

SEED GUIDE



2024/25



Much has changed since 1971, but Snobelen Farms has remained committed to meeting consumer demand and serving grain and seed customers with the best-in-class, quality product.

A family-owned and operated business for over 50 years, Snobelen Farms has grown to include all aspects of production, processing and trading of grains, food grade soybeans and seed for markets in Canada and around the world.

Snobelen Farms operate out of 8 grain receiving facilities across southwestern Ontario, with Lucknow and Palmerston being the main seed facilities.



Lucknow 1-800-582-5669

- Head office
- Food grade soybean facility
- Receiving facility
- Cleaning, processing, and packaging pedigree seed
- Seed treating



Palmerston 1-877-343-3630

- IP and seed receiving facility
- Cleaning, processing, and packaging pedigree seed
- Seed treating



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MEET THE TEAM



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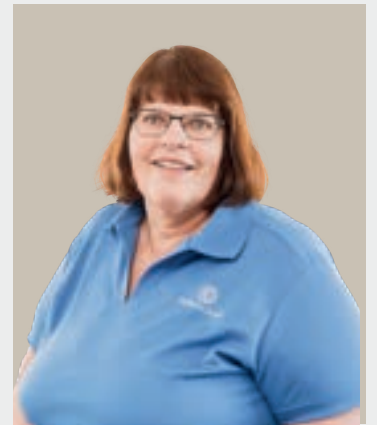
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SOYBEANS

Conventional | Traited

Snobelen Farms sources superior soybean genetics that are high performing and well adapted for both technology traited and food grade markets.



CONVENTIONAL SOYBEANS

Descriptions



OAC Strive

- Impressive emergence and early season growth
- Ideally suited for 7" to 15" rows
- Good on all soil types

CHU 2650

RM 0.4



OAC Lakeview

- High yielding, stable performance across most environments
- Excellent tolerance to Phytophthora root rot

CHU 2700

RM 0.5



SFL 06-44IP

- SCN Resistant
- Strong yield potential
- Impressive emergence
- Excellent disease package

NEW!

CHU 2700

RM 0.5



OAC Kamran

- SCN Resistant
- Excellent lodging score
- Short to medium plant structure

CHU 2725

RM 0.6



OAC Malory

- SCN Resistant
- Excellent yield potential
- Attractive field appearance

CHU 2800

RM 1.2



OAC Union

- SCN Resistant
- Strong yield potential
- Medium-tall plant, suited for narrow rows
- Suited for all soil types

CHU 2875

RM 1.4



OAC Bruton

- SCN Resistant
- Phytophthora root rot resistant
- Tall plant height
- Well suited for clay soils

CHU 2975

RM 2.0



OAC Wallace

- High yielding variety in both wet and dry areas
- Performs well in conventional and no-till operations

CHU 2750

RM 0.8

Characteristics

	OAC Strive	OAC Lakeview	SFL 06-441P	OAC Kamran	OAC Malory	OAC Union	OAC Bruton	OAC Wallace
CHU Rating	2650	2700	2700	2725	2800	2875	2975	2750
Maturity Group	0.4	0.5	0.5	0.6	1.2	1.4	2.0	0.8
SCN Resistant	NO	NO	YES	YES	YES	YES	YES	NO
Hilum Colour	Imperfect Yellow	Yellow	Yellow	Imperfect Yellow	Yellow	Yellow	Yellow	Brown
Plant Height	M - T	M	M	S - M	M - T	M - T	M	M - T
Canopy Type	Narrow	Inter.	Inter.	Narrow	Inter.	Nar - Inter.	Inter.	Inter.
Lodging*	1.8	1.7	2	1.1	1.6	1.1	1.3	1.7
Row Width**	7"-15"	7"-15"	7" - 15"	7"-15"	7"-30"	7"-15"	7"-30"	7"-15"
Soil Type	All	All	All	All	All	All	Clay	All
Protein (%)	44.0	39.9	41.9	42.4	42.6	40.3	42.5	38.2
White Mold Rating	AA	A	AA	A	AA	A	A	A

*Lodging: 1 = Excellent, 5 = Poor, ** Recommendation

Plant Height = S = Short, M = Medium, T = Tall

White Mold Rating = AA = Above Average, A = Average, BA = Below Average

TRAITED SOYBEANS

Descriptions



Alouette R2X

- Combination of bushy canopy and tall plant height
- Suited for all soil types

NEW!

CHU 2325

RM 00.1



Mahony R2

- Bushy plant type
- Good podding height
- An aggressive high yielding variety

FINAL YEAR FOR THIS VARIETY

CHU 2350

RM 00.3



Triquet R2X

- SCN - Moderately Resistant
- Strong yields for maturity
- Above average white mold rating
- Medium-tall variety

CHU 2475

RM 00.9



SC24-2675 XF

- SCN Resistant
- Great disease package
- Strong yield performance

NEW!

