



CEREALS GUIDE

2023 - 2024





OUR

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IS MUCH MORE
THAN A SLOGAN

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CEREALS

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PRECISION AG

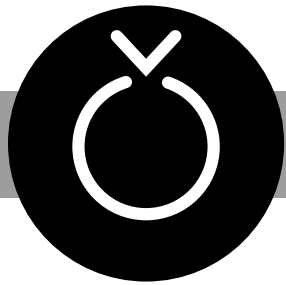
Introduction to precision AG	38-39
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GROW CROPS DIFFERENTLY

IT REPRESENTS OUR MISSION

"Supporting agricultural producers to make them more productive"

PREFACE



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Seed Manager

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Christian
Duchesneau
agronomist

FORAGE



Mylène
Desautels
agronomist

CEREALS



Samir
Aoudia
agronomist

SOYBEANS

PREFACE

Welcome to our 2023-2024 Seed Guide. Our objective is clear: to provide you with a comprehensive and efficient seed portfolio that meets the needs of Synagri's customers. Each year, we conduct trials of numerous high-potential varieties at various test sites. To be included in our Seed Guide, products must meet several criteria and demonstrate good yields over a minimum period of three years.

For cereals, a new product launch cycle commences in 2023-2024. Our selections from the past years are now ready for marketing. This new product launch cycle will span the coming years.

Our forage activities are effectively adapting to the growing demand for cover crops. Our offering of varieties and possible mixtures surpasses what is presented in the Seed Guide.

Please do not hesitate to reach out to one of Synagri's Seed team members. We would be delighted to assist you.

Thank you for taking the time to read our Guide.

Jocelyn Tousignant, agr.
Seed Manager



3 and 5 star Granular

3 and 5 Star fertilizer, more than a high-quality product line.



3 and 5 star Liquid

No compromise when it comes to performance with our 3 and 5 Star liquid starters.



YARA

Yara is a global company involved in the production of innovative and efficient products.



N-POWER BLUE

A unique, synergistic, nitrogenous solution with a less volatile composition.

OUR FERTILIZER

We are committed to developing and distributing high-quality fertilizers that help agricultural producers optimize their yields.

If you are looking to improve the quality and yield of your crops, or if you simply need advice on crop nutrition, feel free to contact your Synagri agent or representative.



Regular

High-quality regular granular and liquid fertilizer.



Amendments

Liming products, leveraging our soils and fertilizer.

QUALITY ASSURANCE

The seed sector is a constantly evolving industry. Increasingly, seeds serve as the primary carriers of new technologies and represent the essence of the varieties we trust. It is essential to establish rigorous quality control measures to ensure complete integrity.

Throughout the production process, our varieties undergo systematic inspection, sampling, analysis, and evaluation of their germination levels. At each stage, they must adhere to the standards outlined by the Seeds Act and the Regulations of the Canadian Food Inspection Agency (CFIA). The Canadian Seed Grower Association establishes guidelines for field production and issues crop certificates. Now, it's SEED CANADA who is representing seed growers, analysts, breeders, distributors, processors, retailers, service providers and all stakeholders along the seed value chain from coast to coast. Synagri actively participates in all these associations to meet the highest quality standards.

A high-quality seed is the first guarantee of a successful harvest!



You are aiming for the
ORGANIC
Market!

We offer seeds and
products adapted to
your needs.

- Cereals
- Forage
- Corn
- Soybeans
- Fertilizers
- Crop protection and health products



Products labelled as GMO-free are gaining traction in the consumer market. Whether from Asia, Europe, or America, many consumers seek information about the origin and traceability of products containing GMOs. At Synagri, we offer a comprehensive portfolio of GMO-free products, including soybeans, corn, grains, and forage plants.

SOYBEANS

For several years, we have been offering a diverse range of conventional Synagri and Belcan soybeans, including GMO-free options. These soybeans cover a range of Corn Heat Units (CHU) from 2,500 to 2,900. All our conventional soybeans can be ordered with or without seed treatment.

CORN

Through our partner Horizon Seeds, SYNAGRI will offer several hybrids, with production taking place in Ontario. In addition to our range of conventional corn, these different corn hybrids undergo evaluations at the CEROM research center and by various growers in Quebec and Ontario. These non-GMO hybrids perform exceptionally well under our conditions. All seed lots undergo PCR analysis (% GMO) by an accredited laboratory. The results are provided to all producers who request them before seed delivery. This ensures that the future buyers' standards are met, as it all begins with the seed.



CEREALS



Mylène Desautels, agr.
Cereals Expert / Seed Analyst
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In our CEREAL section, we take great pride in presenting a range of cultivars that have been meticulously developed through years of research and development at Synagri. These cultivars showcase outstanding yield potential and demonstrate resilience against diseases like wheat scab. We also offer varieties that possess excellent bread-making properties, characterized by high-protein levels. Additionally, our collection includes naked barley, which has shown its value in the animal feed industry.

Furthermore, we are excited to announce that new varieties will soon be introduced to our lineup. We encourage you to stay connected and remain updated as we unveil these upcoming additions. At Synagri, our commitment to innovation and providing farmers with top-quality cereal cultivars remains unwavering.

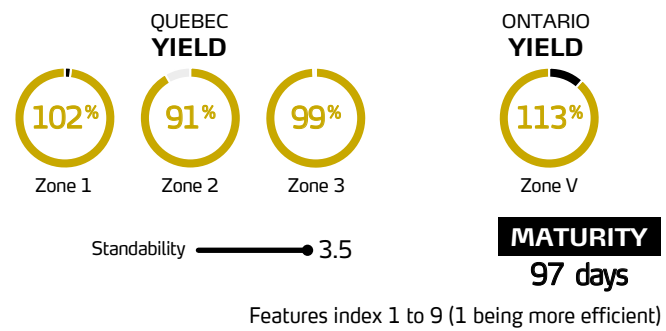
OATS



Mistral... for its whiteness

New white oat who have a good resistance of leaf diseases

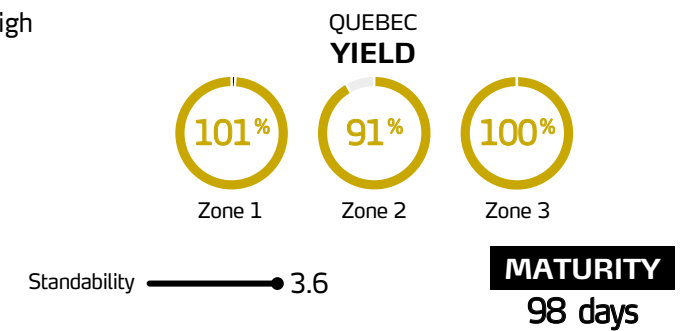
Recommended seeding rates: 350 to 400 seeds/m² (135 to 155 kg/ha)



AAC Banner... for oatmeal

Accepted by Quaker, oat with white almonds and a high level of B-Glucan, good disease tolerance.

