

S E E D S G U I D E

2021

C E R E A L S & F O R A G E S



D E V E L O P M E N T | R E S E A R C H | S P E C I A L I T Y



The Semican Research Center was initially set up in 1996 by Jacques Beauchesne, the founder of Semican. At that time, federal and provincial cereal breeding programs were being phased out, or moving elsewhere...

How to distinguish ourselves then, with no access to private varieties? Creating the Research Centre addressed that need.

The primary objective of the Centre was to gain access to exclusive, good-quality cereal varieties that we could then offer to Canadian grain producers. To that end, Jacques Beauchesne promptly met with local, national and international partners to get material for testing under Eastern Canadian climatic conditions. Affiliations were formed with plant breeders for the provision of genetic material and the breeding process was underway.

Over the years, cereal and soybean crosses were made using conventional selection methods in the field. Even without the use of modern techniques to speed up the process, the Research Centre has achieved excellent results. Thus, in less than 25 years, Semican has brought 41 varieties to market so far.

Our work continues to progress, and many high-quality varieties developed by our Research Center are now available. You'll find them in this Seed Guide!

Read on!

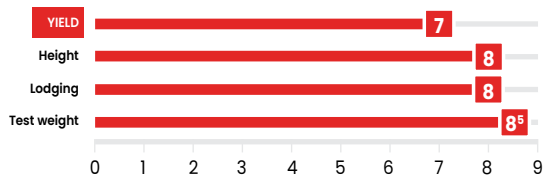


SPRING WHEAT

Milling wheat

TOUNDRA CEHRS-α

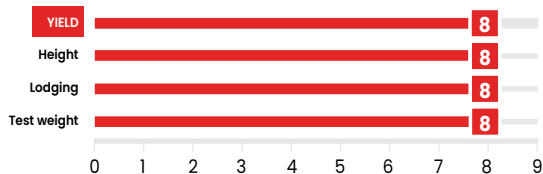
- Very good yielding
- Good tolerance to fusarium
- High protein level



Milling wheat

AAC HARLAKA CEHRS-α

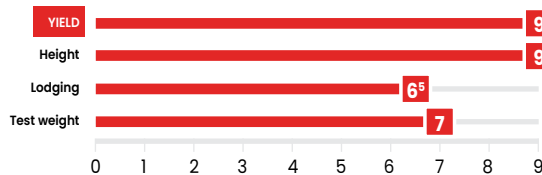
- High yielding
- Good standability
- Excellent milling quality



Milling wheat

AAC SCOTIA CEHRS-α

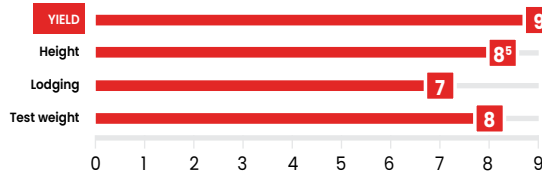
- Excellent tolerance to fusarium
- Large seed
- Good milling quality
- Qualifies for Pool C in Ontario



Milling wheat

MOKA CEHRS-α

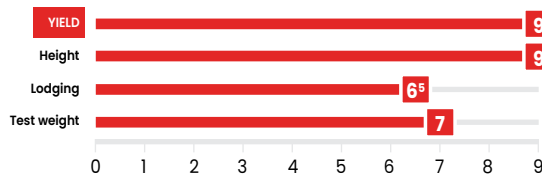
- Excellent tolerance to fusarium
- Big kernel
- Early maturing variety



Feed wheat

BANGOR CEHRS-α

- Very good yielding
- Good straw production
- Excellent tolerance to fusarium



Selection of the nicer heads to create new wheat variety



WINTER WHEAT

Milling winter wheat

BROME CEHRW-α

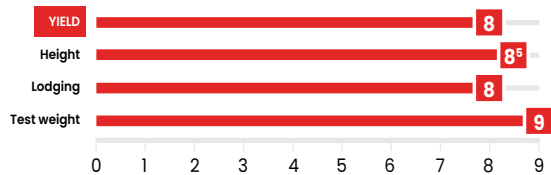
- Excellent winter survival
- Excellent tolerance to fusarium
- Very good straw production



Milling winter wheat

MONTCALM CEHRW

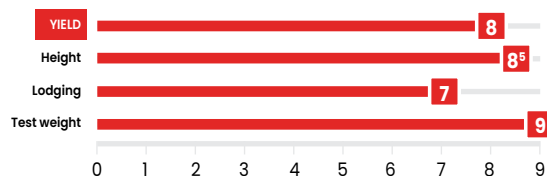
- Excellent winter survival
- Excellent yield
- Excellent milling quality



Milling winter wheat

CHAMPLAIN CEHRW-α

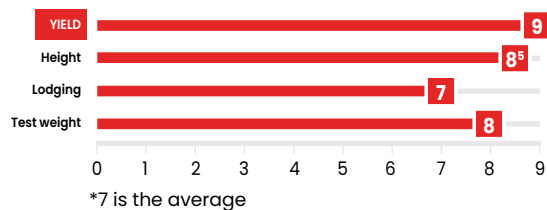
- High quality grain
- Excellent tolerance to fusarium
- Very large seed



Feed winter wheat

FRONTENAC EFW

- Very good yielding
- Excellent winter survival
- Easy to harvest



LEGEND

- CEHRS = CANADIEN EASTERN HARD RED SPRING
- CEHRW = CANADIAN EASTERN HARD RED WINTER
- CESRW = CANADIAN EASTERN SOFT RED WINTER
- EFS = EASTER FEED SPRING
- EFW = EASTERN FEED WINTER
- α = Awned

Seeding of our cereals plots



WINTER WHEAT FALL RYE

Milling winter wheat

HIGH YIELD
VARIETY



EMPEROR CESRW

- Good fusarium tolerance
- Good tolerance to leaf diseases
- Very good lodging resistance
- Excellent milling quality



Milling winter wheat

WAVE CESRW

- Excellent winter survival
- Good tolerance to leaf diseases
- Good lodging resistance
- Excellent milling quality



Hybrid fall rye

KWS BONO

- Excellent feeding quality
- Excellent yield
- Excellent standability



Fall rye

DANKO

- Lots of high quality straw
- Excellent winter survival
- Excellent milling quality

