



ICDC Forage Projects 2008

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ICDC/SIPA Annual Conference



Saskatchewan
Ministry of
Agriculture



Outline

- SW Project Survey
- Gopher Field Day
- SW Fruit Initiative
- Irrigation Scheduling (Herbert)
- Corn Water Use (Estuary)
- Phosphorus on Alfalfa (Miry Creek)
- Alfalfa Variety Demos
 - Waldeck
 - Consul
- Osler Alfalfa/Grass Variety Research
 - CSIDC Alfalfa Management





SW Survey

- Two Objectives
 - Crop Distribution
 - ICDC Research Priorities

- 13 Irrigation District Annual Meetings



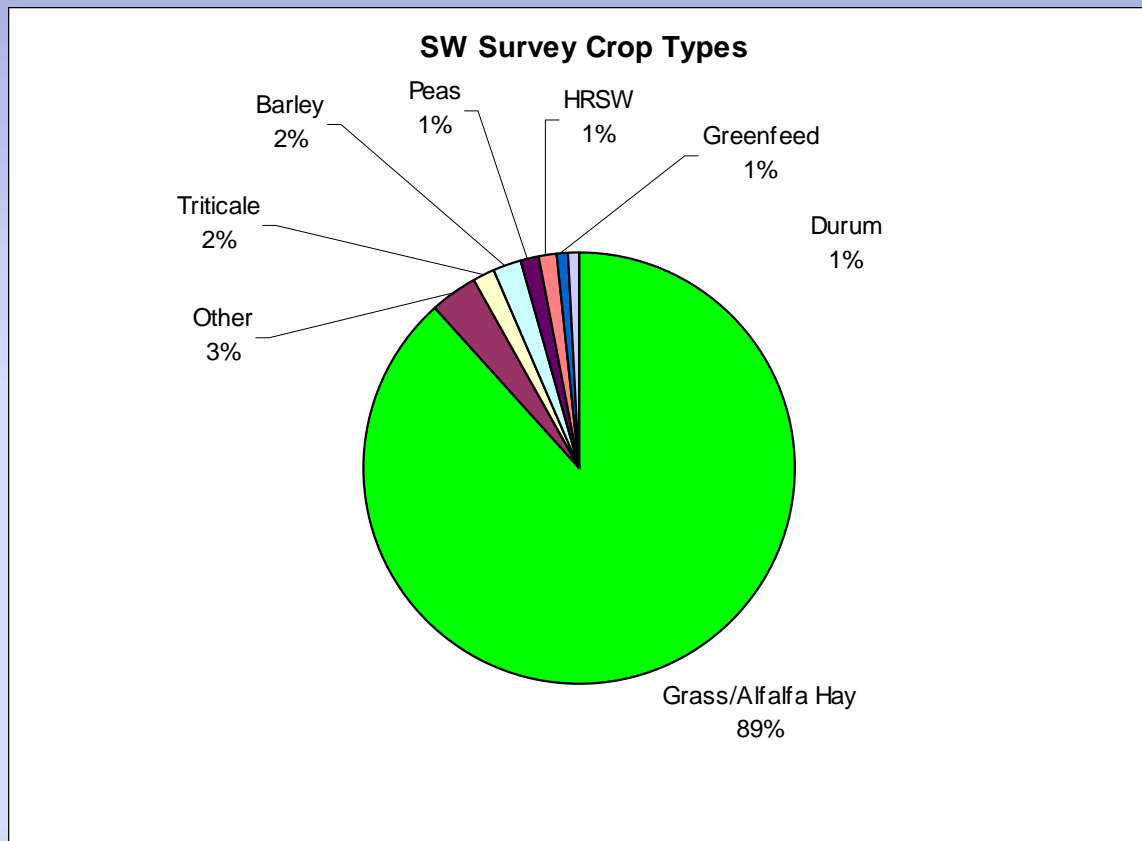


	Acres	Type	Date
Chesterfield	685	Flood	Feb 5
Consul/Nashlyn	3,485	Flood	Mar 28
Eastend	2,878	Flood	Feb 7
Herbert	1,667	Pivot	Mar 27
Lodge Creek	970	Flood	Apr 1
Maple Creek	2,039	Flood/Pivot	Feb 8
Middle Creek	1,087	Flood	Mar 13
Miry Creek	1,551	Sprinkler	Apr 2
North Waldeck	1,639	Flood	Apr 23
Ponteix	1,495	Flood/Pivot	Apr 8
Rush Lake	3,394	Flood	Apr 7
Val Marie	6,600	Flood	May 2
Vidora	2,436	Flood	Mar 13