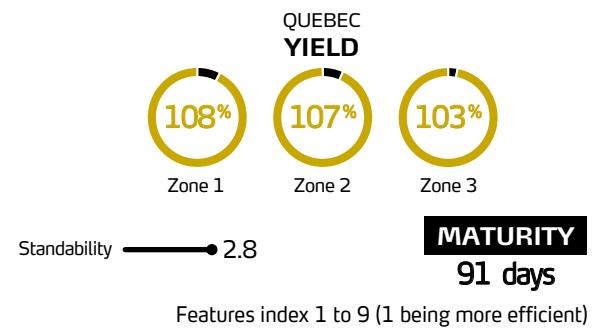
Recommended seeding rates: 350 to 400 seeds/m² (125 to 145 kg/ha)



OA1609-7... White spring Oat

Yield like AAC Nicolas
Good level of groats and B-Glucan
In evaluation by Quaker for human consumption

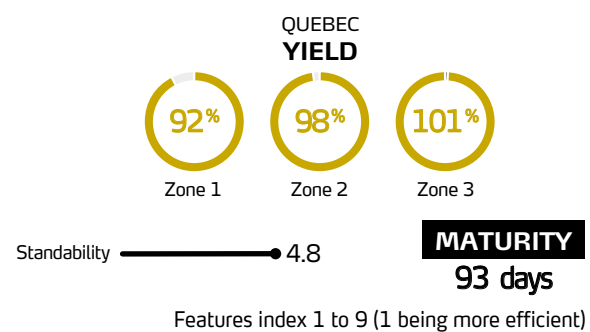
Recommended seeding rates: 350 to 400 seeds/m² (130 to 150 kg/ha)



Synextra... the protein pro

Specific weight superior, solid and tall straw

Recommended seeding rates: 350 to 400 seeds/m² (135 to 155 kg/ha)



WHEAT



We offer four bread wheats, as well as two feed wheat. Each one has specific unique characteristics.



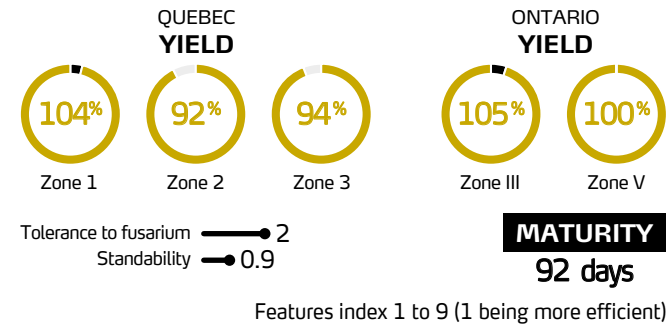
AAC Synox... superior quality

- Mid maturity
- Outstanding bread-making quality protein % around 15-16
- Good tolerance to Fusarium
- Accepted by Ontario Wheat Board (OWB)

Crop management positioning

Recommendations:

- Seeding rates 450 to 500 seeds/m² (180 to 200 kg/ha)
- Nitrogen dose: 120 to 140 kg/ha
- Intensive management: 150 kg/ha
- Fungicide: T1: If needed
T2: Recommended
T3: Recommended
- Growth regulator: recommended, especially in conditions where there is a risk of lodging.



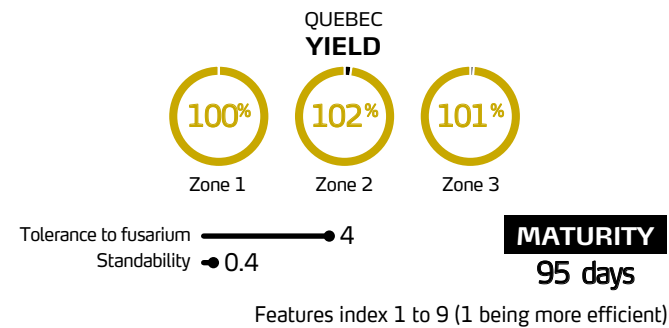
RGT Presidio... guaranteed yield

- A higher yielding wheat in all growing areas of Quebec
- Exceptional standability
- Suitable for high-performance management with phased fertilization and fungicides

Crop management positioning

Recommendations:

- Seeding rates 425 seeds/m² (165 kg/ha)
- Nitrogen dose: 125 to 150 kg/ha * according to yield potential.
- Fungicide: T1: If needed
T2: Essential
T3: Essential
- Growth regulator: in risk of lodging, otherwise not necessary.



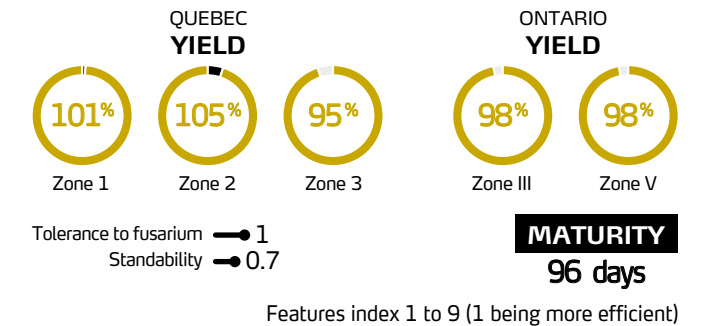
Major... high tolerance to Fusarium

- None-bearded wheat, late maturing with long straw
- Admissible to Pool C of the OWB since 2012
- Major is one of Quebec bread wheat with the best tolerance to Fusarium head blight (index 2) in Eastern Canada

Crop management positioning

Recommendations:

- Seeding rates 495 to 575 seeds/m² (200 to 230 kg/ha)
- Nitrogen dose: 125 to 150 kg/ha
- Fungicide: T1: If needed
T2: If needed
T3: If needed
- Growth regulator: Recommended in conditions where there is a risk of lodging



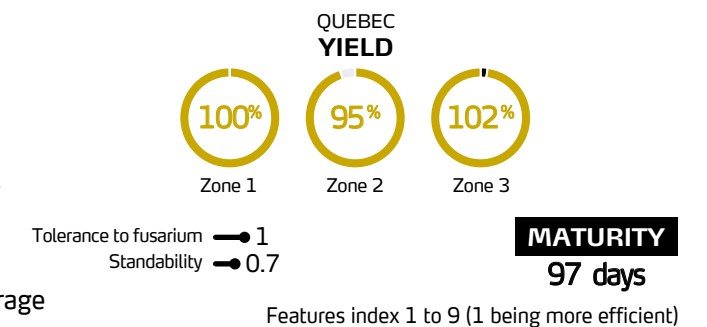
Sirlaurier... new in our forage offering



- Feed wheat
- For use in mixture or seeding alone
- Excellent yield and tolerance to Fusarium

Recommended seeding rates: 425 to 550 grains/m²

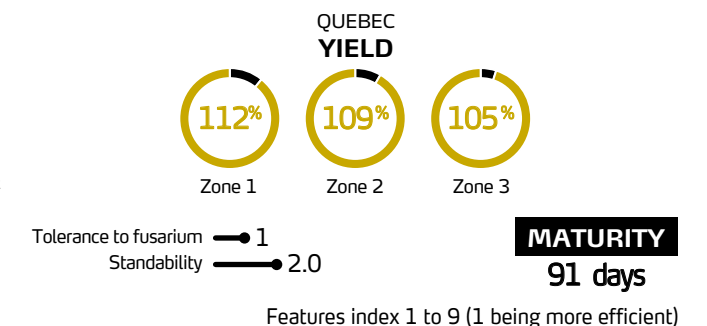
- Conventional: 180 to 185 kg/ha for an average seeding density of 425 seeds/m²
- High performance: 220 to 230 kg/ha for an average seeding density of 550 seeds/m²



Audika... for quality and yield

- Excellent yield in all zone
- Good tolerance to diseases like rust and oïdium
- Excellent resistance to fusarium head blight
- Bread-making quality protein around 14%

Recommended seeding rates: 450 to 500 grains/m² (170 to 190 kg/ha)



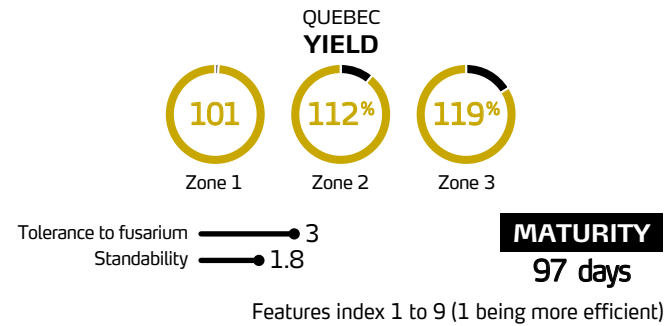
TRITICALE



Spring Triticale CIRCUIT

- Higher yield
- Excellent disease tolerance
- Good maturity
- Also used as a cover crop and forage supplement

Recommended seeding rates: 450 to 500 seeds/m²
(190 to 200 kg/ha)



LES FERMES BÉGIN
Sainte-Germaine, Boulé, QC



C.P.R. GRENON FARM
Saguenay, QC



C.H.L. INC.
Saint-Nazaire-d'Acton, QC



LES CULTURES LORKA SENC.
Sainte-Croix, QC

FERME JEANIPA INC.
Saint-Marcel-de-Richelieu, QC

FERME PARADEN INC.
Honfleur, QC



Stack the odds even more in your favour.

Get enhanced weed control with Liberty 200 SN.

Just when you thought triple-stacked herbicide-tolerant soybeans couldn't get any better. Liberty[®] 200 SN herbicide helps you achieve a weed-free environment thanks to its unique Group 10 mode of action. In addition to rapid and complete burndown of tough-to-control broadleaf and grassy weeds, it gives you added flexibility across multiple herbicide-stacked soybeans that contain the LibertyLink[®] trait, and Enlist E3[™]. So let triple-stacked soybeans handle the yields – Liberty 200 SN will handle the weeds.

Visit agsolutions.ca/Liberty200SN to learn more.

Liberty[®] 200 SN

Herbicide



Always read and follow label directions.

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™ The transgenic soybean event in Enlist E3™ soybeans is jointly developed and owned by Dow AgroSciences LLC and M.S. Technologies, L.L.C.

Through dozens of tests carried out over three years, we have compared the financial profitability of several doses of nitrogen in wheat. You can clearly see in the graphs below that the higher the nitrogen dose, the higher the yields. The challenge is to determine at which nitrogen dose it is no longer profitable to add more. We were able to measure that the most profitable nitrogen dose levels are as follows:

Presidio wheat: **125 to 140 kg/ha**. With more intensive management, **150 kg/ha** is ideal.

AAC Synox wheat: **110 to 130 kg/ha**. With more intensive management, **150 kg/ha** is ideal.

In fields with a lower yield potential, doses of 100 kg/ha are more suitable.

