



**Saskatchewan
Ministry of
Agriculture**

Regional Variety Trials in Sask

John Ippolito, Sask Ag

**Presented to Saskatchewan Oat
Development Commission
8 January 2012**



Overview

- **Saskatchewan Variety Performance Group (SVPG) and Saskatchewan Advisory Council on Grain Crops (SACGC) – regional oat trials in SK**
- **SCIC reports on seeded acres by variety**
- **Top 5 oat varieties (by SCIC) and some movers.**

Overview of RVT

- **SVPG**
 - Conducts the regional trials to compare agronomic performance
- **SACGC**
 - Supervises collection, analysis and compiling the data
- **Varieties of Grain Crops 2013 (yellow book)**
- **Oats**
 - varieties tested
 - locations



Varieties of Grain Crops 2013

Crop Production Areas



The cropland of Saskatchewan has been divided into four areas based roughly on agro-climatic conditions. Crop yields can vary from area to area. In choosing a variety, producers will want to consider the yield data in combination with marketing and agronomic factors.

Area 1: Drought is a definite hazard and high winds are common. Sawfly outbreaks often occur in this area. Cereal rust may be a problem in the southeastern section.

Area 2: Drought and sawfly may be problems in the western and central sections of the area. Cereal rust may be a problem in the southern section.

Area 3: Sawfly can also be a problem. Drought is not as likely to be a problem in this area, particularly in the east. Cereal rust may occur in the eastern portion. The frost-free period can be fairly short in the northern section.

Area 4: Rainfall is usually adequate for crop production. However, early fall frosts and wet harvest conditions are frequent problems.

Note About Dividing Lines:

The dividing lines do not represent distinct changes over a short distance. The change from one area to another is gradual.

Table of Contents

Cereal Crops	
Wheat	4
Winter Wheat	6
Rye	6
Triticale	6
Malting Barley	7
Feed and Food Barley	9
Oat	10
Other Crops	
Buckwheat, Caraway, Coriander, Fenugreek, Safflower, Canaryseed	11
General Seed Facts	12
Pulse Crops	
Lentil	13
Field Pea	14
Chickpea	15
Soybean	15
Dry Bean	16
Faba Bean	16
Oilseed Crops	
Flax	17
Sunflower	17
Mustard	18
Canola	19
Clubroot	21
Breeding Institutions and Seed Distributors	22

Symbols Used in 2013 Seed Guide:

- § Variety may not be described in 2014
- Insufficient test data to describe
- ⊕ Plant Breeders' Rights at time of printing
- ⊙ Applied for PBR protection at time of printing

Abbreviations used:

Relative maturity: VE = Very Early, E = Early, M = Medium,
L = Late, VL = Very Late

Resistance: VG = Very Good, G = Good, F = Fair, P = Poor,
VP = Very Poor, n/a = not applicable