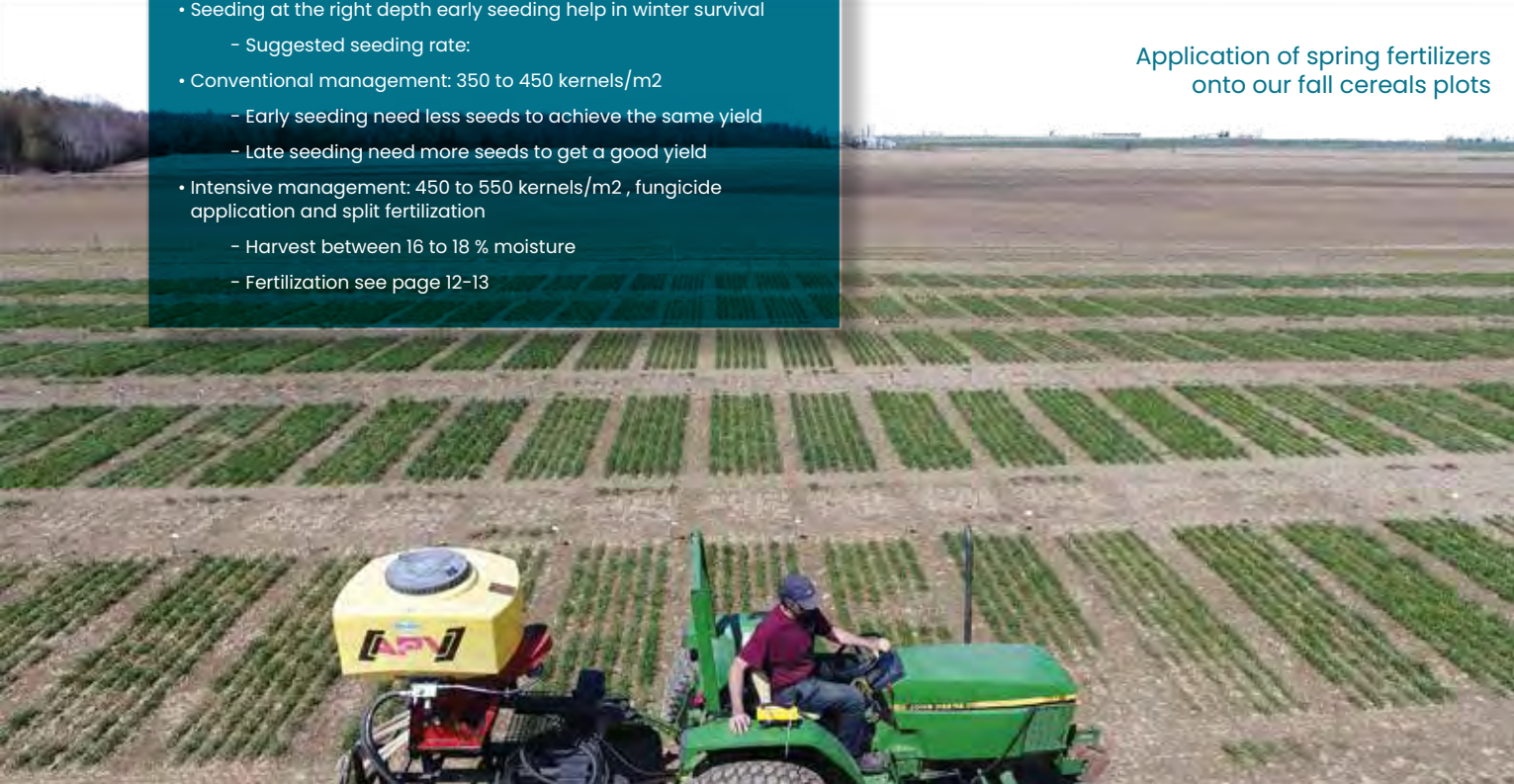


*7 is the average

MANAGEMENT

- Field with good surface drainage
- Seeding at the right depth early seeding help in winter survival
 - Suggested seeding rate:
- Conventional management: 350 to 450 kernels/m²
 - Early seeding need less seeds to achieve the same yield
 - Late seeding need more seeds to get a good yield
- Intensive management: 450 to 550 kernels/m², fungicide application and split fertilization
 - Harvest between 16 to 18 % moisture
 - Fertilization see page 12-13

Application of spring fertilizers
onto our fall cereals plots



FEED BARLEY



Feed barley (2 row)

CHAMPION

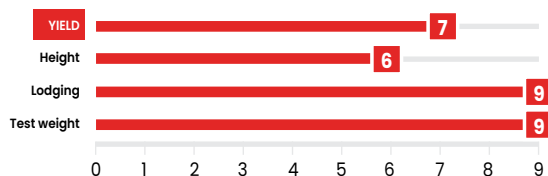
- High yielding
- Excellent standability
- Large seed



Barley (6 row)

TRADITION

- Exceptional standability
- Good yield
- Excellent test weight

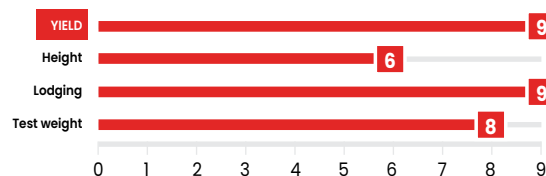


*7 is the average

Feed barley (2 row)

NEWPORT

- High yielding
- Excellent standability
- Excellent tolerance to fusarium



CEREALS SELECTION

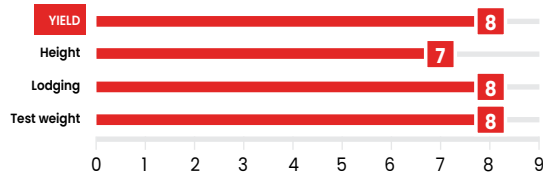


MALTING BARLEY

Malting barley (2 row)

AAC CONNECT

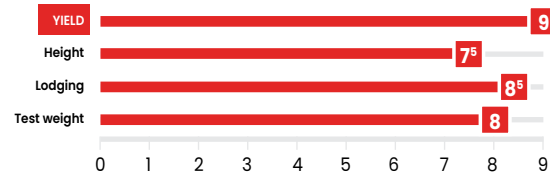
- Excellent yield
- Early maturity
- Very good standability



Malting Barley (2 row)

CDC COPPER

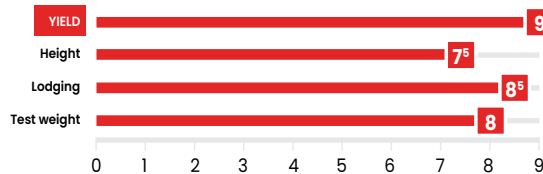
- Very good yielding
- Very good standability
- Large seed