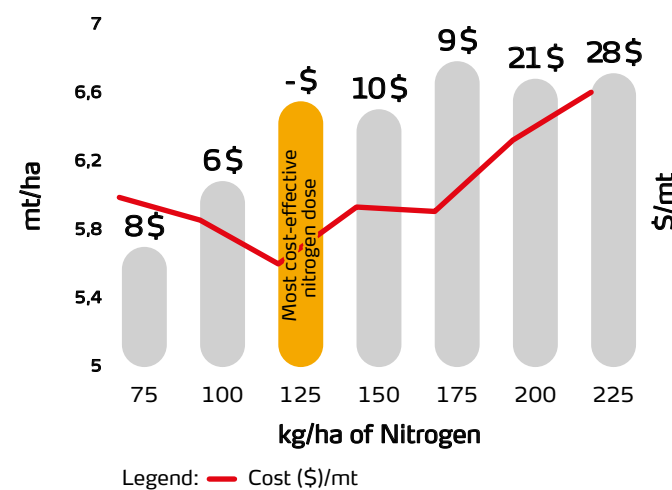


NITROGEN IN WHEAT

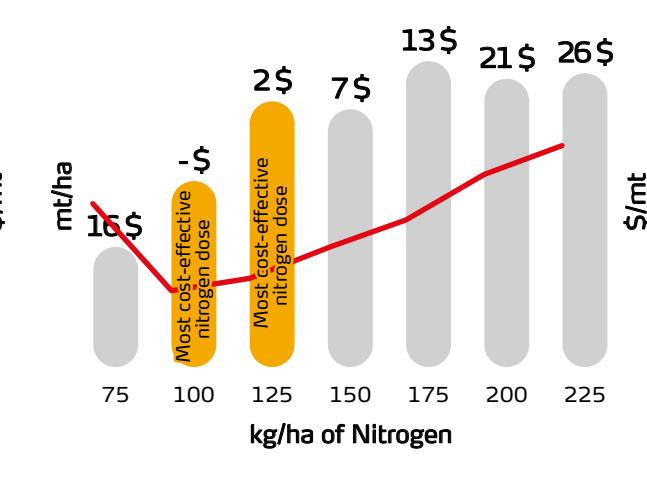
RESULTS

YaraBela® AXAN 27-0-0-3.75 (S)
YaraVera® AMIDAS™ 40-0-0-5.5 (S)

PRESIDIO – NITROGEN LEVEL
DIFFERENCE OF COST/MT VS. THE LOWEST



AAC SYNOX – NITROGEN LEVEL
DIFFERENCE OF COST/MT VS. THE LOWEST



Ideally, applications should be done as follows:

- **50 to 60 kg/ha** of incorporated nitrogen in preplant (with **YaraVera® AMIDAS™**)
- **55 to 90 kg/ha** of nitrogen at Z29 (with **YaraBela® AXAN** end tillering – beginning of stem elongation)
- Nitrogen can also be fractionated by reducing by **25 kg/ha** the dose at Z29, which will be added at Z39 (end of stem elongation, before boot stage) to improve protein level.



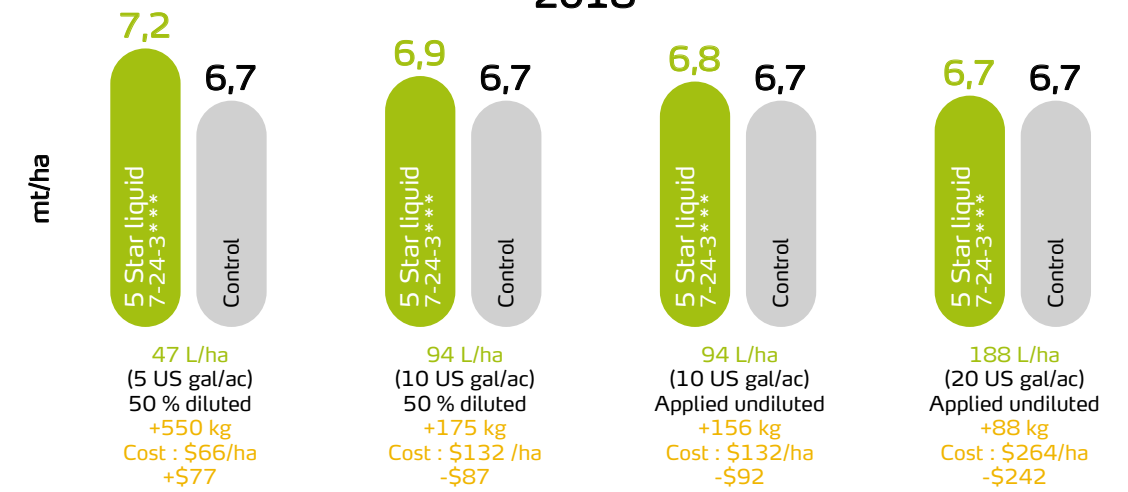
The primary goal of a liquid starter fertilizer, such as the 7-24-3 (5*), is to promote early plant growth and facilitate rapid root establishment. The effectiveness of a starter fertilizer lies in its ability to provide readily available phosphorus and facilitate quick absorption by the plant.



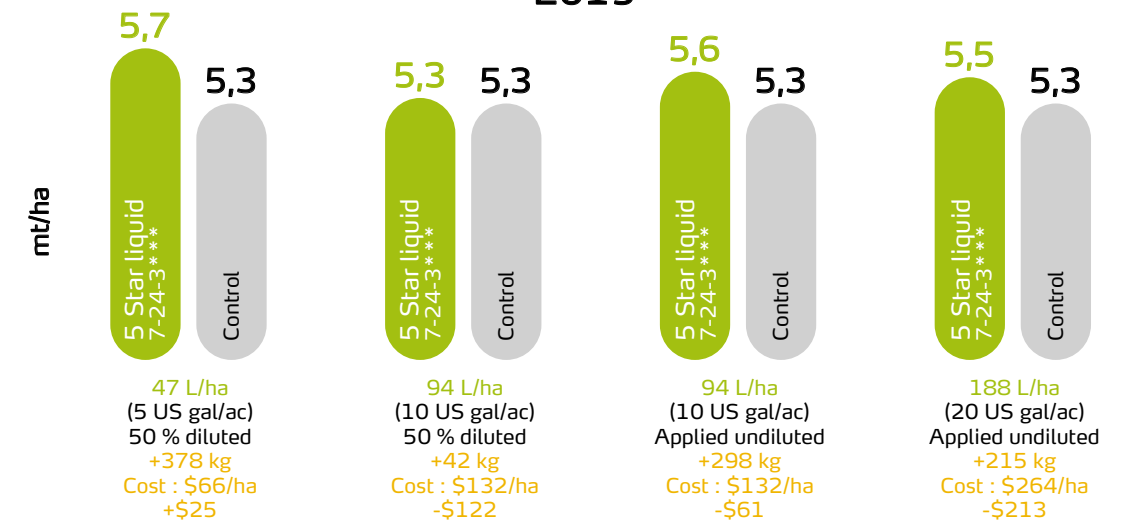
LIQUID STARTER IN WHEAT

RESULTS

LIQUID STARTER TESTS WITH 7-24-3 (5)* APPLIED IN POP-UP PLACEMENT (NEAR THE SEED) 2018



LIQUID STARTER TESTS WITH 7-24-3 (5)* APPLIED IN POP-UP PLACEMENT (NEAR THE SEED) 2019





JUICE UP YOUR YIELDS

Environmental stress conditions can have a serious impact on crop quality and yield. New OHM™ biostimulant from UPL has been proven to boost stress tolerance by optimizing nutrient utilization which results in increased root length, leaf size, biomass, plant vigour and higher yield potential. Its easy-to-use formulation can be tank-mixed with any UPL herbicide or fungicide in an integrated **pronutiva**® program for improved plant health in one pass.

