



FARMING

Roots that run deep



Decoding the oat

There's nothing like a piping hot bowl of oatmeal or a platter of freshly baked oatmeal cookies to comfort the soul on a frigid winter day. This hearty grain is packed with nutritional benefits that help keep your heart healthy and your cholesterol levels in check. But besides their dietary goodness, oats are surprisingly complex. In fact, they are among the most genetically complex organisms on earth, according to Agriculture and Agri-Food Canada (AAFC).

The AAFC has been conducting research on oats for more than 20 years. Recently, Canadian researchers have taken on the challenging task of mapping the oat genome for two main reasons:

1. to develop a more robust version with better weather- and insect-resistant properties, and
2. to help oat farmers further enhance the already impressive health benefits of oats by influencing the selection of specific traits.

With their high protein, mineral and healthy oil content, oats are renowned for their nutritional value. Among the discoveries of the past 20 years, researchers have found that oats slow down the body's absorption of cho-

lesterol and sugar thanks to a unique soluble fibre called β -glucan. In practice, this means that eating oats makes you feel full for longer, as slower digestion maintains levels of hormones associated with feelings of satiety.

Canadian farmers already produce 15 per cent of the 22 million tons of oats harvested worldwide each year. Cracking the genetic code of the oat would be a huge win for Canada's agricultural industry, especially for farmers in more difficult climates. Enjoyed in muffins, breakfast bars and homemade granola, oats are also used in skincare products as a safer alternative to certain artificial ingredients.

Thanks to continued research and innovation in Canadian agricultural practices, the future of oat farming is looking hearty, healthy and delicious!



The humble potato: Canada's most valuable vegetable

A staple in Canadian cupboards, the potato is an incredibly versatile food. Whether boiled, fried or roasted, mashed, hashed or diced, it adds a hearty and nutritious touch to countless meals. For nearly 20 years, Agriculture and Agri-Food Canada (AAFC) has been working hard to ensure Canadian potato growers and consumers alike have access to the best spuds on the market.

Under the Accelerated Release Program (established in 1998), the AAFC releases 10 to 15 new potato selections each year featuring an assortment of colours, sizes and other valued characteristics. Potato industry entrepreneurs across the country then evaluate each crop and pinpoint front-runners that meet the needs of Canadian consumers and producers in matters of flavour, quality and hardiness.

Thanks to a combination of traditional crop breeding techniques and cutting-edge technology, scientists can boost the aesthetic and nutritional value of potatoes.

For example, researchers have isolated a variety with a low glycemic index that could help consumers with everything from weight loss to diabetes management. With names like Poppy, Glossy and Red Viola, today's marketplace for spuds is more diverse than ever! But developing new varieties is no easy feat. According to the AAFC's head potato breeder, Dr. Benoit Bizimungu, it takes years to crack the formula for a nutrient-rich potato that's resis-

tant to drought and disease while possessing a high yielding power.

One thing's for certain: Canada's potatoes stand up to the nutrition test — especially new, colourful varieties packed with powerful, disease-fighting antioxidants. A true dietary powerhouse, the potato is great as a side dish, in salads and dipped in ketchup. How do you prefer your spuds?

FAST FACTS:

- The potato is the most valuable of all Canada's vegetable crops, accounting for one third of the annual revenues of Canadian vegetable farmers.
- The AAFC has released close to 200 unique potato varieties since the inception of the Accelerated Release Program in 1998.

DID YOU KNOW?

One potato with skin contains as much iron as a cup of spinach and as much potassium as a medium-sized banana.



Agroforestry 101

Do you already have trees growing on your farm? If so, you might want to consider taking up agroforestry — one of the most environmentally friendly and profitable farming practices of the modern day. Agroforestry involves integrating trees in the tending of crops and pastures to benefit harvests while helping the environment. Read on to learn more!



A WIDE RANGE OF BENEFITS

In addition to embellishing your farm's overall appeal — and increasing its market value — agroforestry provides a slew of other benefits. First, the presence of trees protects crops in a number of ways, primarily by serving as a barrier against strong winds, pests, dust and even noise pollution. In addition, trees help reduce greenhouse gas emissions and other pollutants by preserving the quality of soil and water. Furthermore, they improve the quality of life of livestock by significantly reducing anxiety levels. Finally, various trees and shrubs can help increase revenue by producing fruits or nuts.

WHERE TO PLANT

To ensure you reap all the benefits that your trees and shrubs have to offer, it's crucial that you plant them in a strategic location on your farm. Not sure where to start digging? Consider these spots:

- Around fields
- Around buildings
- Bordering a stream
- Along roads
- On less fertile ground
- In pastures

Furthermore, you can plant different species of trees and shrubs (maple, oak, walnut, lime, elm, etc.) and contribute to maintaining your region's biodiversity at the same time!

How to get your kids interested in the farm life

Do you often dream of the day your kids will be old enough to take over the family farm? Here are a few key pieces of advice to help pique their interest at a young age. After all, it's an essential prerequisite for any business owner looking to someday hand over the reins to their offspring.

First and foremost, it's important that your children feel that they play an integral role in your family's farming operations. Involve them in the farming process by delegating some of the easier tasks that are safe for a person of their age to handle with little to no help. For example, make them each responsible for the upkeep of a parcel of land and guide them in the right direction without giving too much away. Explain what you expect of them and help them find the appropriate means to accomplish the task at hand, but refrain from doing all of the work for them, even if what they're doing is far

from perfect. Offer them support, but give them the freedom to learn from firsthand experience. And don't forget that your encouragement and congratulatory words are crucial!

Furthermore, remember that what impasses you the most about the farming life doesn't necessarily align with your children's preferences. Be attentive, leverage their strengths and, above all else, show interest in their passions. Finally, focus on emphasizing the positive aspects of your line of work. You wouldn't want to get the kids discouraged from the get-go by recapping the day's troubles every night over dinner.



Your children need to feel that their participation is crucial to your family's farming operations. Get them involved!