CHU 2675

RM 0.5



Ramage XF

- SCN Resistant
- Excellent standability
- White hilum

CHU 2675

RM 0.5



Savage R2X

- SCN Resistant
- Excellent yield potential
- Strong performer in drought situations

CHU 2675

RM 0.5



Mason XF

- SCN Resistant
- Bushy, tall variety
- Good disease package
- Suited for no-till and clay soils

CHU 2700

RM 0.6



Harvey E3

- Excellent standability
- Well suited to areas and seasons with high white mold pressure

CHU 2700

RM 0.6



Altitude R2

- Impressive emergence and early season growth
- Ideally suited for 7" to 15" rows
- Good on all soil types

FINAL YEAR FOR THIS VARIETY

CHU 2725

RM 0.6



Orr R2X

- SCN Resistant
- Good white mold rating
- Moderate field tolerance to Phytophthora root rot

CHU 2750

RM 0.8



Ridley XF


- SCN Resistant
- Versatile performer on different soil types
- Medium plant height with bushy canopy
- Suited for all row widths

CHU 2750

RM 0.8

TRAITED SOYBEANS







Characteristics

	Alouette R2X	Mahony R2	Triquet R2X	SC24-2675 XF	Ramage XF
Trait					
CHU Rating	2325	2350	2475	2675	2675
Maturity Group	00.1	00.3	00.9	0.5	0.5
SCN	NO	NO	Moderately Resistant	YES	YES
Hilum Colour	Black	Black	Black	Imperfect Black	Imperfect Yellow
Plant Height	T	M	M - T	S	M
Canopy Type	Bushy	Bushy	Intermediate	Bushy	Intermediate
Lodging*	2	1.5	1.8	2	1.5
Row Width**	7"-30"	7"-30"	7"-15"	7"-30"	7"-30"
Soil Type	All	All	All	All	All
White Mold Rating	A	A	AA	A	A

*Lodging: 1 = Excellent, 5 = Poor, ** Recommendation

Plant Height = S = Short, M = Medium, T = Tall

White Mold Rating = AA = Above Average, A = Average, BA = Below Average

Savage R2X	Mason XF	Harvey E3	Altitude R2	Orr R2X	Ridley XF
					
2675	2700	2725	2725	2750	2750
0.5	0.6	0.6	0.6	0.8	0.8
YES	YES	NO	NO	YES	YES
Black	Black	Light Brown	Brown	Brown	Black
T	T	M	S - M	M - T	M
Bushy	Bushy	Intermediate	Intermediate	Bushy	Bushy
2.2	2.5	2	1.3	1.4	1.5
7"-30"	7"-30"	7"-30"	7"-30"	7"-30"	7"-30"
All	Clay	All	All	All	All
A	A	AA	AA	A	A

SOYBEAN SEED TREATMENTS



HERBICIDE TREATMENT

New Vayantis® IV RFC seed treatment is the next generation of soybean seed treatments from Syngenta. It delivers comprehensive, next-level performance against a wide range of early-season seed and seedling diseases – including the broadest Pythium and Phytophthora protection available – for a stronger standing, higher-performing crop.

SCAN ME



INSECTICIDE TREATMENT

Protect your soybean seeds and seedlings from insects.

Fortenza® is a non-neonicotinoid soybean seed treatment that delivers control of the following pests: European chafer, June beetle, Bean Leaf Beetle, Black Cutworm, Wireworm and Seed Corn Maggot.

Fortenza® helps build a strong soybean stand, even under heavy insect pressure, producing faster, more uniform growth. This product can be used with most Rhizobium-based inoculants.

SCAN ME



FUNGICIDE TREATMENT

Saltro® is a soybean fungicide seed treatment for sudden death syndrome (SDS) management and suppression of soybean cyst nematode (SCN).

It provides a new mode of action that sets a new standard for SDS protection and is a consistent performer regardless of SDS pressure, without any stress on the plant.

SCAN ME





**LALFIX PROYIELD
LIQUID SOYBEAN**

LALFIX® LIQUID SOYBEAN inoculant contains two unique strains of *Bradyrhizobium elkanii* selected for enhanced performance and competitiveness in soybean production. This species is known to nodulate soybean roots and fix atmospheric nitrogen in a symbiotic relationship with the plant.

Soybean Inoculant applied by Snobelen Farms with either a Fungicide or Fungicide + Insecticide creates the ultimate seed treatment package for farmers. We utilize our state of the art facilities to apply the seed treatments with precision to every soybean so that you can be assured that each plant has the best start in the field.

Farmer Applied Inoculant

+ **LALFIX Peat**

1.2 kg package
4.45ml/100lbs of seed

Full Rate: 30 units/1.2kg
Half rate: 60 units/1.2kg

Once applied to seed, plant within 48 hours. Keep out of direct sunlight.



SCAN ME



+ **LALFIX Liquid**

1.1 L bladder
80g/100lbs of seed

Full Rate: 50 units/1.1L
Half rate: 100 units/1.1L

Once applied to seed, plant within 30 days. Keep out of sunlight in cool dark area.