Malting barley (2 row)

AAC SYNERGY

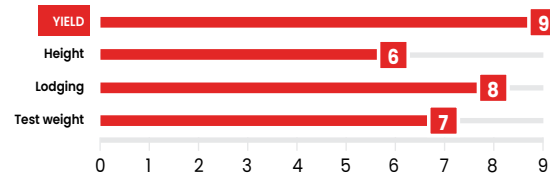
- Excellent yield
- Excellent test weight
- Large kernel



Malting barley (2 row)

NEWDALE

- Excellent yield in all areas
- Excellent tolerance to fusarium
- Good quality straw



*7 is the average

MANAGEMENT

- Early seeding in a good drainage field
- High seeding rate (1,6 M seeds/acre) for uniformity at fungicide application and harvest
- Avoid corn rotation to reduce fusarium
- Use 50 to 70 Unit of Nitrogen for good yield
- Adding boron in fertilization could reduce ergot
- Have storage spaced dedicated for this crop
- Harvest at 16-18 % moisture
- Send a representative sample to your dealer

Quality guideline

- IP barley
- Germination over 95 %
- Protein less than 12,5 %
- DON less than 0,5 ppm
- Plumpness on a 6/64 screen over 85 %

HARVEST OF OUR BARLEY PLOTS



OATS



Oat

AAC RICHMOND

HIGH FLAKING
OR MILLING
QUALITY



- Good seed supply Ontario production
- Highest straw yield
- Above average standability



Oat

CDC ORRIN

HIGH FLAKING
OR MILLING
QUALITY



- Exceptional yield
- High quality grain
- Very good standability



*7 is the average

MANAGEMENT

- Early seeding
- Seeding in a dry firm soil
- Suggested seeding rate:
Covered: 1,1 to 1,3 M seeds/acre
Hulless: 1,4 to 1,6 M seeds/acre
- Fertilization:
Nitrogen
Covered: Nitrogen 40 to 50 lb/acre
Hulless: potash 50 to 70 lb/acre
Good potash application will help
in reducing lodging
- Harvest between 16-18% moisture
to keep a bright white color

Oat

CDC ARBORG

HIGH FLAKING
OR MILLING
QUALITY



- Excellent yield
- Good standability
- Low % of hull



All good breeding
program starts with
crossing varieties
together



HULLESS OATS

Hulless oats

FUEGO

ORGANIC
BUYBACK
CONTRACT



- High quality grain with fat and protein
- Large kernel
- Early maturing variety



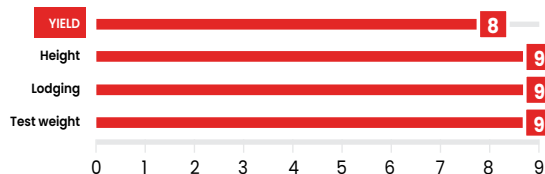
Hulless oats

NAVARO

LIMITED
QUANTITY



- Good yield
- Very good straw production
- Excellent standability

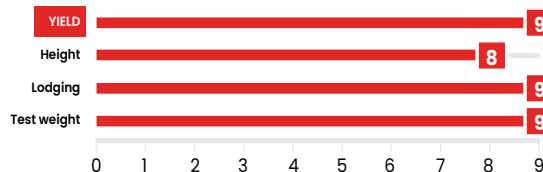


Hulless oats

CASINO



- Excellent test weight
- Excellent standability
- Quick maturity



CHARACTERISTICS	CORN	HULLESS OAT	COVERED BARLEY
ASH %	0.8	0.9	2.0
ADF %	3.7	2.5	9.0
CRUDE PROTEIN %	8.5	16.5	11.2
DENSITY (kg/hl)	70.0	71.0	62.0

FEED VALUE			
ENERGY (Mcal/kg)	2.05	2.00	



FORAGE CEREALS AND PEAS

FORAGE OATS

- Nelson forage oats specially selected for large leaves and excellent forage yield
- Supercedes other conventional oats for forage production
- With Optimum mixes, forage oat is the choice for improving forage

FORAGE RYE

- Double cropping possibility
- Hybrid Rye will procure a high tonage of forage early in the season
- Can be harvested as grain or forage along the needs

SEMI-25

- A blend of 25% each of TRADITION barley, MEADOW peas, CANMORE oat and AAC SCOTIA wheat
- For early feed
- Providing good protein and digestibility

MAXI-SILE

- Blend of 50% of forage oats and 50% forage peas
- Protein rating higher than forage oats alone
- Adding peas will help quality even if the harvest is delayed



FIRST CUT



SECOND CUT

CROP MANAGEMENT

- Harvest Forage Oats at boot stage, before the head emerges (50 to 55 days after seeding)
- Weed resistant blend that does not require any herbicides in most cases
- Adjust the height of the cut to maximize forage, this will produce appetizing forage with high nutritional value

SEEDING RATE

Forage oats as cover crop with alfalfa = 85 kg/ha or 75 lbs/acre

Nelson forage oats alone = 120 kg/ha or 105 lbs/acre

Maxi-Sile as cover-crop = 100 kg/ha or 90 lbs/acre

Maxi-Sile alone = 165 kg/ha or 145 lbs/acre



IP SOYBEAN



We are proud to offer you our new line of IP and conventional soybean varieties. The varieties are selected for their high yield and exceptional quality for export markets. Our talented Sales and Agronomy team are excited to help you to choose the best soybean variety according to your needs.

LATE MATURITY VARIETY OF SEMICAN SOY:

		RM	HU
BALTAZAR	Tofu type	1.2	2875

EARLY VARIETIES OF SEMICAN SOY:

		RM	HU
MOZART	Tofu type	00.7	2475
DELANCE	Tofu type	00.8	2500
DAÏKI	Tofu type	00.8	2525
LUSTAR	Very high protein type	00.8	2525
KAZART	Tofu type	00.9	2550
MN0103SP	Natto type	00.9	2550
WINDSOR	Conventional type	0.1	2575



For more technical information please contact:

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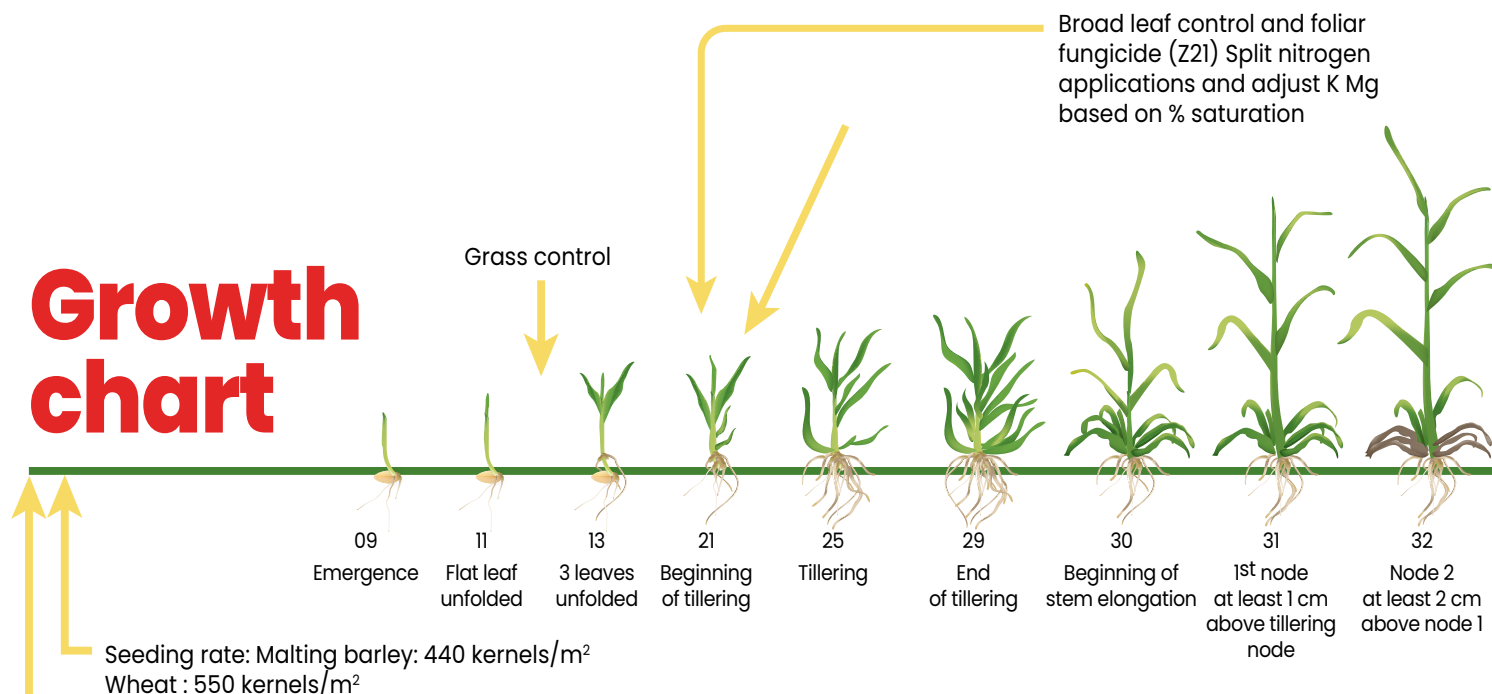
And request your SemicanSoy Guide