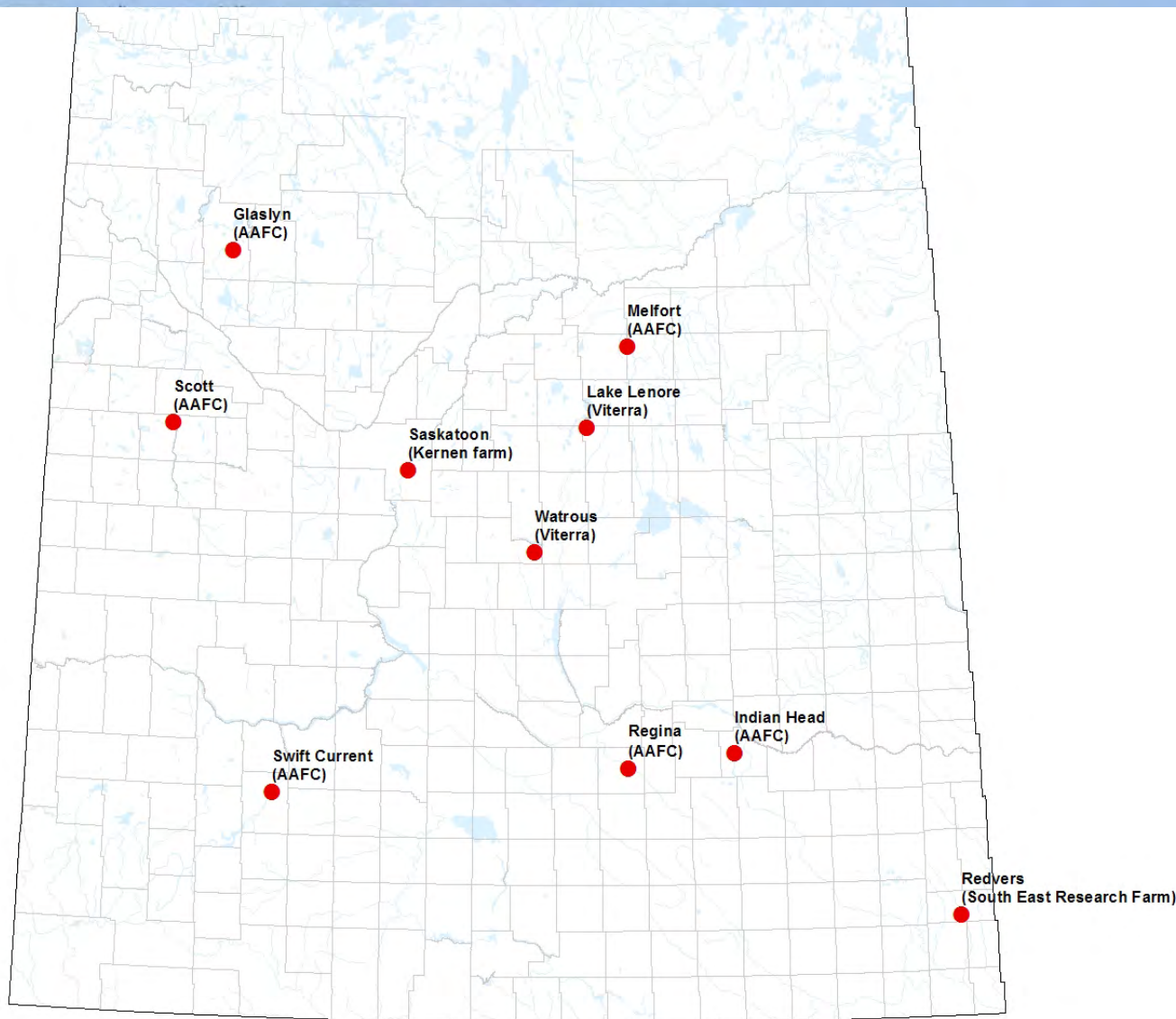
Seed size: S = Small, M = Medium, L = Large

The information contained herein is provided by the Saskatchewan Advisory Council on Grain Crops. To reproduce this information in whole or in part, permission must be obtained from the council. Please contact Mitchell Japp, secretary, at: (306) 787-4664.

Oats Tested in 2012

- CDC Dancer (check)
- Bradley
- CDC Seabiscuit
- CDC Big Brown
- CDC Nasser
- Souris
- Stride
- OT3054
- OT3056

Oat Locations for SVPG Trials



SCIC oat data

- **Variety data based on 827,164 seeded acres insured with SCIC (accurate as of Nov 2, 2012)**
- **15% of total acres reported as unknown variety, or left blank**
- **Varieties with less than 400 acres reported are not included.**

Variety Name	Seeded Acres
AC Morgan	306,604
CDC Dancer	97,882
Derby	55,544
CDC Orrin	49,460
Leggett	37,152
Triactor	27,536
SW Betania	24,420
Pinnacle	21,286
Calibre	12,745
Ronald	10,332
CDC Minstrel	3,696
Summit	3,585