SCAN ME



SOYBEAN SEEDING RATES

Number of Seeds/Lb	7.5" Row 194,000 seeds/acre (2.8 seeds/ft. row)	15" Row 177,000 seeds/acre (5.1 seeds/ft. row)	22" Row 172,000 seeds/acre (7.2 seeds/ft. row)	30" Row 162,000 seeds/acre (9.3 seeds/ft. row)
Pounds/Acre Seed				
1800	108	98	96	90
2000	97	89	86	81
2200	88	80	79	74
2400	81	74	72	68
2600	75	68	66	63
2800	69	63	62	58
3000	65	59	58	54
	157,000 plants/acre (2.3 plants/ft. row)	143,000 plants/acre (4.1 plants/ft. row)	139,000 plants/acre (5.9 plants/ft. row)	131,000 plants/acre (7.5 plants/ft. row)

Seed Rate in pounds/acre for each common row spacing and recommended seeds/acre (seeds/ft. of row)

Seeding rates are based on having a germination of 90% and an emergence of 85-90% (plant stand of 76-81% of seeding rate)

Derived from: PUB 811, Table 2-11

OPTIMUM PLANTING DATE

Planting Date	Yield (bu/acre)	Percent of Full Yield (%)
April 15 - May 5	63.8	100
May 6 - May 20	63.3	80
May 21 - June 5	58.3	92

SEEDS PER FOOT ROW

Row Spacing (inches)	Linear Feet of Row per Acre	Desired Plant Population per Acre						
		105,000	110,000	130,000	150,000	175,000	200,000	225,000
30	17,424	6.0	6.3	7.5	8.6	10	11.5	12.9
22	23,760	4.4	4.6	5.5	6.3	7.4	8.4	9.5
15	34,848	3.0	3.2	3.7	4.3	5.0	5.7	6.5
10	52,272	2.0	2.1	2.5	2.9	3.3	3.8	4.3
7.5	69,696	1.5	1.6	1.9	2.2	2.5	2.9	3.2

Derived from: Mississippi State University Extension Service

SEEDING DEPTH

Soybean seed is very sensitive to planting depth. Under most conditions, soybeans should be planted around 1.5 inches deep. However, since soybean seed has a high water demand for germination, it is important to plant ½ inch into moisture. It is also important to achieve good seed-to-soil contact and to close the seed slot.

As a general rule you can plant shallower when:

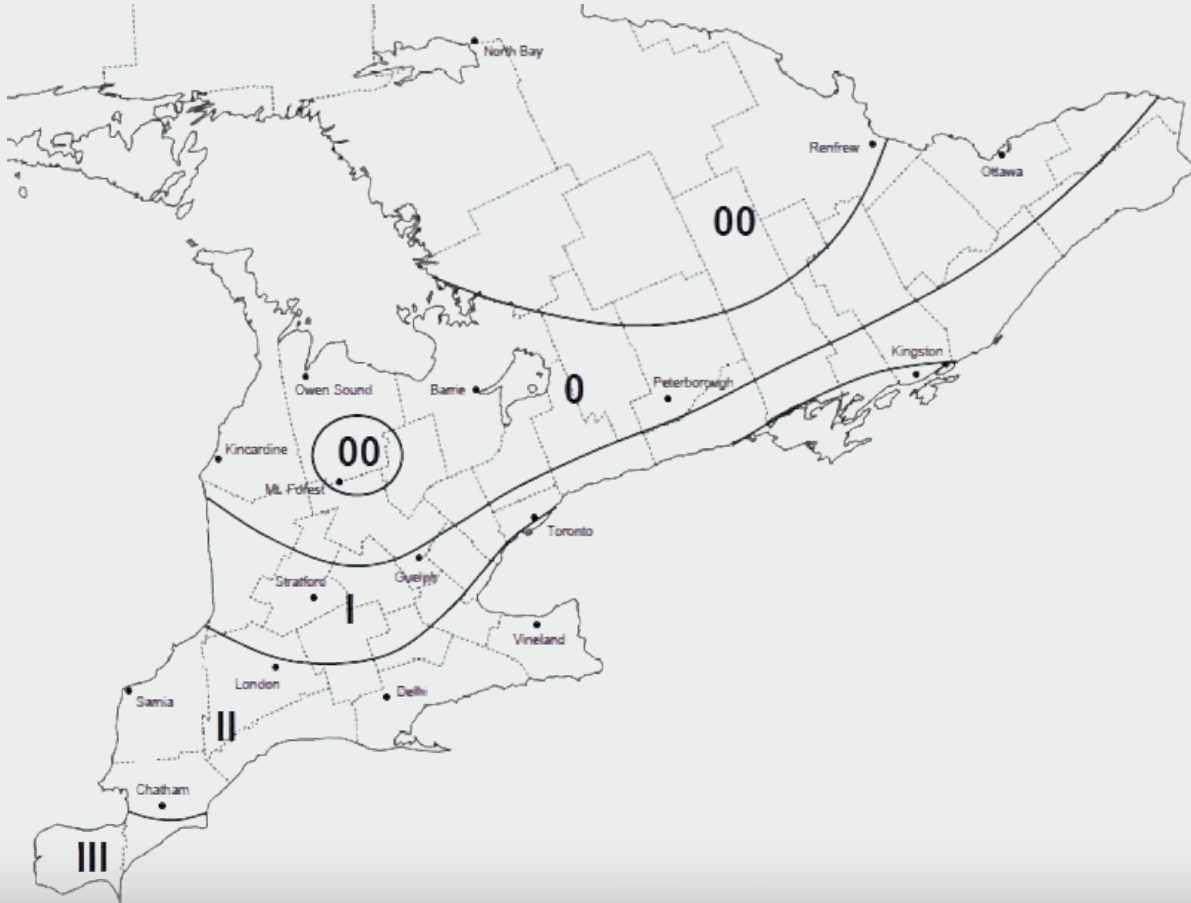
- planting early
- fine textured soils
- moist soils