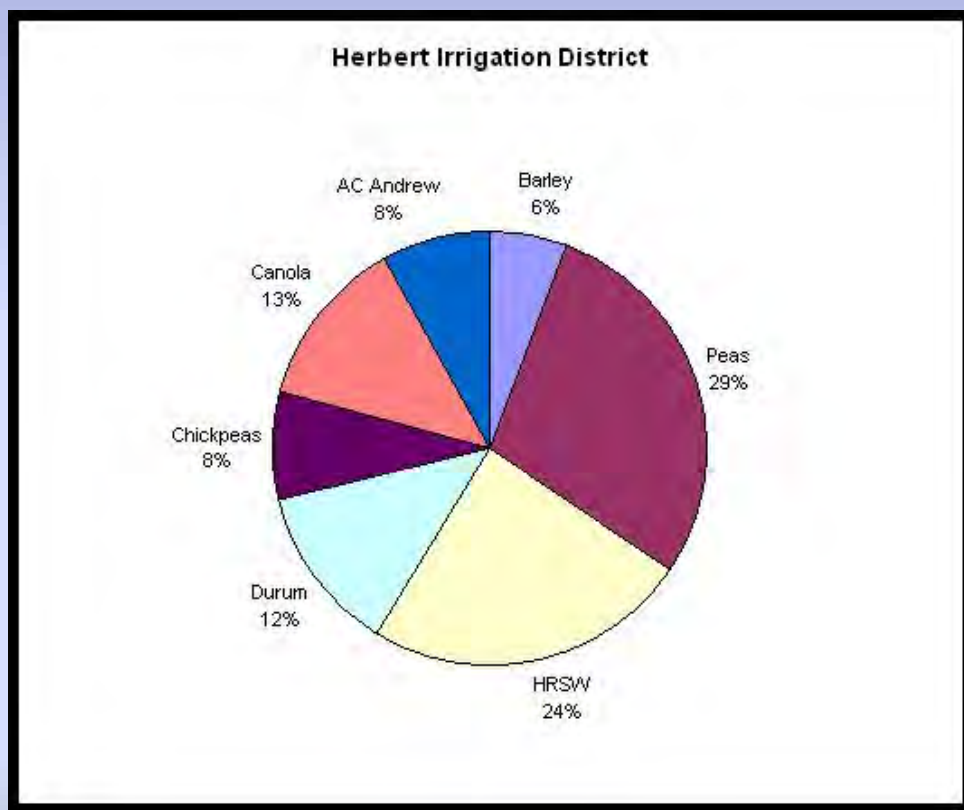
Crop Distribution

- 32,500 acres
- Rotation
 - 9 years Hay
 - 1 year Cereal





Herbert Irrigation District





ICDC Priorities

- Handed our 1999 Survey
 - Keep doing
 - Stop doing
 - New Ideas



ICDC Priorities

- Alfalfa Reseeding Techniques
- Dandelion Control in Alfalfa
- Pocket Gopher / Gopher Control
- Forage Production Centers tied to Livestock Feeding
- Forage Mixes for Grazing
- Zero Tillage / Direct Seeding
- Alfalfa Fertilizer Economics
- Deer Damage on Alfalfa and Irrigation Ditches
- Salinity Control
- Grass Seed Varieties for Irrigation



New Ideas

- Gopher Control (4x)
- Effective Fertilizer Application on Alfalfa (2x)
- Install Hawks Nests for Non-Toxic Gopher Control
- Better Canada/USA Agreement for Low Volume Releases
- Aeration on Older Grass/Alfalfa Stands
- Methods of Rotating Out of Hay and into Cereal/Oilseed and Back



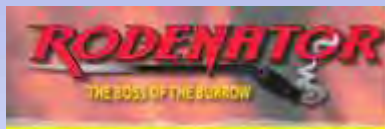
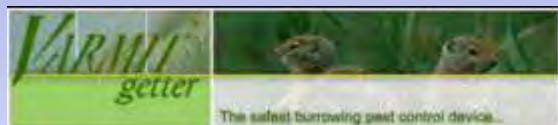
Gopher Field Day

- June 16
- Ponteix ID
- 3 Speakers
 - Scott Hartley
 - Cam Wilks
 - Dr. Gilbert Proulx





