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# Irrigated Forage Projects at CSIDC

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# Alfalfa Management Trial



July 15, 2010



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# Alfalfa Management Trial

- Comparing yield performance of 7 alfalfa varieties in a 3 cut system
- Year 3 of 3
- Cut timing targeted at June 15, August 1, September 15
- 75 lb  $P_2O_5$ , 75 lb  $K_2O$  applied annually



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# Alfalfa Management Trial

- Direct seeded with JD 750 drill on June 4, 2008
- 12.6 lb/acre
- Area per variety = 0.38 acres
- Soil test annually







# ALS Laboratory Group Agricultural Services

Phone:  
1-800-667-7645

## SOIL TEST REPORT

### Dealer / Crop Consultant:

I.C.D.C.

BOX 609

OUTLOOK,SK S0L 2N0

Phone: --

Fax: --

Email:barry.vestre@agr.gc.ca

### Client Information:

NOT SPECIFIED

### Sample / Field Information:

Crop Year 2011

Field Name 12SW

Legal Location SW 15 29 8 W3

Soil Climatic Zone Brown

GPS Reference

Acres

Previous Crop

Yield

Stubble Management N/A

Rotation N/A

Sample ID 721147

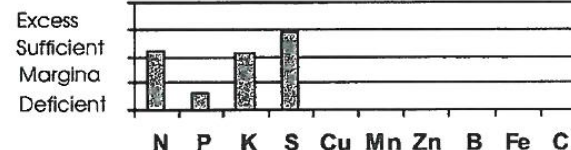
Date Sampled 02-NOV-10

### SOIL TEST CHARACTERISTIC

Depth (inches)	Texture	pH	E.C.		Salinity Rating	Organic Matter %	NH <sub>4</sub> -N (lb/ac)	Calculated CEC meq/100g	Base Saturation			
			1S:2W	1S:2W (mS/cm)					Ca	Mg	K	Na
									ppm			
									% of CEC			
0-12	Loam	7.9	1.4	3.2	Slight							
12-24	Clay Loam	8.3	2.2	4.8	Moderate							

### SOIL TEST NUTRIENT LEVELS

Depth (inches)	NO <sub>3</sub> -N	P	K	SO <sub>4</sub> -S	Cu	Mn	Zn	B	Fe	Cl
					lb/ac					
0-12	11	20	462	>96						
12-24	5			>86						





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# Alfalfa Management Trial

- Harvest 2011 – June 20, Aug. 4, Sept. 22



October 14, 2009



## 2009-2011 Dry Matter Yield Summary (t/a)

VARIETY	2009 YIELD	2010 YIELD	2011 YIELD	MEAN YIELD
2065MF	4.51	5.82	5.43	5.26
AC LONGVIEW	4.78	5.04	5.39	5.07
STEALTH	4.70	5.22	5.16	5.03
53Q30	4.50	5.42	5.14	5.02
HYBRIFORCE 400	4.61	5.29	4.95	4.96
AC BLUE JAY	4.49	5.26	5.07	4.95
CEI EQUINOX	4.43	5.43	4.86	4.91
MEAN	4.57	5.35	5.14	5.02
CV (%)	5.81	5.44	4.96	3.38
LSD (0.05)	0.47	0.51	0.45	0.30
F-Value	0.76	2.79	2.75	1.92



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# Evaluation of Commercial Pasture Blends



July 15, 2010





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# Commercial Pasture Blends

- Evaluate commercial and custom forage blends for yield, persistence and species composition
- Year 2 of 3
- Small plot trial at CSIDC
- 50 lb  $P_2O_5$  and 15 lb  $K_2O$  annually
- N applied on a plot-by-plot basis



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Second clipping – June 23, 2011



# Commercial Pasture Blends

- Harvest – May 30, June 23, July 21, Aug. 19

Blend	Total DM Yield (ton/acre)	Total DM Yield (lb./acre)	Total DM Pasture Yield (lb./acre)	Grazing days (AUM/ac)	Grazing days (AU days/acre)
Custom Blend #1	3.84	8453	5917	6.5	197
Northstar Custom Blend	4.91	10811	7568	8.3	252
Custom Blend #2	3.32	7317	5122	5.6	171
Brett-Young Super Pasture Blend	4.89	10785	7550	8.3	252
Viterra Ranchmaster Blend	3.93	8654	6058	6.6	202
Pickseed Haygraze Blend	3.96	8729	6110	6.7	204

#### Assumptions:

Pasture yield calculated as total DM yield with a 70% utilization rate

3% of body weight DM requirement = 30 lb DM/AU/day \* 30.5 days = 915 lb DM/AUM

1 AU = one 1000 lb cow with or without calf





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# Perennial Forage Biomass Evaluation



September 3, 2009





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# Perennial Forage Biomass

- Measure the forage biomass production of 10 perennial grass species
- Small plot trial at CSIDC
- Year 2 of 3
- 100 lb N, 50 lb  $P_2O_5$ , 15 lb  $K_2O$  annually
- Single cut harvest



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# Perennial Forage Biomass

- Harvest – July 25

Species	Yield (t DM/acre)
Western Wheatgrass	3.74
Switchgrass	4.81
Russian Wildrye	4.96
Crested Wheatgrass	5.71
Slender Wheatgrass	6.30
Meadow Bromegrass	6.54
Hybrid Bromegrass	6.80
Tall Wheatgrass	7.31
Intermediate Wheatgrass	7.89
Smooth Bromegrass	8.60



# 2012 Ideas ??

- Continue pasture and biomass trials
- Forage fertility
- Corn agronomy



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A huge thank you and tons of recognition for Sarah Butler & Rory Cranston!!! They did the hard work for me !!