You may have to plant deeper when:

- planting late
- high residue conditions
- coarse textured soils
- dry soils

The range of planting depth, depending on the conditions, is 1" – 2.5".

ONTARIO SOYBEAN MATURITY MAP



Source: Ontario Soybean and Canola Committee, 2019

POPULATION REDUCTION/ YIELD POTENTIAL

Plants Per Acre	Optimum Stand	Optimum Yield
157,000	100%	100%
118,000	75%	98%
78,000	50%	90%
39,000	25%	75%

IP SOYBEAN PROGRAM

INCREASE YOUR PROFIT PER ACRE, GROW IP SOYBEANS

- ✓ Competitive Premiums
- ✓ Strong performing varieties
- ✓ Regardless of yields, crop will be purchased
- ✓ 6 receiving facilities
- ✓ On-farm storage programs

Full range of varieties and heat units.

*Required to sign a contract, meet specific growing and receiving requirements



WINTER WHEAT

Soft Red | Soft White

We provide several choices of soft red and soft white winter wheat and varieties that are Ontario market leaders.

Although yield potential is important when choosing a variety, there are several other characteristics to consider including: reaction to fusarium head blight, winter survival, plant height, response to fungicides, and straw production. Snobelen Farms has carefully selected winter wheat varieties that will fit your farm acres.



New Winter Wheat Exclusivity

In a significant move to drive innovation and enhanced service offerings, Alliance Agri-Turf and Snobelen Farms announced in April 2024 their enhanced strategic relationship with Corteva Agrisciences to exclusively offer the former Corteva™ seeds brand winter wheat varieties, as well as exclusive future offerings for the Eastern Canada market. This collaboration combines Corteva's™ industry-leading wheat genetics platform with Alliance and Snobelens' local expertise and unrivalled customer service. Together both partners have a rich history and strong track record of providing quality seed production, setting the goal for a new benchmark for excellence.

We are optimistic about the future and the positive impact our business relationship will have on our customers and the industry. We look forward to supplying you and your customers – new and old – with existing Corteva™ varieties in the coming wheat season and for years to come.



WINTER WHEAT

Descriptions

B654SRW



Soft Red

- Consistently high yielding
- Responds well to intensive management
- Awnless

B700SRW



Soft Red

- Very good fusarium head blight tolerance
- Exceptional yield potential
- Above average lodging resistance
- Awned

Branson



Soft Red

- Consistent top performer
- Excellent flour quality
- Awnless

GRO-08SRW

Soft Red

NEW

- Exceptional test weight
- Strong winter survival and lodging tolerance
- Excellent yield potential
- Awned

Marker

Soft Red

- Responds well to intensive management
- Performs well on tougher soil types
- Awnless

OAC Constellation



Soft Red

- Strong straw and medium plant height
- Very good tolerance to leaf and stripe rusts
- Awned

OAC Moon



Soft Red

NEW

- Excellent lodging score
- Strong resistance to stripe rust
- Awned

OAC Virgo



Soft Red

NEW

- Exceptional resistance to powdery mildew & stripe rust
- Excellent test weight and winter survival scores
- Awnless

AVA

Soft White

- Outstanding yield potential
- Strong fusarium rating
- Awnless

Characteristics

	AVA	BRANSON	B654SRW	B700SRW	GRO-08SRW	MARKER	OAC CONSTELLATION	OAC MOON	OAC VIRGO
Combined Fusarium Rating	MS	S	S	MR	MR	S	MS	MS	MS
Test Weight	BA	BA	A	BA	AA	BA	AA	BA	AA
Winter Survival	H	VG	G	VG	VG	G	G	VG	VG
Lodging	F	VG	VG	VG	VG	F	VG	VG	VG
Height	T	S	T	S	S	M	M	M	M
Heading Type	Awnless	Awnless	Awnless	Awned	Awned	Awnless	Awned	Awned	Awnless
Maturity Date	Early	Early	Mid	Mid	Mid	Mid	Late	Late	Late
Powdery Mildew	G	G	F	F	G	G	VG	F	VG
Leaf Rust	G	G	VG	G	G	G	VG	F	F
Stripe Rust	F	VG	VG	F	N/A	VG	VG	VG	VG