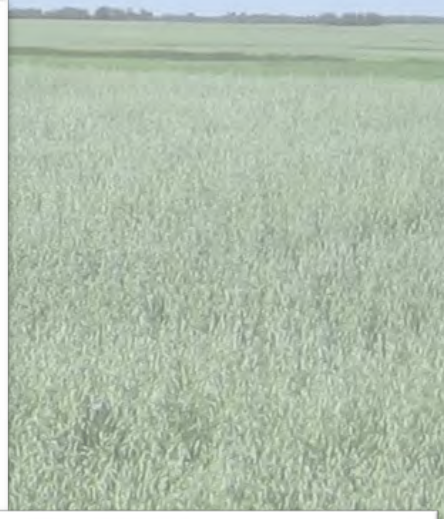
Diseases of Oat

- **Most recent available data: 2011**
- **Fusarium**
 - Detected *Fusarium graminearum*, *F. poae*, *F. avenaceum* and *F. culmorum*.
 - Largely in NE Sask, but that's where the oats are.
 - *F. poae* was most common by plate method. PCR detected *F. graminearum* and *F. poae* in all samples
- **Stem rust**
 - Environmental conditions were not favourable for stem rust in 2011.

Stem rust on oat



Crown rust on oat



AC Morgan

- 37% of insured oat acres with SCIC
- Yield \geq CDC Dancer
- Maturity \geq CDC Dancer
- Very good standability
- Susceptible to stem rust and crown rust.
- Distributor: SeCan

CDC Dancer

- Check variety in SVPG regional trials
- 12% of insured oat acres with SCIC
- Resistant to smut
- Slightly lower yield relative to other top varieties
- Good standability
- Medium for maturity (96 days)
- Distributor: FP Genetics / Cargill

Derby

- **7% of insured oat acres with SCIC**
- **Yield similar to CDC Dancer**
- **Medium maturity**
- **Good standability**
- **Susceptible to stem rust and crown rust. Moderately susceptible to smut.**
- **Distributor: Mastin Seeds**

CDC Orrin

- 6% of insured oat acres with SCIC
- Yield > CDC Dancer
- Maturity \geq CDC Dancer
- Good standability
- Resistant to smut. Susceptible to crown rust. Moderately susceptible to stem rust.
- Distributor: FP Genetics / Cargill

Leggett

- 4.5% of insured oat acres with SCIC
- Yield \geq CDC Dancer
- Maturity $>$ CDC Dancer
- Good standability.
- Resistant to crown rust and smut.
- Distributor: FP Genetics

CDC Minstrel

- **0.4% of insured oat acres with SCIC**
- **Yield > CDC Dancer**
- **Maturity > CDC Dancer**
- **Very good standability**
- **Moderately susceptible to crown rust, resistant to smut.**
- **Distributor: FP Genetics**

Summit

- **0.4% of insured oat acres with SCIC**
- **Yield similar to CDC Dancer**
- **Medium for maturity**
- **Good standability**
- **Resistant to crown rust and smut**
- **Distributor: FP Genetics**

Stride

- **Not yet reported on SCIC stats.**
- **Yield > CDC Dancer**
- **Maturity > CDC Dancer**
- **Good standability**
- **Resistant to crown rust and smut**
- **Distributor: SeCan**

Questions?

- **Acknowledgments:**
 - Mitchell Japp
 - Drs. Aaron Beattie and Jennifer Mitchell-Fetch
 - Sean Miller
 - Brad Champagne
 - Barry Lane

