp SmartGrass 0.3 oz. + BioLink Spreader Sticker	3,045 A					\$20.72		
P-Value	0.0819					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 \$23.33/oz RyzUp cost. Surfactant costs vary.

**Summary:** On May 21, there were differences between products tested in the extended leaf height, however none of the product combinations resulted in heights that were significantly greater than the check. On June 10 and 17, the 0.9 oz/ac rate of RyzUp SmartGrass® in combination with ClassAct 2.5% NG was significantly taller than the check. Hay yield was determined on July 15; while treatment differences did exist, none of the product combinations tested resulted in yields that were higher than the check.



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