*Always verify seed size by checking seed tag

*Seed size varies by year and seed lot

*Chart derived from OCCC trials, Snobelen Farms Ltd, and field observations

Fusarium Data: MR=Moderately Resistant, MS= Moderately Susceptible, S=Susceptible, HS=Highly Susceptible

Combined Fusarium Ratings are based on both Fusarium head blight ratings and deoxynivalenol (DON) levels from inoculated provincial trials (OCCC 2018 trials table 5a, 5b, 5c)

Lodging, Powdery Mildew, Leaf Rust, & Stripe Rust, Winter Survival: VG=Very Good G=Good F=Fair

Height: T= Tall, M= Medium, S= Short

Test Weight: AA=Above Average, A=Average, BA=Below Average

Heading Date: # of days from January 1 when 75% of heads are at Zodok 59

Maturity Date: # of days from January 1 when 75% of peduncles have changed colour

SEEDING RATES

Earlier than Optimum Planting Date by 10 Days	Optimum Planting Date	7 Days Past Optimum Planting Date	14 Days Past Optimum Planting Date	21 Days Past Optimum Planting Date
1.0 - 1.2	1.4 - 1.5	1.6 - 1.8	1.8 - 2.0	2.0 - 2.2

*seeding rates are expressed in millions of seeds per acre

*seeding rates derived from Crop Advances 2013, OMAFRA Publication 811 and University of Guelph

The above seeding rate chart is a general recommendation based on years of Ontario based research. However, seeding rates need to be adjusted for soil type, fertility levels, soil structure, and planting dates. Heavy clay soils may require as much as 20% more seed than other soil types. Ideally, 60 heads per square foot is the target. Winter wheat planted early allows for prolific tillering and strong tillers to develop and therefore fewer seeds per acre are required. If the plant density is too high for early planting dates, lodging can be an issue. Wheat planted well after the optimum planting date typically does not tiller much and therefore requires a heavier seeding rate to achieve 60 heads per square foot.

Calculating Seeding Rates by Amount of Seed to Achieve Target Plant Density

Use the number of seeds per lb (often found on the seed bag and/or tote) to determine the required seeding rate (lb/acre)

Amount of Seed (per lb)	Desired Plant Population (x 1000)							
	809/ac	1,012/ac	1,213/ac	1,416/ac	1,619/ac	1,861/ac	2,024/ac	2,226/ac
8,000	101	127	152	178	202	233	253	278
9,000	90	112	135	158	157	207	225	247
10,000	81	101	121	142	162	186	202	223
11,000	73	91	109	127	145	164	185	204
12,000	67	83	100	117	133	150	170	187
13,000	62	77	92	108	123	138	157	172
14,000	55	71	86	100	114	128	146	160
15,000	53	67	80	93	107	120	136	149
16,000	50	63	75	88	100	113	127	140

SEEDS PER FOOT ROW

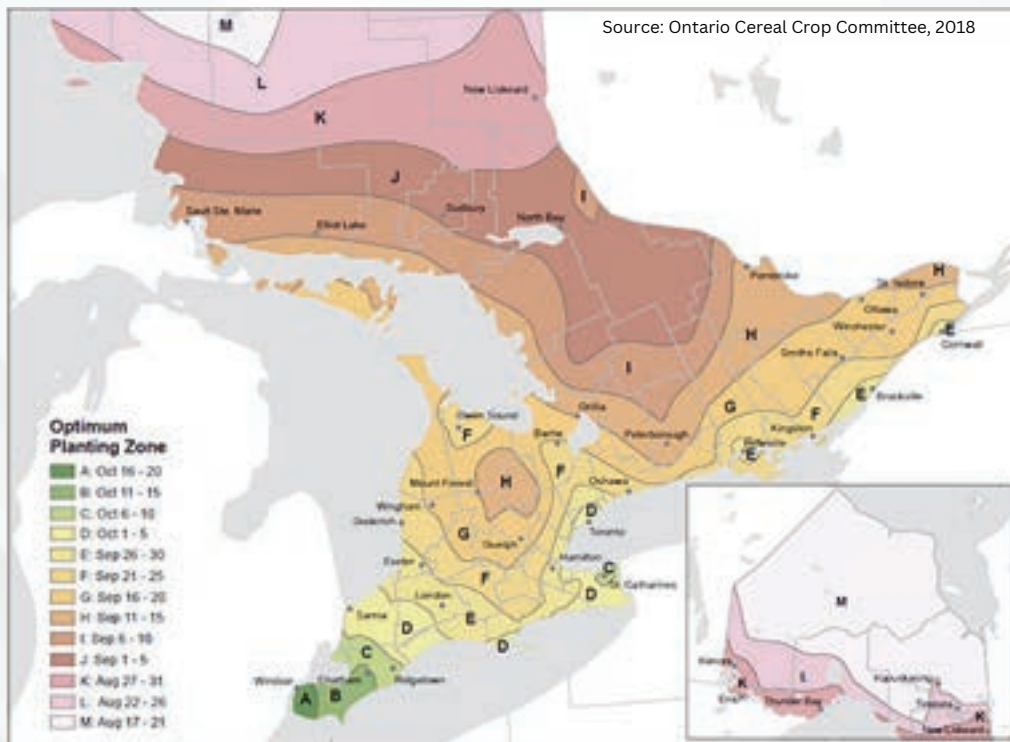
Seeds per foot row (7.5" rows) conversion to millions of seed per acre