SOYA IP WILL PROVIDE ADDITIONAL INCOME



GOOD MANAGEMENT OF MALT BARLEY AND MILLING WHEAT

Growth chart



Disease

Fungal disease according to growth chart

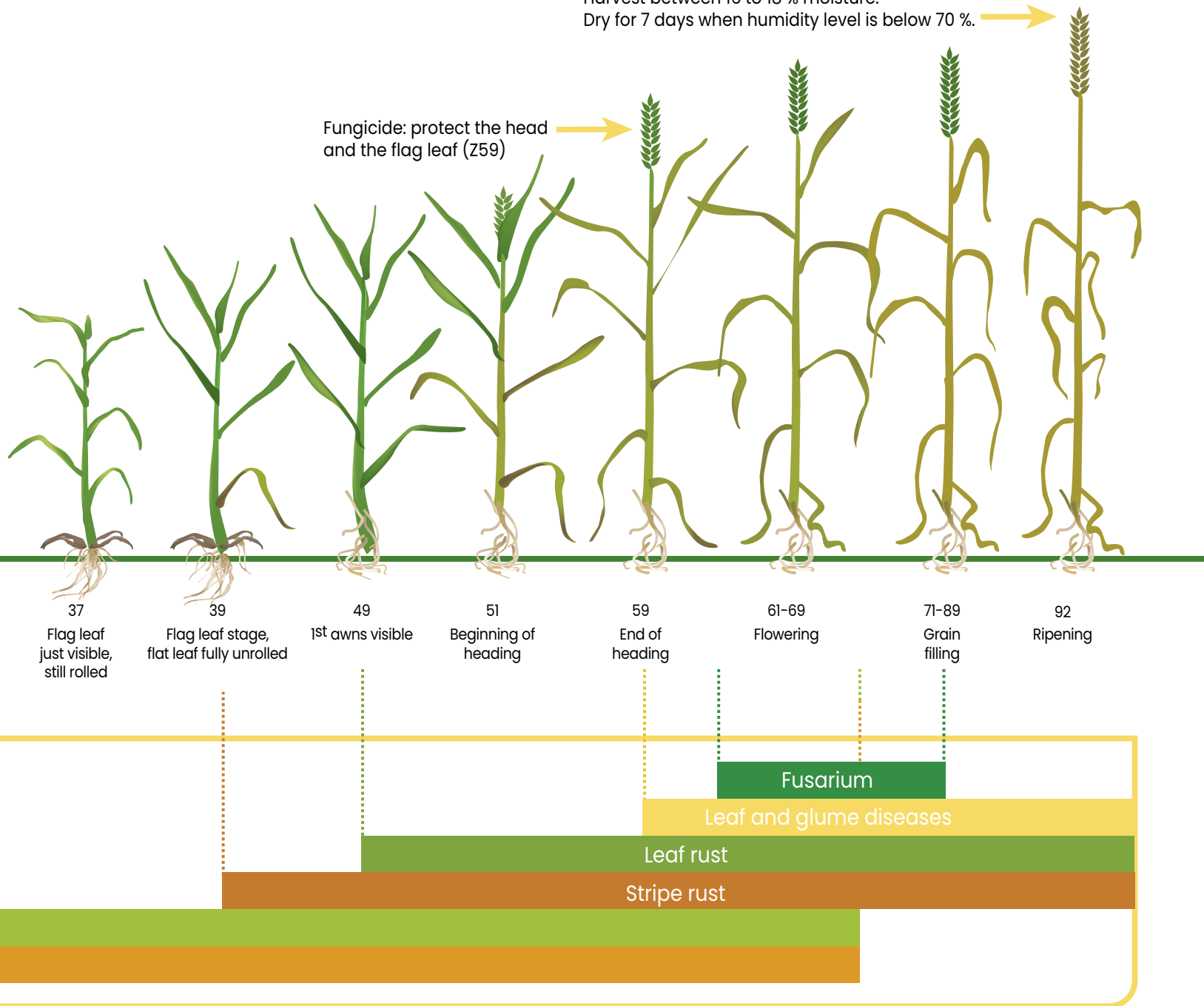
Septorial blight

Powdery mildew

Final Target Population		Number of seeds planted at 85% germ	Thousand Kernels Weight (g)													Disc spacing (inches)			
plants/m ²	plants/acre		Seeds/m2	28,0	30,0	32,0	34,0	36,0	38,0	40,0	42,0	44,0	46,0	48,0	50,0	Seeds per foot of row	5	6	7
250	1 012 146	294	73	79	84	89	94	99	105	110	115	120	126	131	11		14	16	
275	1 113 360	324	81	86	92	98	104	109	115	121	127	132	138	144	13		15	18	
300	1 214 575	353	88	94	101	107	113	119	126	132	138	144	151	157	14		16	19	
325	1 315 789	382	95	102	109	116	123	129	136	143	150	157	163	170	15		18	21	
350	1 417 004	375	103	110	117	125	132	139	147	154	161	169	176	183	15		17	20	
375	1 518 219	441	110	118	126	134	141	149	157	165	173	181	188	196	17		20	24	
400	1 619 433	471	117	126	134	142	151	159	168	176	184	193	201	209	18		22	26	
425	1 720 648	500	125	134	142	151	160	169	178	187	196	205	214	223	19		23	27	
450	1 821 862	529	132	141	151	160	170	179	188	198	207	217	226	236	20		25	29	
475	1 923 077	559	139	149	159	169	179	189	199	209	219	229	239	249	22		26	30	
500	2 024 291	588	147	157	168	178	188	199	209	220	230	241	251	262			27	32	
525	2 125 506	618	154	165	176	187	198	209	220	231	242	253	264	275	24		29	33	
			Seeding rate in lb/acre lb/acre x 1.12 = kg/ha																

Harvest between 16 to 18 % moisture.
Dry for 7 days when humidity level is below 70 %.

Fungicide: protect the head and the flag leaf (Z59)



Malting barley:

At start of tillering (Z21), add 20 to 30 N depending of the soil status of the field. The boron in both crops is an important trace of element in the control of ergot. Always add 1 lb of boron per acre on malting barley and milling wheat. Potential yield when good management is applied : 2.4 tons per acre.

Milling wheat:

At start of tillering (Z21): add 50 to 70 N depending of the soil status of the field and at flag leaf stage (Z39): add Mn Foliar and 20 N granular or liquid.

The boron in both crops is an important trace of element in the control of ergot. Always add 1 lb of boron per acre on malting barley and milling wheat.

Potential yield when good management is applied: 2.4 tons per acre

SEEDING RATE CHART

RATES 1-9:

1 = WEAK
9 = EXCELLENT
7 = CULTIVAR
AVERAGE

MATURITY RATES

RATES 1-9:

1 = VERY EARLY
9 = LATE

TYPE:

2R = 2 ROW
6R = 6 ROW
C = COVERED
H = HULLESS

		SEEDING RATE					
		TYPE	THOUSAND KERNEL WEIGHT	CONVENTIONAL		INTENSIVE	
				plants/acre	LB/ACRE	plants/acre	LB/ACRE
BARLEY	AAC CONNECT	2R MALT	47	1 315	160	1 619	197
	AAC SYNERGY	2R MALT	45	1 315	153	1 619	188
	CDC COPPER	2R MALT	45	1 315	153	1 619	188
	NEWDALE	2R MALT	42	1 315	143	1 619	176
	CHAMPION	2R FEED	49	1 315	167	1 518	192
	NEWPORT	2R FEED	48	1 315	163	1 518	188
	TRADITION	6R FEED	40	1 315	136	1 518	157

OATS	AAC RICHMOND	C	39	1 113	112	1 315	133
	CDC ARBORG	C	39	1 113	112	1 315	133
	CDC ORRIN	C	42	1 113	121	1 315	143
	CASINO	H	30	1 417	110	1 619	126
	FUEGO	H	28	1 417	103	1 619	117
	NAVARO	H	29	1 417	106	1 619	121

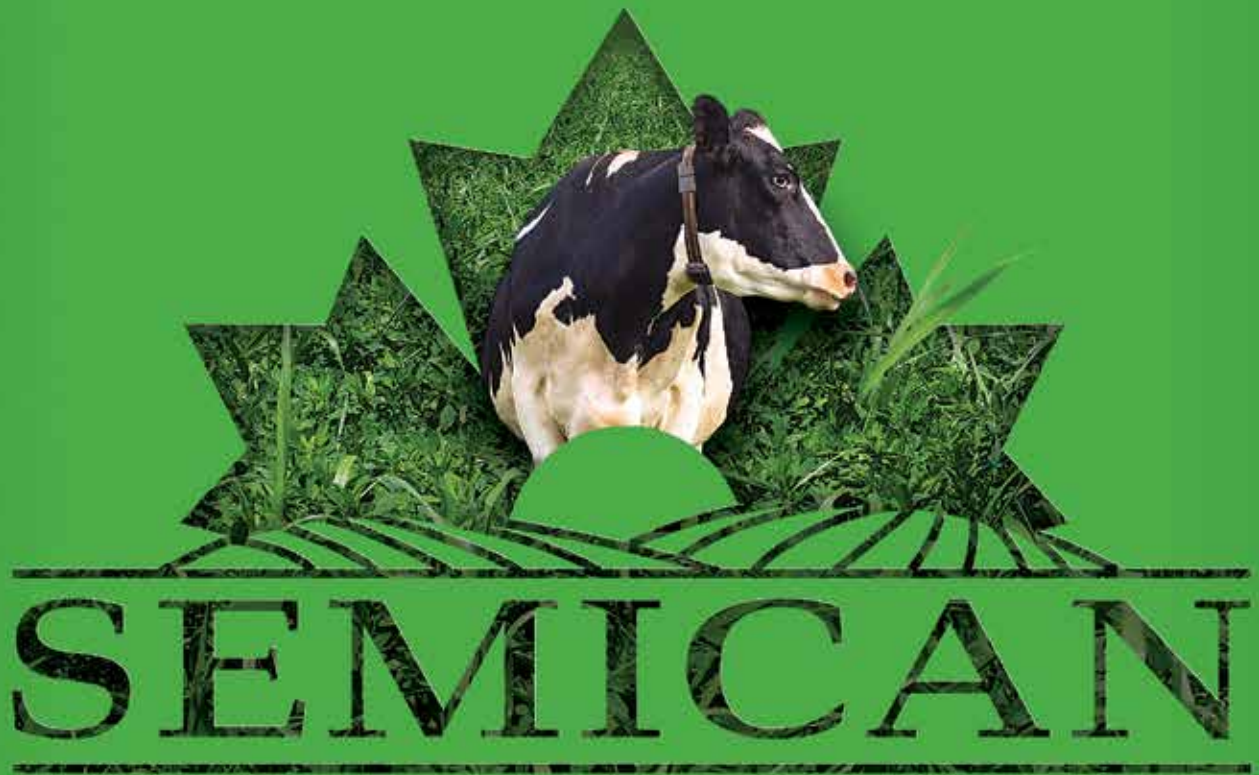
WHEAT AND RYE	AAC SCOTIA	CEHRS-α	41	1 518	161	1 720	182
	AAC HARLAKA	CEHRS-α	37	1 518	145	1 720	165
	MOKA	CEHRS-α	40	1 619	168	1 821	188
	TOUNDRA	CEHRS-α	38	1 518	149	1 720	169
	BANGOR	EFS-α	41	1 518	161	1 720	182
	BROME	CEHRW-α	47	1 417	172	1 720	209
	CHAMPLAIN	CEHRW-α	45	1 417	165	1 720	200
	MONTCALM	CEHRW	43	1 417	158	1 720	191
	FRONTENAC	EFW	42	1 417	154	1 720	187
	EMPEROR	CESRW	33	1 417	121	1 720	147
	WAVE	CESRW	34	1 417	125	1 720	151
	DANKO (fall rye)		33	1 417	121	1 720	147
	KWS BONO (hybrid fall rye)		34	708	60	910	80