Be ready for whatever Mother Nature has in store. Ask your UPL representative or retailer about OHM biostimulant or visit ohmbiostimulant.ca.

Leading crop protection for your soybeans. We're ALL IN.



HERBICIDE		
Broadstrike™ RC	Diligent™	FirstRate™
Canopy™ PRO	Elevore™	Freestyle™
Classic™	Enlist™ 1	
Commenza™	Enlist Duo™	
FUNGICIDE	SEED APPLIED TECHNOLOGY	
Acapela™	Lumisena™	Lumiderm™

Every field is different, and no two years are the same – so we've got your back with a comprehensive lineup of crop protection solutions that meet your specific needs, every step of the way.

For more information, see your ag retail or visit Corteva.ca



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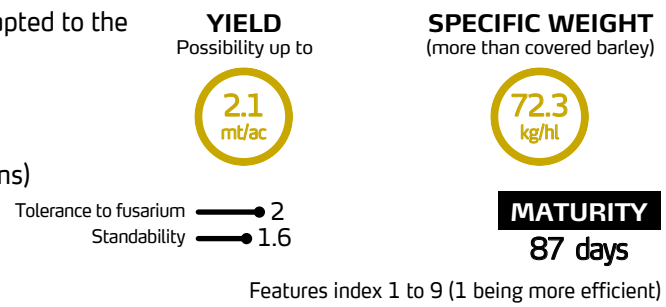
™ ® Trademarks of Corteva Agriscience and its affiliated companies. © 2021 Corteva.

BARLEY



Bastile... high nutritional intake

- A 6-row hulless barley that is particularly well adapted to the colder regions
- Variety developed for animal feed to replace corn
 - in zones dedicated to small grains
 - to reduce the impact of toxin content (vomitoxins)
- Very high volumetric weight
- Average straw and appearance
- Excellent Fusarium index



Crop management positioning

Recommendations:

- Seeding rates 415 to 485 seeds/m² (170 to 195 kg/ha)
- Nitrogen dose: 80 to 110 kg/ha
- Fungicide: T1: If needed
T2: If needed
T3: If needed

Growth regulator: Recommended

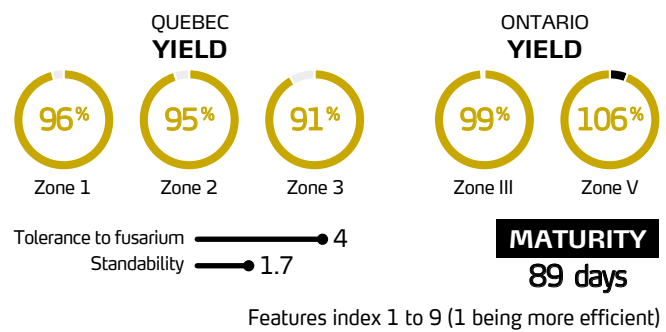
In 2019, trials showed a 20% yield increase.



Oceanik... a little early

- It's a check for the tolerance to Fusarium in the RGCQ
- Excellent yield in Ontario zone III
- One of the earliest barley varieties

Recommended seeding rates: 375 to 440 seeds/m² (180 to 200 kg/ha)

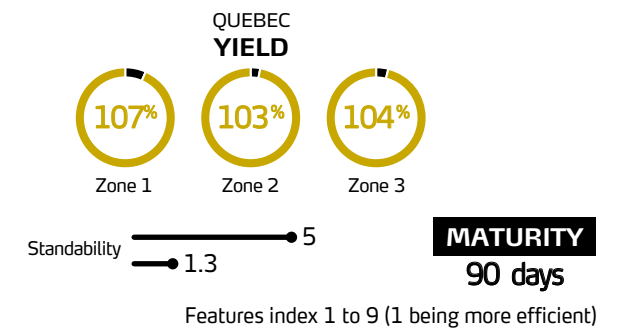


Waterloo... best yield in its category

In top 3 of the better in yield grains on market in all aeras.

- Long and solid straw
- Specific weight around 68 kg/hL

Recommended seeding rates : 375 to 440 seeds/m² (180 to 210 kg/ha)



Coming soon: new results from the experiment on optimal quantities of naked barley to effectively replace grain maize in mixed feeding rations for dairy cattle. Stay tuned!

BASTILE Hulless Barley

can partially and advantageously replace corn in dairy cattle feed



Cristiano Côrtes, Ph. D.
Annie Perron, Agr.
Vicky Poirier, Agr.

Stéphanie Claveau, Biol., M. Env.
Gérard Landry, Agr.



<https://youtu.be/sNzg05bnotE>

Context

In recent years, it has become increasingly popular among dairy farmers to optimize the use of farm-produced grains in their herd's feed. In more northern regions, such as the Saguenay-Lac-Saint-Jean region, the production of corn, the reference energy feed, is rather minimal due to the short growing season and the low corn heat units brought about by the climate. Companies are therefore constantly looking for crops with the characteristics needed to grow in northern conditions and that can be used to provide energy for their livestock feed. Since barley is an early cereal with a good energy source, it represents an interesting alternative.

Goals

To study the effects of hulless barley as a replacement for corn on the zootechnical and technical-economic performance of dairy cows under commercial farm conditions.

Methodology

Two homogeneous groups of cows at the start of the trial

Treatment	Corn (n = 15)	Hulless Barley (n = 15)
Lactation days	115	115
Parity	2.9	3
Milk production (kg)	41	41
Fat (%)	4.36	4.58
Protein (%)	3.51	3.45
SCC/ml	68,000	60,000
LPI	2,367	2,309

Ingredient	Corn	Hulless Barley
Supplement	1,208 g	243 g
Corn	3.4 kg	0
Hulless Barley	0	3.4 kg
Mineral	244 g	345 g

- Cow tracking;
- Bolus pH and temperature on two sentinel cows from each group;
- Milk components on six milk checks.