Demonstrations



- Propane
- Every hole
- Collapses holes





Demonstrations



- Foam
- Every Hole





Demonstrations

The Gophinator

- Anhydrous Ammonia
- Need a license
- Every Hole





Demonstrations



- Traps
- Every Hole
- Need to reset





Bait

- Phostoxin
 - Gas, Need a License, Close the Hole
- Strychnine
 - Wet or Dry, not Humane, Secondary Poisoning, Close the Hole
 - Available 2009
- Rozol
 - Anti-coagulant, Multiple Feeds, Open Hole



Bait Applicators





SW Fruit Initiative

- Treasure Valley Markets
 - Irrigation Scheduling
 - Field Day July 8
- Cypress Hills Vineyard and Winery
 - Irrigation Scheduling





Irrigation Scheduling

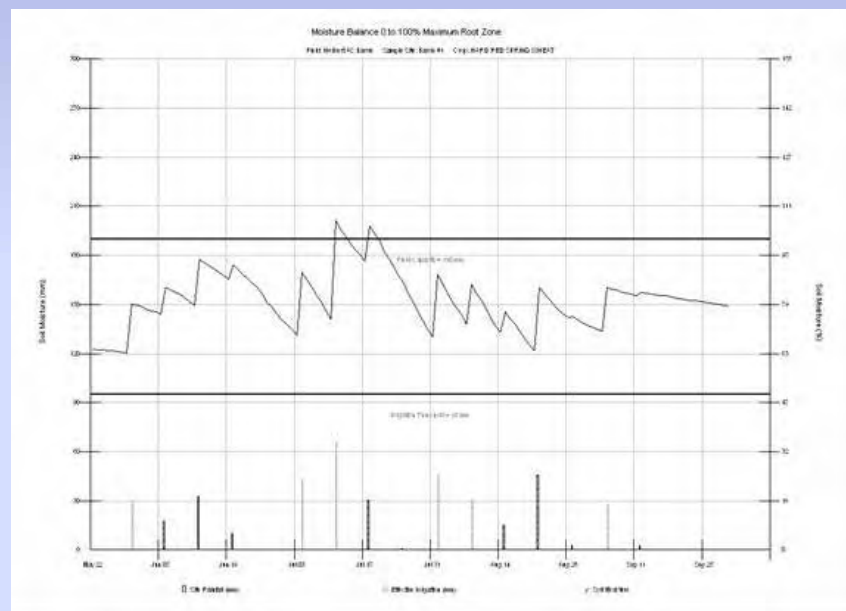
- Herbert Irrigation District
 - Peas
 - HRSW
 - AC Andrew
 - Canola
- AIMM
- Weekly visits





AC Barrie HRSW

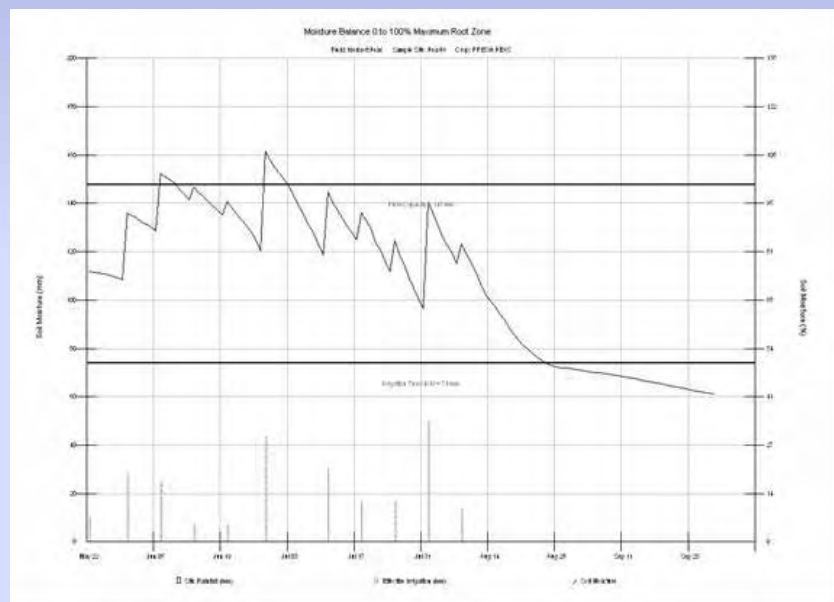
- Initial Soil Moisture
 - 175 mm (6.8")
- Final Soil Moisture
 - 175 mm (6.8")
- Amount Applied
 - 427 mm (16.8")
- Amount Used
 - 427 mm (16.8")
- Amount Modeled
 - 343 mm (13.5")
- Yield 50 bu/ac