SEED GUIDE 2021

KERNEL				PLANT			DISEASES		
YIELD	TEST WEIGHT	PROTEIN	OIL	HEIGHT	STANDABILITY	MATURITY	FUSARIUM	WHITE MOLDS	SEPTORIALEAF BLIGHT
8	8	11.5	--	7	8	8	7	8	8
9	8	12.0	--	7.5	8.5	9	7	8	7
9	8	12.0	--	7.5	8.5	9	7	8	7
9	7	12.5	--	6	8	8	9	8	8
8.5	9	12.5	--	7.5	9	7	7	7	8
9	8	12.5	--	6	9	7	9	8	7
7	9	12.0	--	6	9	7	7	7	7
9	8.5	14.0	5.0	9	8.5	9	8	--	9
9	9	14.0	6.0	7	9	7	9	--	8
9	9	14.5	6.5	7	8	9	8	--	8
9	9	15	7.5	8	9	7	9	--	9
7	8	18	9.5	8.5	8	7	9	--	9
8	9	15	8	9	9	7	9	--	8
9	7	13.0	--	9	6.5	7	8	9	8
8	8	14.5	--	8	8	8	9	8	9
9	8	13.5	--	8.5	7	7	9	9	8
7	8.5	13.5	--	8	8	7	9	7	8
9	7	13	--	9	6.5	7	9	9	8
9	9	11.5	--	9	8	9	9	9	9
8	9	12.5	--	8.5	7	8	8	8	9
8	9	12.5	--	8.5	8	8	8	9	9
9	8	10.5	--	8.5	7	8	9	8	9
9	8	10.0	--	8	8	8	8	7	7
8	8	10.6	--	7	8	7	7	7	9
9	7	9.5	--	9	8	9	8	9	9
9+	6.5	8.5	--	8	8	9	9	9	9

FORAGE SEEDS GUIDE

2021



D E V E L O P M E N T | R E S E A R C H | S P E C I A L I T Y

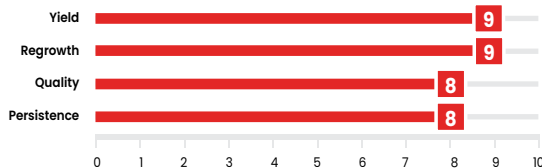
ALFALFA

Our certified alfalfa and clover are inoculated with PRE-VAIL. PRE-VAIL is approved for organic production.

Alfalfa

SURESHOT

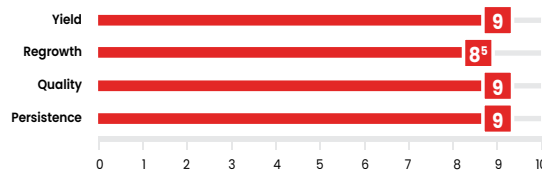
- Improved forage quality will produce more milk per acre
- Fast recovery, persistence and high yield
- Highly resistant for all diseases
- Excellent winterhardiness
- Dormancy of 5



Alfalfa

STRONGHOLD

- Multifoliate
- A high quality, highly digestible alfalfa with exceptional yields
- Very fast regrowth after cutting allowing for a 28 day harvest schedule
- Highly persistent featuring an exceptional disease resistance package



Alfalfa

HY-PRO BRAND

- Blend of Semican Alfalfa varieties which includes a branch rooted variety
- Bring diversity, adaptability to variable soils, yield persistence and good disease resistance



Alfalfa

RELOAD

- New alfalfa with high digestibility
- Excellent resistance to diseases
- Outstanding forage quality
- Dormancy of 4



Alfalfa

SURGE Hi-GEST

- New alfalfa with high digestibility
- Excellent resistance to diseases
- Outstanding forage quality
- Dormancy of 4



CLOVER AND TREFOIL

Red clover

ABERCLARET

- Brand new early flowering diploid with exceptionally high yield
- Bred for strong crowns leading to vastly improved persistency
- Trials have shown that it yields over 17 tonnes of dry matter in the 2nd year, 14 tonnes in both 3rd and 4th years and 10 tonnes in the 5th year

Birdfoot trefoil

BRUCE

Perfect legume for lowland situations and acidic pH. Very persistent and offers a remarkable dry hay or silage, due to the fineness of its stem.



GRASSES

Meadow brome **AC ADMIRAL**

Bred in Canada for the harsh Canadian environment AC® Admiral Meadow Bromegrass's improved yield potential (especially in the Brown and Dark Brown soil zones), brings a new level of productivity to Canadian forage producers.

Meadow fescue **TORED**

Tored Meadow fescue is very palatable and has a great yield. Tored is drought tolerant and winter hardy.