2018 Economic Study



Purchase price of ground corn (\$/t)	Purchase price of ground hulless barley		
	\$275	\$250	\$225
\$255	\$138	\$169	\$200
\$265	\$169	\$181	\$213
\$275	\$200	\$194	\$225
\$285	\$150	\$206	\$238

Savings between \$6,900 and \$11,900 per year for a herd of 50 cows

Purchase price of ground corn (\$/t)	Hulless barley yield (t/ha)				
	3	3.5	3.8	4	4.5
\$255	3.5	\$179	\$200	\$212	\$237
\$265	3.8	\$191	\$212	\$224	\$250
\$275	4	\$203	\$225	\$237	\$262
\$285	4.5	\$216	\$237	\$249	\$275

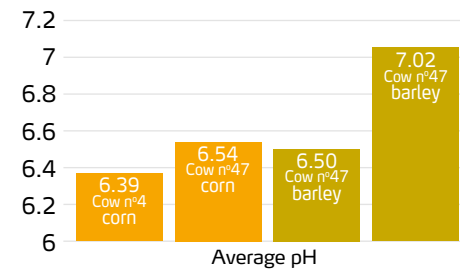
Savings between \$6,675 and \$13,750 per year for a herd of 50 cows



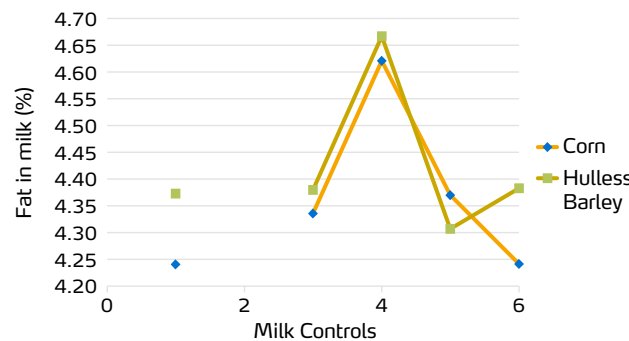
Zootechnical Results

Treatment	Corn	Hulless Barley	P-value
Milk production (kg/day)	36.9	37.1	0.91
Milk production 4% (kg/day)	38.4	39	0.72
Milk composition (%)			
Fat (%)	4.36	4.42	0.44
Protein	3.51	3.55	0.34
Lactose	4.61	4.56	0.08
Total solids	13.53	13.53	0.73
Urea (N mg/dL)	9.94	11.25	< 0.001
SCC/ml	145,000	116,000	0.44

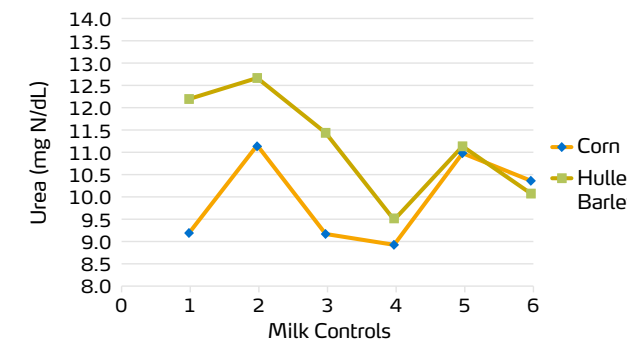
Average Ruminal pH Values of Four Sentinel Cows



Milk Fat Composition



Urea Milk Composition



Conclusion

- Substitution of 38.5% of corn by hulless barley = equivalent zootechnical performances
- Hulless barley: an interesting alternative for northern regions and organic farms (non-GMO hulless barley)
- It is preferable to include hulless barley in a PMR or a TMR (avoid any sorting)
- Instead of purchase, on-farm hulless barley production is more advantageous if a yield of 4 t/ha or more is achieved.

Financial Partners



ACKNOWLEDGEMENTS

- Gabriel Guay and Jacob Gauthier (Ferme des Sureau inc.)
- Cécile Tétreault, (Synagri)
- Frédéric Ouellet, agr.



WE ARE

Active Ingredients



WE ARE

Agile Innovation



WE ARE

All About Input



WE ARE

All In

For more information about the ADAMA products we recommend for Synagri customers, please visit: adama.com/east-canada/en/synagri

EVALUATION OF THE NUTRITIONAL VALUE OF NAKED BARLEY FOR PIGS IN GROWTH PHASE

Naked barley is of real interest as a replacement for corn in feed for pigs in the growth phase with its higher digestible protein content. Even if it has a lower digestible energy, it still shows potential. The next step will be to obtain the digestibility of amino acids and then to be able to establish a price of interest. It would also be beneficial to measure the volatile fatty acids produced in the faeces and the content in beta-glucan to evaluate the prebiotic potential of this cereal, given the strong degradation of NDF.

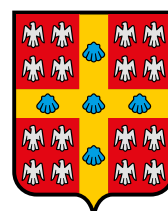
The objective of this work was to evaluate the nutritional composition in the laboratory as a first step, then to estimate the ileal and total digestibility of nutrients in pigs of a variety of naked barley, which was compared with different types of corn.

RESULTS

The results show that NDF (7.4 vs. 9.2%) and raw protein (CP, 6.9 vs. 10.3%) contents of naked barley are higher than corn, while ADF (3.5 vs. 2.3%) and raw energy (3,828 vs. 3,768 kcal/kg) were lower in naked barley ($P < 0.001$). Results of the digestibility test show an apparent ileal digestibility of naked barley's CP of 73.3%, not so different from that of corn, which is 74.4%. Thus, the digestible CP content of barley is higher than that of corn (7.65 vs. 5.03%, $P < 0.001$). The apparent digestible energy coefficient was lower for barley than for corn (86.2 vs. 89.6%, $P = 0.001$), just like the digestible energy in the food (3,247 vs. 3,430 Kcal/kg, $P < 0.001$). Finally, NDF was more degraded in barley than in corn (59 vs. 34%, $P < 0.001$), although the content was higher in the cereal.