Seeds per foot row	16	17	18	19	20	21	22
Seed per acre (million)	1.115	1.195	1.254	1.324	1.394	1.463	1.533
	23	24	25	26	27	28	29
	1.603	1.673	1.742	1.812	1.882	1.951	2.021

SEEDING DEPTH

Wheat should be planted no less than 1.0" deep (2.5cm). The preferred range of seeding depth is 1.0 – 1.25". Any shallower and the crop becomes more vulnerable during the winter months. It takes approximately 80 growing degree days for winter wheat to germinate and an additional 50 GDD for every inch of seeding depth to achieve emergence.

OPTIMUM PLANTING DATE



SEED TREATMENTS



LALRISE® START SC is a liquid inoculant based on a plant growth-promoting microbe (PGPM) that increases crop establishment through improved root vigor and nutrient availability. This PGPM solubilizes phosphorus from organic and inorganic reservoirs, which promotes growth in young plants and increases crop homogeneity, root mass growth and yields.

Key Benefits:

- Stimulates the start-up of young plants
- Improves soil exploration with roots, allowing better nutrient uptake
- Enhances the productivity of plants, allowing better growth, yield and quality





WINTER BARLEY

Winter barley is a cereal crop planted in the fall, growing through the winter and harvested in early summer. It is prized for its cold tolerance, high yield potential, and ability to provide soil cover during winter months to reduce erosion. Winter barley is commonly used for animal feed, malting for beer production, and as a cover crop to improve soil health and fertility.

DESCRIPTION

LCS Calypso

- 2-row
- High Yielding
- Excellent straw quality

SU Ruzena

- 2-row
- Excellent winter survival
- High test weight
- Suited to intensive management
- Matures a week earlier than LCS Calypso

CHARACTERISTICS

	LCS Calypso	SU Ruzena
Yield Index	100	99
Winter Survival (%)	93	96
Heading (days)	142	142
Maturity (days)	173	166
Lodging 0 = standing 9 = flat	3.6	3.1
Plant Height (cm)	82	74
Test Weight (kg/hL)	63.2	63.1
Thousand Kernel Weight (g)	52.1	51.2



SPRING CEREALS

We have many choices of spring cereal varieties including oats, barley and hard red spring wheat for multi end use markets. We strive to provide you with excellent variety choices, proven performance information, production agronomy recommendations and marketing options.

Our state-of-the-art seed processing facility enables us to deliver high-quality certified seed, convenient packaging options and seed treatment choices to meet your needs.



SPRING WHEAT

Spring Cereals

Ventry

- Milling quality
- Hard red spring wheat
- Good yield potential
- Excellent lodging tolerance and a good disease package

Quantum

- Feed quality HRS
- Very good yield potential
- Early maturity
- Short plant structure
- Excellent standability

	Ventry	Quantum
Fusarium Data	MS	S
Combined DON	MR	S
Test Weight	A	AA
Height	M - T	S
Heading	E	M
Maturity	E - M	E
Lodging	AA	AA
Straw Yield	A	AA

Test weight, Lodging, Straw Yield: AA=Above Average, A=Average, BA= Below Average

Height: S=Short, T=Tall, VT=Very Tall

Heading & Maturity: E=Early, M=Medium, L=Later, VL=Very Late

Fusarium Data, Combined DON: S=Susceptible, MS: Moderately Susceptible

OATS

Spring Cereals

AAC Bullet

- While hulled milling oat
- Good Crown Rust resistance
- Very strong straw
- Excellent yield, heavy kernel weight
- Medium height

AAC Basil



- White hulled oat
- Excellent lodging scores
- Very strong yield
- Medium plant height

CDC Haymaker



- Forage oat
- Large, plump seed with high seed weight
- Tall structure with later maturity
- High yield potential

		Test Weight	Height	Maturity	Lodging	Straw Yield
AAC Basil	White	BA	BA	M	AA	AA
AAC Bullet	White	AA	AA	E - M	AA	AA
CDC Haymaker	Forage	N/A	VT	VL	BA	N/A