Annual ryegrass **AUBADE**

Westerwold ryegrass that continually regrows until fall. Gives quality leafy fodder for both pasture and silage or as green manure.

Perennial ryegrass **TRIBAL**

Tribal ryegrass is a tetraploid perennial ryegrass that is high yielding and extremely palatable. Tribal is winter hardy, has good disease resistance and has good summer productivity.

Italian ryegrass **HUNTER**

Hunter has excellent spring and fall production. As an Italian ryegrass its growth is entirely vegetative in the first year and, unlike Westerwold types, it requires vernalisation in order to enter the reproductive phase. With good snow cover it may survive winter in our climate. Superior forage volume sets it apart from annual Ryegrass in the year of establishment.

ALSO AVAILABLE :

Forage sorghum, Japanese millet, Pearl millet, Reed canary grass.

Meadow brome **FLEET**

High yield, rapid growth and season long forage quality. With a rapid spring start, this variety offers good yield on well drained soils. Very good winter resistance and quick recovery after cutting. Improves forage digestibility by its fineness and leaf volume.

Soft leaf tall fescue **SWAJ**

SWAJ is a highly palatable, endophyte free Tall fescue. It is winter hardy and drought tolerant and because of its soft leaf is highly suitable for both grazing or haying.

Orchardgrass **BENCHMARK+**

Benchmark + has vigor and plant health providing high yields. The recovery is impressive for a cutting interval of 4-6 weeks.

Festulolium **FEDORO**

Fedoro is a crossing of Festuca pratense and Lolium multiflorum. It is very healthy and shows a low tendency for producing heads. Excellent yield performance.

Timothy **SUMMERGRAZE**

This timothy has good summer production and works well in a hay stand or pasture. It has great spring vigor, is a very leafy plant and intermediate maturity.

Timothy **CATAPULT**

Semi-erect plant with a range of medium green to dark green color, Catapult is taller than other varieties. Its early maturity and aggressive growth allow it a fast recovering after cutting. Catapult covers the ground quickly and reacts fine to the competition. It survives well during the season and year to year



OPTIMUM MIXTURES



FORAGE SEEDS

Mixtures	Composition		Description
Opti-Prime	90%	Sureshot alfalfa	Stability, persistence and incomparable performance. Higher percentage of alfalfa to maximize yield.
	10%	Summergraze timothy	
Opti-Sure	40%	Sureshot alfalfa	Balance between yield and quality make this blend a must.
	40%	Stronghold alfalfa	
	20%	Summergraze timothy	
Opti Hy-Pro	80%	Hy-Pro Brand alfalfa	A blend of alfalfas varieties providing genetic diversity, proven yields, persistence and good resistance.
	20%	Summergraze timothy	
Opti-Hay	20%	AC Brador alfalfa	Mixture of three alfalfas. Perfect for uneven fields and variable soils.
	20%	Stockpile alfalfa	
	20%	Foothold alfalfa	
	40%	Ovation timothy	
Opti-Choice	80%	Sureshot alfalfa	Alfalfa and meadow fescue for great yield and high quality
	20%	Tored meadow fescue	
Opti-Grass	60%	Tored meadow fescue	A great combination of grasses that can be added to another mix for optimizing yield, quality and persistence
	40%	Benchmark + orchardgrass	
Opti-Pasture	32%	Summergraze timothy	A pasture mix for livestock designed to provide a regular quantity of quality feed throughout the season.
	20%	Runner alfalfa	
	20%	Tored meadow fescue	
	9%	Tribal perennial ryegrass	
	9%	SWAJ soft leaf tall fescue	
	5%	Huia white clover	
	5%	Glacier white clover	
Opti-Lowland	35%	Summergraze timothy	A mixture that will provide good production on those wetter soils
	20%	SWAJ soft leaf tall fescue	
	15%	Fedoro festulolium	
	15%	Tored meadow fescue	
	10%	Glacier ladino clover	
	5%	Aberclaret red clover	
Opti-Horse	40%	Summergraze timothy	A mixture for horses that will provide exceptional volume and palatability.
	12%	Kentucky bluegrass	
	15%	Perennial ryegrass	
	15%	Meadow fescue	
	3%	White clover	
	15%	Benchmark + orchardgrass	

MAX MIXTURES

Mixtures	Composition		Description
BROME-MAX	25 %	Carlton smooth brome	Ideal for long rotations with the quality of hybrid brome.
	50 %	Fleet meadow brome	
	25 %	AC Rocket bromegrass	
FESCUE-MAX	65 %	Brome-Max	For a maximum boost in alfalfa at 5-6 lbs/acre.
	35 %	Swaj soft leaf tall fescue	
FORAGE-MAX	70 %	Brome-Max	Assures forage volume when seeded with alfalfa.
	15 %	Swaj soft leaf tall fescue	
	15 %	Aubade annual ryegrass	
HAY-MAX	60 %	Brome-Max	Impressive leaf volume when used in a regime of intensive cutting.
	20 %	Benchmark+ orchardgrass	
	20 %	Swaj soft leaf tall fescue	
PASTURE-MAX	65 %	Brome-Max	Effectively increases the volume of fibre in the ration.
	20 %	Tribal perennial ryegrass	
	15 %	Swaj soft leaf tall fescue	
FESTULO-MAX	60 %	Brome-Max	Assures good forage volume and nutritional value.
	40 %	Fedoro festulolium	
RYE-MAX	65 %	Brome-Max	Maximum palatability with effective fibre.
	35 %	Hunter Italian ryegrass	

DIFFERENCES BETWEEN FORAGE, SPECIES, GRASSES AND LEGUMES

	Timothy	Bromegrass	Orchardgrass	Tall fescue	Annual Ryegrass	Festulolium
Adaptation	All areas	All areas	All areas	All areas	All areas	All areas
Drainage requirement	Good to excellent Does well on good soil drainage	Very good (tolerance to excess water)	Very good	Poor to very good (tolerance to excess water)	Good to excellent	Good
pH requirement	6.0 to 6.5	6.0 to 6.5	6.0 to 6.5	5.5 to 7.0	5.5 to 7.0	6.0 to 6.5
Hardiness	Excellent	Average to good	Average	Very good	Excellent	Average
Seedling establishment	Moderate, slow and easy	Low and difficult to sow	Fast and easy	Moderate, slow and easy	Fast and easy	Fast
Strength of competition	Good	Good	Very strong	Good	Very strong	Average
Regrowth	Slow and low in summer	Average	Fast	Good in summer, excellent in fall	Fast	Good
Drought resistance	Low	Good to very good	Very good	Very good	Poor	Average
Forage quality	Good palatability, digestibility and protein level lower than bromegrass	Keeping quality with maturity	Protein level and palatability decrease with maturity	Protein level and palatability decrease with maturity	Good palatability	Good palatability
Utilisation	Stored feed	Pasture and stored feed	Pasture and stored feed	Pasture and stored feed	Pasture and stored feed	Stored feed
Number of seeds per lb	1 135 000	135 000	660 000	225 000	230 000	115 000