CONTEXT

This project is carried out as part of a problematic where feeding pigs is the major element in the production cost of pork. Indeed, the price of commonly used raw materials, such as corn and soybean oil cake, are volatile and therefore subject to sudden price increases. Furthermore, they are consumed by humans, which undermines sustainability from a global perspective. Thus, reducing their use in feeding animals is one of the components of livestock production's sustainability. Several alternatives are available, but locally, in Québec, there are few. However, there are cereals with agronomic and nutritional potential that deserve to be further evaluated in animal feeding, such as naked barley, which is the subject of this work.



UNIVERSITÉ
LAVAL

MP Létourneau Montminy,
Associate Professor,
Animal Science Department,
Université Laval

SUMMARY OF THE METHODOLOGY

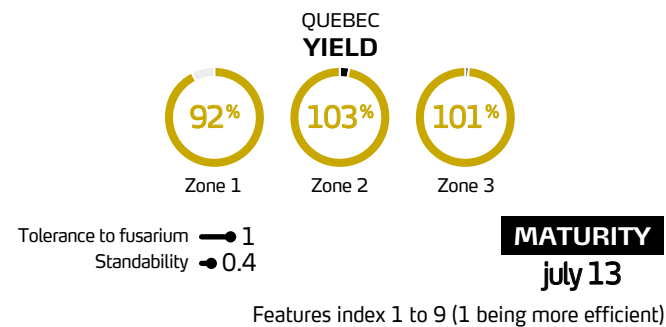
A trial with pigs cannulated at the distal ileum was carried out from October to December 2020 at the Pavillon des Services of the Université Laval. Six castrated male pigs (F1, Alphagene) were placed in adjacent individual pens of 1 m × 2 m with enrichment and unlimited access to water. All six pigs were operated on to place an ileal T-cannula in order to collect ileal digestive content (Wubben et al., 2001). The six barrows were randomly assigned one of the eight corn or naked barley brought to 100% of the feeding with the addition of a premix of minerals and vitamins in a crossover device: 6 pigs × 9 treatments × 4 periods of 7 days. Pigs were weighed at each period to adjust the experimental ration to 4% of their body weight per day, divided into two meals. Collection of ileal flow and fresh faeces took place on the last two days of each experiment period.

Possibility of making **special mixtures**, with the proportions and components of your choice, according to stock availability.
*A minimum number of bags is required.

Carnaval... doesn't feel the cold

- This feed quality wheat is **adapted to our winter conditions**
- The highest relative yield in its RGCQ trials
- Index 2 for Fusarium
- **Very good winter survival, 95% average for 3 years**
- Good quantity of straw with excellent resistance to lodging

Recommended seeding rates: 500 to 550 seeds/m² (190 to 220 kg/ha)

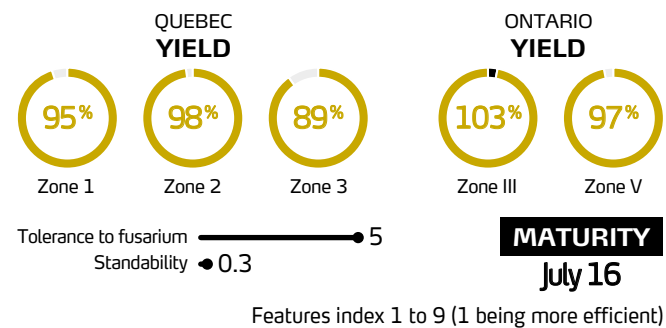


Pro 81...



It's a hard red winter wheat, with good resistance to diseases, Excellent winter survival and a good level of protein.

Recommended seeding rates: 500 to 550 seeds/m² (190 to 210kg/ha)



All the SYNAGRI exclusive cereal seed mixtures are designed to ensure the best combination of varieties according to the nutritional needs required. Particular attention is always a priority in order to harmonize the maturity, length of straw and tolerance to lodging in the combined varieties.

Cereal Mixtures with 2 varieties...

to improve the nutritional value of oat

	Species	Varieties ¹	Seedind rate	Benefits
SEM 610	60% Wheat 40% Oat	Sirlaurier Mistral	140 kg/ha	<ul style="list-style-type: none"> ▪ Protein and energy contribution from the wheat ▪ Curative, fibrous contribution from the oats ▪ Balanced mix in less fertile soils and a better nutritional yield

Cereal Mixtures with 3 varieties...

best mixtures for balance, in the field and in the barn

	Species	Varieties ¹	Seedind rate	Benefits
SEM 530	50% Wheat 25% Oat 25% Hulless Oat	Sirlaurier Mistral Lavoie	135 kg/ha	<ul style="list-style-type: none"> ▪ Possibility of seeding in a greater range of soils
SEM 520	50% Wheat 25% Oat 25% Barley	Sirlaurier Mistral Waterloo	135 kg/ha	<ul style="list-style-type: none"> ▪ Balanced nutritional ratio ▪ Very good yield potential ▪ Excellent synergy between species ▪ Great adaptability
SEM 350	35% Wheat 35% Peas 30% Oat	Sirlaurier CDC Meadow Mistral	165 kg/ha	<ul style="list-style-type: none"> ▪ Uniform maturity, balanced mix ▪ Basis of a well-balanced animal feed ▪ Good protein input coming from peas and wheat ▪ Adaptable to every soil type

Cereal Mixtures with 4 varieties...

for constant and balanced mixtures

	Species	Varieties ¹	Seedind rate	Benefits
SEM 250	25% Wheat 25% Oat 25% Barley 25% Peas	Sirlaurier Mistral Waterloo CDC Meadow	165 kg/ha	<ul style="list-style-type: none"> ▪ Diversified mix combining different species ▪ Very well-balanced to act as a base in quality animal feed ▪ Balanced components

1. Subject to availability

Facts on Cereal Mixtures

The components variation percentage (± 5%) is not necessarily the most important factor in the choice of a mixture. The environmental conditions in the current year determine the development of every component in the mixture. There is a complex relationship between seed characteristics and the environment in which they will compete with one another for space, water, nutrients and light. There are more advantages in growing mixtures in an uncertain farming environment.

* : Plant's breeder right of the International Union for the Protection of New Varieties of plants.

