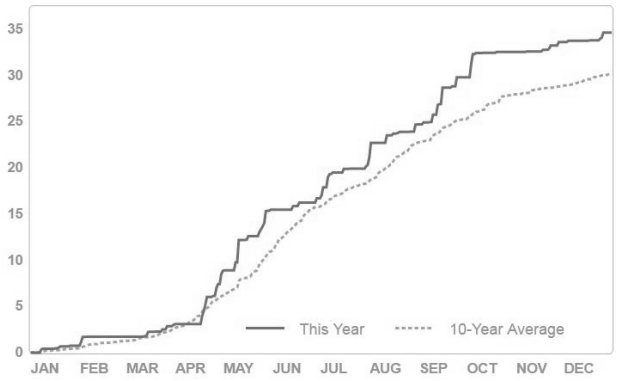
RyzUp SmartGrass®, Green Sol 48, and Surfactants on Smooth Brome

Study ID: 160023201601
County: Butler
Soil Type: Hastings silt loam
Harvest Date: 5/23/16
Reps: 4
Herbicides: 1.33 pt/ac 2,4-D LoVol 6 on 5/1/16
Seed Treatment: None
Foliar Insecticides: None
Foliar Fungicides: None
Fertilizer: 75 lb/ac broadcast of 42-0-0 (with inhibitor) on 4/16/16

Irrigation: None
Rainfall (in):



Introduction: The objective of this study was to evaluate the effect of RyzUp SmartGrass® and Green Sol 48 in combination with a surfactant, ClassAct® NG® or fertilizer uptake enhancer, AnnGro®. Plant growth and forage production were measured. RyzUp SmartGrass was applied at a rate of 0.3 oz/acre and Green Sol 48 was applied at a rate of 8 oz/acre. Treatment combinations are listed in the results tables on the next page. Products were applied on April 25, 2016 with a backpack sprayer at 28 gpa. Active ingredients for RyzUp SmartGrass and Green Sol 48 are below. This is a small plot study conducted on-farm.


RyzUp SmartGrass®
PLANT GROWTH REGULATOR
WATER SOLUBLE GRANULE
FOR ORGANIC PRODUCTION
ACTIVE INGREDIENT:
Gibberellin A_3 ..... 40.0% w/w
OTHER INGREDIENTS..... 60.0% w/w
Total..... 100.0% w/w
Contains a total of 1 g of Gibberellic Acid in 2.5 g of product.
EPA Reg. No. 73049-1
EPA Est. No. 33762-IA-001 List No. 60218

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

GREEN SOL 48

ACTIVE INGREDIENTS:
Gibberellic Acid
Kinetin [N-(2-Furanyl methyl)-1-H-Purin-6-amine]

GUARANTEED ANALYSIS (Fertilizer)
8-20-20
Total Nitrogen (N) 8.0%
8.0% Ammoniacal Nitrogen
0.0% Nitrate Nitrogen
Available Phosphate (P_2O_5) 20.0%
Soluble Potash (K_2O) 20.0%
Sources: Monoammonium Phosphate, Potassium Sulfate
Trace Elements:
Boron (B) 0.02%
Copper (Cu) 0.05%
0.05% Chelated Cu
Iron (Fe) 0.10%
0.10% Chelated Fe
Manganese (Mn) Total 0.05%
0.05% Water Soluble Mn
Molybdenum (Mo) 0.0005%
Zinc (Zn) 0.05%
0.05% Chelated Zn
Sources: Sodium Borate, Copper Chelate, Iron Chelate, Manganese Chelate, Sodium Molybdate, Zinc Chelate. Chelating Agent: Ethylene Diamine Tetra Acetate (EDTA)

Product information from: *www.greensol.com/labels/GS48_Label.doc*

Results:

	Natural Height (in)		Extended Heights (in)		
	May 2	**May 23**	**May 2**	**May 9**	**May 23**
Check	6.3 B	11.5 A	8.4 C*	12.5 C	15.6 A
RyzUp SmartGrass (0.3 oz) + ClassAct NG 2.5%	7.7 A	13.4 A	10.5 A	17.8 A	18.4 A
RyzUp SmartGrass (0.3 oz) + AnnGro	7.4 A	13.3 A	9.4 B	15.0 B	18.1 A
GreenSol 48 (8 oz/ac) + ClassAct NG 2.5%	6.0 B	11.6 A	8.5 C	12.6 C	15.7 A
P-Value	0.0001	0.189	0.001	<0.0001	0.097

	Yield (lb hay/ac)†	Marginal Net Return‡ ($/ac)
Check	3,331 B	126.71
RyzUp SmartGrass (0.3 oz) + ClassAct NG 2.5%	4,543 A	155.28
RyzUp SmartGrass (0.3 oz) + AnnGro	4,196 AB	149.35
GreenSol 48 (8 oz/ac) + ClassAct NG 2.5%	3,576 AB	113.28
P-Value	0.0444	N/A

*Values with the same letter are not significantly different at a 90% confidence level.
†Yield standardized to 10% moisture.
‡Marginal net return based on $76.09/ton hay, $11.50/oz RyzUp SmartGrass, $7.29/ac for ClassAct NG 2.5%, $1.08/oz Green Sol 48, and $6.82 application cost. Product cost for AnnGro is not available and therefore is not included in these calculations.

Summary: When plant height was recorded on May 2 and 9, 2016, the two treatments with RyzUp SmartGrass had taller natural leaf height (both dates) and extended leaf height (measured on May 2, 2016 only). When brome grass was cut on May 23, 2016 there was no difference in leaf height between any of the treatments. The RyzUp SmartGrass with ClassAct 2.5% NG had the greatest hay production and resulted in the highest marginal net return at standardized hay prices used. The other treatments tested did not have production that was significantly different than the check.

Sponsored by: University of Nebraska Lincoln; Nebraska Corn Board

In Partnership with: Nebraska Soybean Checkoff; Nebraska Corn Growers Association; Nebraska Dry Bean Commission