Golden Peas

- Initial Soil Moisture
 - 117 mm (4.6")
- Final Soil Moisture
 - 177 mm (6.9")
- Amount Applied
 - 356 mm (14.0")
- Amount Used
 - 296 mm (11.6")
- Amount Modeled
 - 414 mm (16.3)
- Yield 30 bu/ac





Estuary Corn Water Use

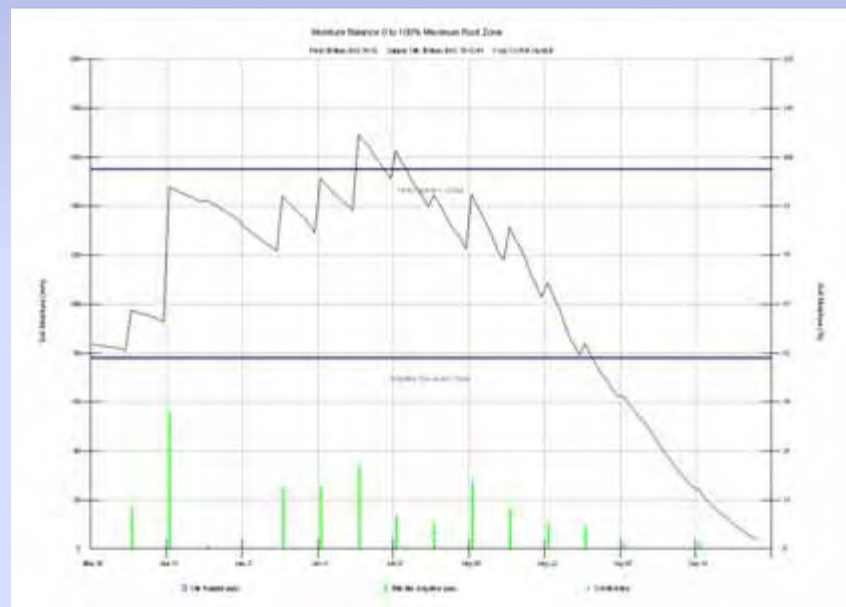
- Three varieties
DKC 27-44 (2200)
Murano (2550)
38B11 (2650)
- Field scale, pivots at the Estuary Hutterite Colony
- Received 2220 CHUs (2116 90%, 2327 Ave)





DKC 27-44 (2200)

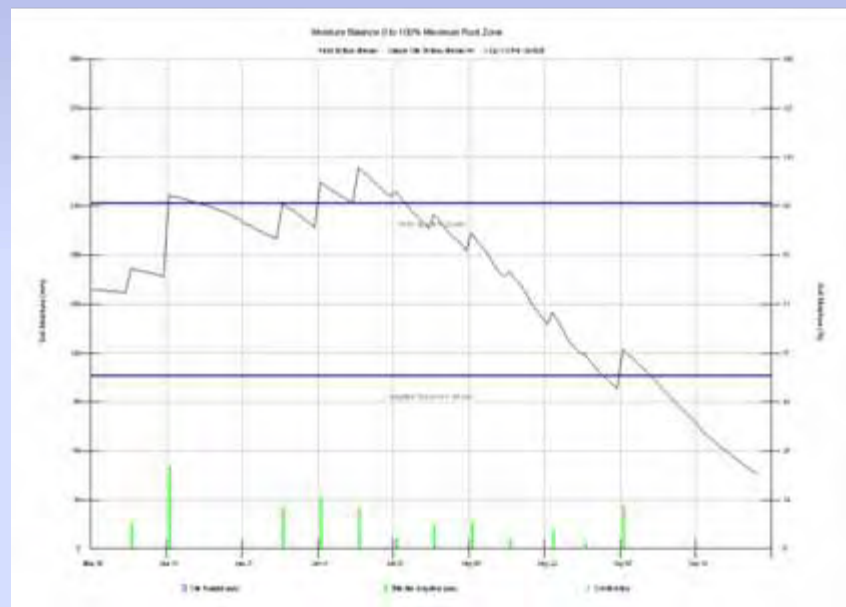
- Initial Soil Moisture
 - 90 mm (3.5")
- Final Soil Moisture
 - 64 mm (2.5")
- Amount Applied
 - 302 mm (11.9")
- Amount Used
 - 328 mm (12.9")
- Amount Modeled
 - 330 mm (13.0")
- Yield 19.7 t/ac Silage