SYNAGRI FORAGE MIXTURE



Forage Mixtures with 2 or 3 varieties...

for use as a cover crop, green crop harvested at the filling stage

Species	Seed rate	Benefits
SEM 500 50% Forage Oat ¹ 50% Forage Peas ²	120 kg/ha	<ul style="list-style-type: none"> Mix similar to Sem 400 but without the wheat Totally appropriate for Quebec's cooler regions Better yield than seeding a single forage plant Oats contributes to yield and nutritional qualities Peas preserve quality in case of late harvest Helps ingestion
SEM 400 40% Forage Wheat 40% Forage Peas ² 20% Forage Oat ¹	130 kg/ha	<ul style="list-style-type: none"> Extremely efficient mix that can attain 3,800 to 4,500 kg/ha of dry matter at the first cut Wheat has a better yield than oats, especially in warm regions Possible analysis of 16 to 20% total protein Adaptable to many types of storage Peas preserve quality in case of late harvest Can be grown in any soil type Good competition for weeds Maintains good soil

¹ CDC Haymaker ² Lacross (stock availability)



Forage peas Lacross

- For need in forage only, **ONLY SALE IN MIXTURE.**
- Protein yield high
- Intermediate maturity
- Good match with CDC Haymaker oat in your mix SEM 500.
- Excellent lodging resistance.

Number of seeds to be sown by linear meter in relation to the disc row spacing and the desired number of seeds per square meter.

Row spacing	Desired Number of Seeds per m ²													
	In	mm	300	325	350	375	400	425	450	475	500	525	550	575
4	102	30.6	33.2	35.7	38.3	40.8	43.4	45.9	48.5	51	53.6	56.1	58.7	61.2
5	127	38.1	41.3	44.5	47.6	50.8	54	57.2	60.3	63.5	66.7	69.9	73	76.2
6	152	45.6	49.4	53.2	57	60.8	64.6	68.4	72.2	76	79.8	83.6	87.4	91.2
7	178	53.4	57.9	62.3	66.8	71.2	75.7	80.1	84.6	89	93.5	97.9	102.4	106.8

Seeding rate

Recommended seeding rates are given for guidance only; the weight of 1000 each specific grains each lot remains the best tool for the calculation of an accurate seeding.

Spring Wheat 425 to 550 seeds/m²
Barley 375 to 440 seeds/m²
Oat 350 to 400 seeds/m²

Seeding rate for different varieties used as a cover crop: -30% of the density of the seed suggested

1000 Seed Weight (TKW) in Grams of the Variety to Seed

Desired established population (plants/m ²)	Seeding density (grains/m ²)	30		32		34		36		38		40		42		44		46		48		50	
		lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha	lb/a	kg/ha
280	325	87	98	93	104	98	111	104	117	110	124	116	130	122	137	127	143	133	150	139	156	145	163
300	350	94	105	100	112	106	119	112	126	118	133	125	140	131	147	137	154	143	161	150	168	156	175
320	375	100	113	107	120	114	128	120	135	127	143	134	150	140	158	147	165	154	173	160	180	167	188
340	400	107	120	114	128	121	136	128	144	135	152	143	160	150	168	157	176	164	184	171	192	178	200
360	425	114	128	121	136	129	145	136	153	144	162	151	170	159	179	167	187	174	196	182	204	189	213
380	450	120	135	128	144	136	153	144	162	152	171	160	180	168	189	176	198	184	207	192	216	200	225
400	475	127	143	135	152	144	162	152	171	161	181	169	190	178	200	186	209	195	219	203	228	212	238
420	500	134	150	143	160	151	170	160	180	169	190	178	200	187	210	196	220	205	230	214	240	223	250
440	525	140	158	150	168	159	179	168	189	178	200	187	210	196	221	206	231	215	242	224	252	234	263
460	550	147	165	157	176	167	187	176	198	186	209	196	220	206	231	216	242	225	253	235	264	245	275
480	575	154	173	164	184	174	196	184	207	195	219	205	230	215	242	225	253	236	265	246	276	256	288
500	600	160	180	171	192	182	204	192	216	203	228	214	240	224	252	235	264	246	276	257	288	267	300

Source: CPVQ 1988 - Spring Cereals

Note: The desired population, in plants/m², represents 85% (minimum germination percentage required for grade 1 pedigreed seeds) of the seeding density in seeds/m².

Determining the Seeding Rate

The seeding rate in kg/ha (lb/ac) is calculated according to the desired density and seed size (g/1000 seeds). For the same population, the smaller the seed, the lower the seeding rate.

$$\text{kg/ha} = (\text{g}/1000 \text{ seeds}) \times (\text{seeds}/\text{m}^2)/100$$

Example of seeding rate calculation:

AAC Synox wheat weighing 40 g for 1000 seeds. For a seeding density of 450 seeds/m².
(40 g/1000 seeds) × (450 seeds/m²)/100 = 180 kg/ha

You can also use the table above; Weight of 1,000 seeds in grams of the variety to be sown.

The first column represents the desired established population (plants/m²) in the field for a minimum germination of 85%. If the germination is higher, the established population will also be higher. The second column represents the seeding density (seeds/m²) to be used to obtain the desired final field population. This column should also be used to calculate the seeding rate. For example, if we use a seeding density of 450 seeds/m² and the germination rate of our seed is 85%, we can expect to have a population of 380 plants/m². The other columns of the table represent the seeding rate in kg/ha or lb/ac depending on the 1,000 seed weight (1st row).



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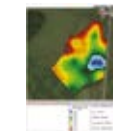
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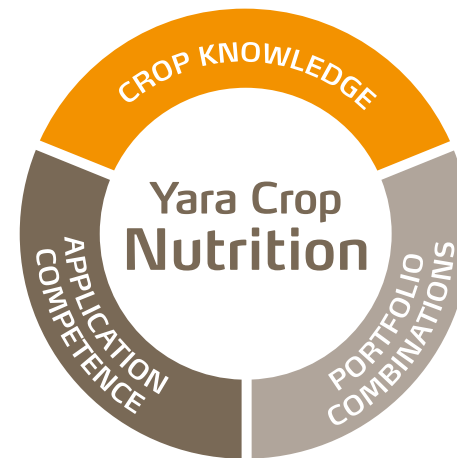




Knowledge grows



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crop nutrition
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