	Alfalfa	Red clover	Ladino clover	Birdsfoot trefoil
Adaptation	All areas	All areas	All areas	All areas
Drainage requirement	Excellent (branch rooted varieties tolerates poor drainage)	Good Low tolerance to drought	Good to excellent	Excellent in poor drainage
Tolerance to acid soil	Low	Good	Good	Good
pH requirement	6.4 to 7.5	6.0 to 6.5	6.0 to 6.5	5.5 to 6.5
Persistence	4 to 5 years on the good management	Very short (2 years)	Persistent because selfseeding and has stolons	Good for long term rotations
Performance	Excellent	Very good	Good to very good	Good
Seedling establishment	Fast	Very quick and easy to establish	Average to fast	Slow
Strength of competition	Slow to establish and strong after the first year	Very aggressive	Very good and aggressive	Weak Does not mix well with competition
Drought resistance	Very resistant on well-drained soil	Weak	Weak (surface roots)	Very resistant
Utilisation	Stored feed	Pasture and stored feed	Pasture	Pasture and stored feed
Number of seeds per lb	230 000	275 000	795 000	370 000

BIOTAL

Silage inoculant

Research has shown an increase of 3 % of the dry matter recovery. So for every 500 tons of silage at 65 % moisture harvested, it will be another 5.25 tons of dry matter available.

Milk Production

US Dairy Forage Research Center has confirmed an increase of 3 % in the milk production for cows eating inoculated alfalfa silage.

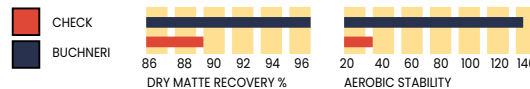


STABILITY AT BOTH ENDS OF THE ENSILING PROCESS



- Faster fermentation with P. Pentosaceus 12455
- Aerobic stability with L. Buchneri 40788
- Recommended for corn silage, haylage and high moisture corn

L. Buchneri 40788 400,000 cfu/g of forage
P. Pentosaceus 100,000 cfu/g of forage + specific enzyme added
1 pouch treats 50 tons



PREVENTS HEATING WHEN LOADING THE SILO



- Faster fermentation by P. Pentosaceus
- Lowers the pH fast to prevent pathogens
- Better dry matter recovery

P. Pentosaceus 100,000 cfu/g of silage
1 pouch treats 50 tons



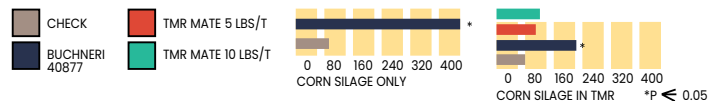
AEROBIC STABILITY AT FEED OUT



- Reduce dry matter loss
- Better stability to air exposure
- Recommended for corn silage and high moisture corn

L. Buchneri 40788 400,000 cfu/g (corn silage)
 600,000 cfu/g (high moisture corn)

+ specific enzyme added
1 pouch treats 50 tons (corn silage)
1 pouch treats 35 tons (high moisture corn)

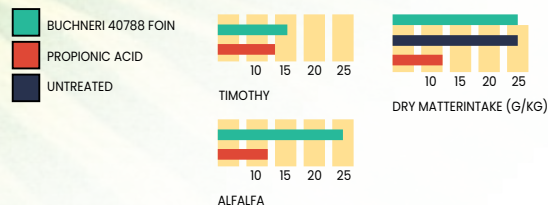


NO DUST, NO BAD ODOR



- Reduce dry matter loss
- Eliminate dust

L. Buchneri 40788 1,200,000 cfu/g of hay
1 pouch treats 10 tons



APPLICATORS

Get the best of your forage

DOHRMANN MODEL: DE-1008

For the low volume application of concentrated product up to 1,000 mt. Treats up to 8.5 tonnes/minute.

MANAGEMENT TIPS

- Harvest at optimum dry matter content
- Avoid soil or manure contamination at harvest
- Obtain the best packing density
- Ensure the bunker/silo is well sealed. • Use oxygen barrier or double polythene if necessary
- Follow proper face management practices at feedout
- Use a silage inoculant



BIOTAL BUCHNERI 500

Lactobacillus buchneri 40788 400,000 CFU's
Pediococcus Pentosaceus 12455 100,000 CFU's



Improved DM Recovery



Ideal Fermentation

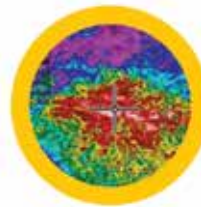


Better Protein Quality

FAST FERMENTATION



Less Spoilage



Less Heating



Less Molds

IMPROVED AEROBIC STABILITY

BIOTAL SUPERSILE

Pediococcus Pentosaceus 90,000 CFU's
Lactobacillus plantarum 10,000 CFU's



Improved DM Recovery



Ideal Fermentation



Better Protein Quality

FAST FERMENTATION



Less Spoilage



Less Heating



Less Molds

IMPROVED AEROBIC STABILITY



Installation of a Dohrmann inoculant applicator on a forage harvester

BIOTAL 40788

Lactobacillus buchneri 40788 400,000 CFU's



Improved DM
Recovery



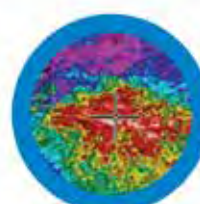
Ideal
Fermentation



Better Protein
Quality



Less
Spoilage



Less
Heating



Less
Molds

FAST FERMENTATION

IMPROVED AEROBIC STABILITY

BIOTAL PLUS

Pediococcus pentosaceus 100,000 UFC's
Propionibacterium jensenii 20,000 UFC's



Improved DM
Recovery



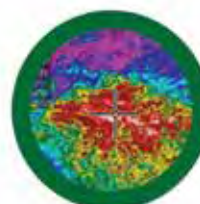
Ideal
Fermentation



Better Protein
Quality



Less
Spoilage



Less
Heating



Less
Molds

FAST FERMENTATION

IMPROVED AEROBIC STABILITY

2021

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