Murano (2550)

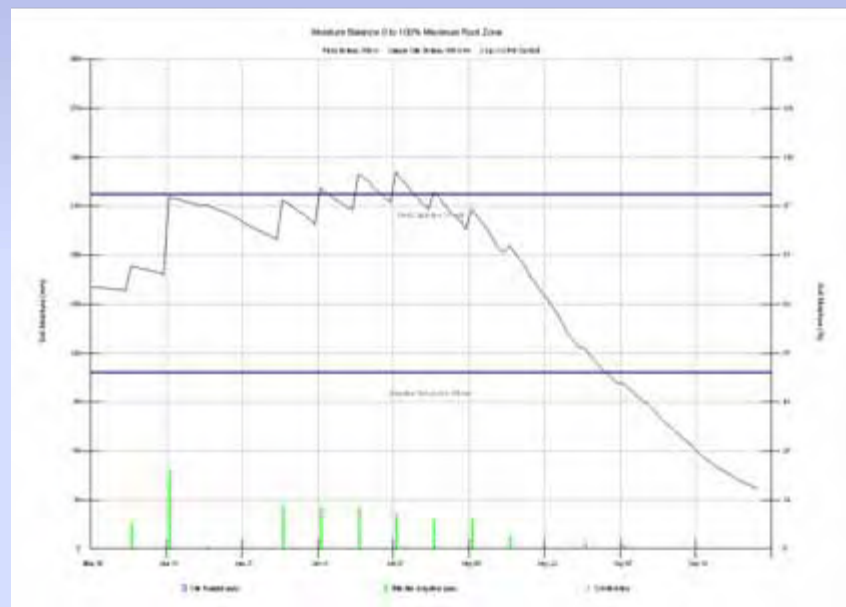
- Initial Soil Moisture
 - 239 mm (9.4")
- Final Soil Moisture
 - 241 mm (9.5")
- Amount Applied
 - 257 mm (10.1")
- Amount Used
 - 255 mm (10.0")
- Amount Modeled
 - 345 mm (13.5")
- Yield (Left to Graze)





38B11 (2650)

- Initial Soil Moisture
 - 168 mm (6.6")
- Final Soil Moisture
 - 178 mm (7.0")
- Amount Applied
 - 241 mm (9.5")
- Amount Used
 - 288 mm (11.3")
- Amount Modeled
 - 335 mm (13.2")
- Yield 20.6 t/ac Silage





Results

	Total Crop Use (mm)	Modeled Crop Use (mm)	Yield (t/ac, 65% Moisture)
DKC 27-44 (2200)	328	330	19.7
Murano (2550)	255	345	Graze
38B11 (2650)	288	335	20.6

- Water Use Efficiency?



Miry Creek P Demo

- Alpine Liquid P
 - Used in annual crops as seed placed P for pop-up effect
 - Foliar for reduced rates?
- Avail coated 11-52-0
 - Coating chelates the P to minimize soil immobilization
 - Slow release
- 11-52-0
- Check



Miry Creek P Demo

- Applied between 1st and 2nd Cut
- Soil test recommends 50 lbs/ac Phosphorus
- Only first year

Check (0 lbs P)

Avail coated 11-52-0 (25 lbs P)

Uncoated 11-52-0 (25 lbs P)

1X Alpine (9 lbs P)

2X Alpine (17 lbs P)

3X Alpine (25 lbs P)



Miry Creek P Demo

Second Cut Yields	Yield (t/ac)
Check (0 lbs P)	1.49
Avail coated 11-52-0 (25 lbs P)	1.62
Uncoated 11-52-0 (25 lbs P)	1.74
1X Alpine (9 lbs P)	1.57
2X Alpine (17 lbs P)	1.56
3X Alpine (25 lbs P)	1.60

- 11-52-0 still the way to go?



Waldeck Alfalfa Variety Demo

- Waldeck
 - 10 varieties
 - 2 floods
 - Established in 2006
 - second full year of production
 - Ave 1st Cut July 18 (119 RFV)
 - Ave 2nd Cut Oct 6 (154 RFV)





Waldeck Alfalfa Variety Demo

	1st Cut	2nd Cut	Total
Convoy	1.93	1.76	3.69
Magnum 3801 Wet	1.85	1.43	3.28
Equinox	2.03	1.16	3.18
Geneva	1.85	1.31	3.17
Ameristand 201+Z	1.84	1.20	3.03
Spredor 4	1.79	1.16	2.95
Starbuck	1.77	1.14	2.91
Gala	1.82	0.96	2.78
AC Longview	1.73	1.01	2.74
HybriForce-400	1.01	0.92	1.94