Test weight, Lodging, Straw Yield: AA=Above Average, A=Average, BA= Below Average

Height: S=Short, T=Tall, VT=Very Tall

Maturity: E=Early, M=Medium, L=Later, VL=Very Late

BARLEY

Spring Cereals

Esma



- Two-row
- Short statured with excellent lodging score
- Heavy test weight

Bornholm

- Two-row
- Early maturity
- Very heavy test weight
- Excellent yield potential

Massy



- Six-row
- Excellent standability
- Superior replacement variety for Dignity in mix grain

DS8126RB

- Six-row
- Excellent standability
- Medium height
- Average yield

AAC Vitality



- Six-row
- Excellent standability
- Medium height
- Average yield

AAC Cranbrook



- Six-row
- Excellent lodging score
- Medium plant height

		Test Weight	Height	Heading	Lodging	Straw Yield
AAC Cranbrook	6R	BA	A	AA	AA	BA
Bornholm	2R	AA	BA	A	BA	AA
Massy	6R	BA	AA	AA	AA	A
Esma	2R	BA	BA	AA	AA	AA
DS8126RB	6R	BA	A	AA	A	BA
AAC Vitality	6R	BA	AA	AA	BA	AA

Test weight, Lodging, Straw Yield: AA=Above Average, A=Average, BA= Below Average
 Height: S=Short, T=Tall, VT=Very Tall
 Heading & Maturity: E=Early, M=Medium, L=Later, VL=Very Late

COMMON BLENDS

- **Forage supreme** (35% Barley, 35% Cereal Oat, 30% Forage Pea)
- **Forage Oat - Forage Pea:** 50/50, 70/30
- **Triticale - Forage Pea:** 50/50
- **3- Way Mix:** Spring Barley, Cereal Oat, Spring Wheat

PLANT POPULATIONS

	Millions of Seeds/Acre	Plants/Foot of Row on 7.5" row spacing
Oats	0.8 - 1.2	11.5 - 17.2
Barley	1.0 - 1.4	14.3 - 20.1
Mixed Grain	0.8 - 1.4	11.5 - 20.1
Spring Wheat	1.2 - 1.6	17.2 - 23.0
Winter Wheat	1.4 - 1.8	20.1 - 25.8

Derived from: OMAFRA - Agronomy Guide for Field Crops Publication 811

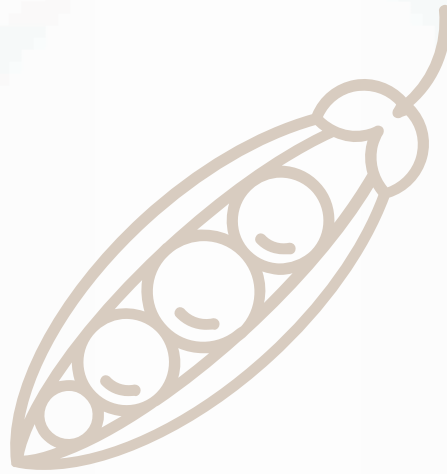
SEEDS PER FOOT ROW

Desired Plant Population (Seeds/foot of row) in 7.5 inch row spacing						
Seeds per Acre	809k	1.012M	1.213k	1.416k	1.619k	1.861k
Seeds/Foot Row	12	14	17	20	23	26

POUNDS OF SEED PER ACRE

Pounds of seed to be planted per acres assuming 15% stand loss and 95% germination										
Seeds/lb.	800k	900k	1M	1.1M	1.2M	1.3M	1.4M	1.5M	1.6M	1.7M
lbs/ac										
8,000	123.8	139.3	154.8	170.3	185.8	201.2	216.7	232.2	247.7	263.2
8,500	116.6	131.1	145.7	160.3	174.8	189.4	204.0	218.5	233.1	247.7
9,000	110.1	123.8	137.6	151.4	165.1	178.9	192.6	206.4	220.2	233.9
9,500	99.1	111.5	123.8	136.2	148.6	161.0	173.4	185.8	198.1	210.5
10,000	99.1	111.5	123.8	136.2	148.6	161.0	173.4	185.8	198.1	210.5
10,500	94.4	106.1	117.9	129.7	141.5	153.3	165.1	176.9	188.7	200.5
11,000	90.1	101.3	112.6	123.8	135.1	146.4	157.6	168.9	180.1	191.4
11,500	86.1	96.9	107.7	118.5	129.2	140.0	150.8	161.5	172.3	183.1
12,000	82.6	92.9	103.2	113.5	123.8	134.2	144.5	154.8	165.1	175.4
12,500	79.3	89.2	99.1	109.0	118.9	128.8	138.7	148.6	158.5	168.4
13,000	76.2	85.7	95.3	104.8	114.3	123.8	133.4	142.9	152.4	161.9
13,500	73.4	82.6	91.7	100.9	110.1	119.3	128.4	137.6	146.8	155.9
14,000	70.8	79.6	88.5	97.3	106.1	115.0	123.8	132.7	141.5	150.4
14,500	68.3	76.9	85.4	93.9	102.5	111.0	119.6	128.1	136.6	145.2

Derived from: OMAFRA - Agronomy Guide for Field Crops Publication 811



COVER CROPS

We offer many cover crop species and mixtures including oats, peas, spring barley, winter barley, cereal rye and forage oats. Cover crops are fundamental to improving field productivity, protecting water quality, reducing soil erosion, recycling nutrients, providing weed control and conserving soil moisture.