Oat

Main Characteristics of Varieties

Variety	Years Tested	-- Yield as % of CDC Dancer --		Test Weight (g/0.5L)	% Hull	% Plump	Relative Maturity*	Resistance to:			
		Area 1 & 2	Area 3 & 4					Lodging	Stem Rust	Crown Rust	Smut
CDC Dancer ☼	8	100	100	253	19.8	70	M	G	F	F	VG
SW Betania ☼	7	105	105	245	22.0	67	M	G	VP	P	G
CDC Big Brown Ⓞ	5	107	107	256	20.4	71	L	G	P	G	VG
CDC Boyer	8	99	100	232	23.3	71	M	G	F	F	P
Bradley Ⓞ	4	106	102	—	—	—	—	—	P	P	VG
Derby	8	98	102	247	22.9	65	M	G	VP	VP	P
HiFi ☼	6	99	97	253	22.4	55	M	G	F	VG	P
Jordan ☼	7	110	118	238	22.4	76	VL	G	F	F	VG
Leggett ☼	7	103	104	256	22.0	71	L	G	F	VG	VG
Lu	6	102	103	248	25.2	47	E	G	VP	VP	G
CDC Minstrel ☼	7	106	107	245	21.0	75	L	VG	F	P	VG
AC Morgan	8	104	108	236	25.1	54	L	VG	VP	VP	F
CDC Morrison ☼	3	100	95	248	24.4	67	L	VG	F	VG	VG
CDC Nasser	5	112	109	233	21.8	64	VL	G	P	VP	VG
CDC Orin ☼	6	108	109	253	23.2	74	L	G	P	VP	VG
Pinnacle ☼	8	113	109	244	23.6	70	VL	F	F	P	VG
Ronald ☼	7	96	99	249	22.4	55	L	VG	F	P	VG
CDC Seabiscuit ☼	6	111	106	240	20.3	73	L	G	F	P	F
Souris ☼	6	109	105	253	21.5	58	M	VG	G	VG	VG
Stride Ⓞ	4	110	111	255	22.9	65	L	G	F	VG	VG
Summit ☼	6	101	102	256	21.6	67	M	G	F	VG	VG
Triactor ☼	7	114	118	240	22.8	66	L	G	VP	G	F
CDC Weaver ☼	7	108	111	245	19.2	71	L	F	F	P	VG

* Maturity Rating M = 96 days

Additional Information

Although disease pressure is lower in eastern Saskatchewan than in Manitoba, crown rust races capable of attacking most varieties, except **CDC Big Brown**, **HiFi**, **Leggett**, **CDC Morrison**, **Souris**, **Stride**, **Summit**, and **Triactor** are increasing in southeast Saskatchewan. Early seeding will reduce the likelihood of severe infection.

Feed Oat

CDC SO-I and **CDC Nasser** are specialty feed oat varieties with higher digestible energy for cattle.

Forage Oat

CDC Baler, **CDC Haymaker** and **Murphy** are forage oat varieties available for annual forage production in Saskatchewan.

Hulless Oat

Bullion, **AC Gwen**, and **Lee Williams** are hulless varieties available for production in Saskatchewan. The hull is part of normal oat yield, thus hulless types yield less. They are difficult to handle and store and should be stored at less than 12 per cent moisture.

False Wild Oats or Fatuoids

False wild oats, or fatuoids, are off-types within common oat fields that have an appearance similar to wild oat, most noticeably, a prominent, dark awn and increased hairiness at the base of each floret. They are thought to result from the infrequent cross-pollination between common oat (*Avena sativa*) and true wild oat (*Avena fatua*). As such, their presence will likely be observed more often in fields planted from farm-saved seed. They have been reported within fields of common oat at rates up to 1 per cent and occur within all oat varieties.

Summary of Varieties

Variety	Yield as %		-----Resistance to: -----				
	of CDC Dancer		Maturity	Lodging	Stem Rust	Crown Rust	Smut
	Area 1 & 2	Area 3 & 4					
CDC Dancer	100	100	M	G	F	F	VG
SW Betania	105	105	M	G	VP	P	G
Derby	98	102	M	G	VP	VP	P
Leggett	103	104	L	G	F	VG	VG
CDC Minstrel	106	107	L	VG	F	P	VG
AC Morgan	104	108	L	VG	VP	VP	F
CDC Orrin	108	109	L	G	P	VP	VG
Stride	110	111	L	G	F	VG	VG
Summit	101	102	M	G	F	VG	VG
Triactor	114	118	L	G	VP	G	F

Triactor

- 3% of insured oat acres with SCIC
- Yield > CDC Dancer
- Maturity > CDC Dancer
- Good standability
- Moderately resistant to crown rust.
- Susceptible to stem rust.
- Distributor: Canterra

SW Betania

- 3% of insured oat acres with SCIC
- Yield \geq CDC Dancer
- Medium maturity
- Good standability
- Susceptible to stem rust, moderately susceptible to crown rust
- Moderately resistant to smut
- Distributor: Viterra