Consul Alfalfa Variety Demo

- Consul
 - 17 varieties, Goliath, no P
 - Alfalfa, CWG, HRSW
 - Established last year
 - No irrigation
 - Yield about 1 t/a
 - Still weeds





Osler

- 14 Alfalfas, 14 Grasses
- Randomized, Replicated Small Plot
- Established in 2003, Year 5
- 3 cuts, intensive management





Osler Alfalfa Results

Variety	2004	2005	2006	2007	2008	% of Beaver
AC Longview (FarmPure)	5.33	3.93	5.58	5.22	5.28	106% a
54V54 (Pioneer)	5.34	4.01	5.56	5.23	4.90	105% ab
AC Nordica (Proven Seed)	5.74	4.57	5.75	4.16	4.58	104% ab
PS8925MF (Pickseed)	5.46	3.59	5.90	5.13	4.62	104% ab
Stockwell (Seed-Link)	5.14	3.68	5.55	4.51	5.45	102% ab
Ameristand (Proven Seed)	5.38	3.67	5.72	5.02	4.51	102% ab
Gala (Proven Seed)	5.13	3.96	5.49	4.62	5.05	102% ab
Geneva (Proven Seed)	5.58	3.55	5.30	5.04	4.76	102% ab
Hornet (FarmPure)	5.27	3.89	5.50	4.45	4.97	101% ab
AC Grazeland (Pickseed)	4.90	3.90	5.49	4.70	4.82	100% ab
Beaver	4.48	4.12	5.82	4.29	5.10	100% ab
PS2065MF (Pickseed)	5.29	3.97	5.32	4.72	4.46	100% b
53Q60 (Pioneer)	5.21	3.54	5.73	4.63	4.59	100% b
CV	8.30	6.20	N/S	10.57	12.28	5.38
LSD	0.60	0.30	N/S	0.71	0.84	1.55



Osler Results

- AC Longview (FarmPure)
- 54V54 (Pioneer)
- AC Nordica (Proven Seed)
- PS8925MF (Pickseed)
- Stockwell (Seed-Link)





Osler Alfalfa Results

- Plant counts after five years of three cuts per year

Variety	Plant Count	
AC Nordica	18.75	a
Beaver	18.25	ab
Gala	18.00	ab
AC Grazeland	16.75	abc
AC Longview	16.50	abc
AmeriStand	14.75	bcd
54V54	14.75	bcd
Geneva	14.00	cd
Hornet	14.00	cd
Stockwell	14.00	cd
PS2065MF	13.50	cd
PS8925MF	12.75	d
53Q60	12.75	d
CV	16.69	
LSD	1.83	



Osler Grass Results

Variety	2004	2005	2006	2007	2008	% of Bravo	
AC Parkland CWG	6.48	4.74	6.95	4.17	6.86	108%	a
Paddock MB	6.03	5.64	7.12	4.65	5.58	107%	a
AC Goliath CWG	8.01	5.42	6.41	2.48	6.49	106%	a
AC Knowles HB	7.22	4.83	6.02	3.42	5.90	101%	ab
Bravo SB	5.83	4.86	6.36	4.01	6.01	100%	ab
Garrison Cfox	5.33	4.69	6.87	3.76	6.38	100%	ab
Chief IntWG	6.39	4.84	5.88	3.83	4.92	96%	ab
Joliette Timothy	4.97	4.30	4.50	3.61	5.58	85%	bc
Arctic Orchard G	3.65	4.56	4.94	3.10	4.23	76%	cd
Aurora Timothy	4.57	4.38	4.64	2.10	3.47	71%	cde
Revenue SIWG	7.21	3.88	4.19	1.26	1.05	65%	de
Kay Orchard G	0.72	3.92	4.78	3.52	2.62	57%	e
Authur Dah WR	5.78	3.58	3.92	1.54	0.01	55%	ef
Courtney Tfes	0.64	2.88	4.75	2.25	0.48	41%	f
CV	23.59	14.54	12.30	29.70	40.17	13.85	
LSD	1.80	0.90	2.67	1.32	2.11	9.77	



CSIDC Alfalfa Management Trial

- Intensive 3 cut system
- Field 12, Quarter Pivot
- 7 varieties
- 3 replicates
- Seeded June 2008







Special Thanks

- Nicole Beatty
– SAMA Yorkton





ICDC Projects

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