DESCRIPTION

Oats

- Perhaps the most common cover crop species.
- Oats are a fast growing spring cereal that requires a soil temperature of 3-4 degrees Celsius to germinate.
- They produce an excellent fibrous root system that builds soil structure and protects against soil erosion.
- Oats are more tolerant of saturated soils and soils with low fertility as compared to spring barley. Oats are highly supportive of mycorrhizal populations and as such, increase the biological activity of the soil - essential in aggregate stability, soil structure and climate resilience.

Oats & Peas

- Snobelen Farms offers a blend of common oats and field peas as another cover crop option.
- In addition to the benefits of oats in a cover crop, peas add a legume to an otherwise grassy cover crop. Legumes, like peas have the ability to fix atmospheric nitrogen and provide a source of nitrogen to the succeeding crop.
- Oats and peas typically germinate quickly, grow rapidly and establish well with adequate moisture. This combination adds diversity to the cover crop and terminates with a killing frost easily, making it easier to manage compared to other cover crop species.
- There is a seed size difference between oats and peas, so drilling is the preferred method of planting.

Winter Barley

- Winter barley should be planted earlier than winter wheat for optimal winter survival. It produces an excellent fibrous root system that prevents surface erosion, builds soil structure, and supports mycorrhizal fungi (beneficial to enhancing soil aggregate stability).
- Winter barley is early maturing (comes out in head well before winter wheat does) and can be used as green feed or taken to full maturity and harvested for grain.
- For those harvesting as green feed, there is opportunity to plant an early maturing soybean variety. This would allow for a double crop income (if weather allows). Yields of winter barley typically exceed those of spring barley.

Cereal Rye

- Cereal rye is the hardiest of cereals and can be planted later than winter wheat with excellent results.
- It requires a soil temperature of 1-2 degrees Celsius to germinate.
- It produces excellent ground cover and a deep fibrous root system to reduce erosion and build soil structure.
- Cereal rye also has some allelopathic properties and can suppress the growth of some weed species. It is an excellent scavenger of unused soil nitrogen and is well suited for soils low in fertility and challenging soil environments.
- Cereal rye does require a termination strategy to make sure it does not become a weed to the succeeding crop.
- Cereal rye is also used as a green feed but typically not taken to grain maturity except for seed
- We recommend common cereal rye as a more cost effective option.

SUGGESTED SEEDING RATES

Cover Crop Species	Seeds/lb.	Drilled	Broadcast	Aerial Seeding
Oats	11,000-12,000	50 - 90*	60 - 95*	80 - 110*
Winter Barley	10,000 - 12,000	50 - 80*	60 - 100*	80 - 120*
Cereal Rye	15,000 - 18,000	55 - 70*	80 - 100*	90 - 120*
Oats & Peas	Depends on mix	60 - 100*	70 - 105*	90 - 120*

*Lbs./acre

BENEFITS OF COVER CROPS

Cover crops offer numerous benefits to farming operations, enhancing both soil health and overall farm productivity. Here are some key advantages:

- 1. Soil Erosion Control:** Cover crops protect the soil from erosion caused by wind and water, helping to maintain soil structure and fertility.
- 2. Improved Soil Health:** They add organic matter to the soil, enhancing its structure, water-holding capacity, and microbial activity.
- 3. Nutrient Management:** Cover crops can capture and recycle nutrients, reducing the need for synthetic fertilizers. Leguminous cover crops, for example, can fix atmospheric nitrogen, enriching the soil.
- 4. Weed Suppression:** Dense cover crop growth can outcompete weeds, reducing the need for herbicides.
- 5. Pest and Disease Management:** Some cover crops can interrupt pest and disease cycles by acting as a physical barrier or through allelopathy (releasing chemicals that inhibit pests and diseases).
- 6. Biodiversity Enhancement:** They promote biodiversity above and below the ground, supporting beneficial insects and soil organisms.
- 7. Water Management:** Improved soil structure and organic matter from cover crops enhance water infiltration and retention, making the farm more resilient to drought.
- 8. Carbon Sequestration:** Cover crops can help sequester carbon in the soil, contributing to climate change mitigation.
- 9. Yield Improvement:** Over time, the improved soil health and nutrient management from cover crops can lead to better crop yields.
- 10. Economic Benefits:** While there are upfront costs, the long-term savings from reduced inputs (fertilizers, herbicides) and improved yields can outweigh these expenses.



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