friends of the farm
les amis de la ferme

# FRIENDS of the Central Experimental Farm

Winter 2026 Newsletter | Volume 38 No. 1

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## Volunteering

*By Christina Fiedorowicz*

This donated bench in the Arboretum celebrates long-serving volunteers Eric and Louise Moore. *Photo by R. Hinchcliff*

Did you know that according to a 2023 Statistics Canada survey, approximately 10.4 million Canadians aged 15 years and older reported volunteering for non-profit, charitable, and community-based organizations? Out of a population of some 41.5 million, that's a significant portion of people who dedicate their time and effort to various causes. Our volunteers at Friends of the Farm are included in that impressive statistic. We have more than 200 individuals contributing over 9,000 hours annually!

It is both gratifying and intriguing to see this level of interest in volunteerism. One wonders what motivates people to step forward in support of some interest or cause. Why does one volunteer? Each of us likely has our own reasons, but when asked, there are some typical explanations.

We may feel that we have lived fortunate lives in many ways and in recognition of having been so lucky, we want to make a positive difference, giving back to society as an expression of our gratitude and appreciation. That is a compelling reason.

Perhaps we want to be useful and feel that we are making a purposeful contribution. If our lives have been busy with children and/or work, there can be a void that needs filling once retirement comes along. Then, volunteering is a great option.

By volunteering and contributing to a cause we care about or has personal meaning, we may experience a sense of satisfaction and fulfilment.

Personal development could be an important reason we volunteer. Learning something new is stimulating and can enrich our lives. It could be quite satisfying knowing how to correctly prune a lilac or transplant a finicky peony.

Or perhaps we want to be part of a group, a community of people, so volunteering offers us a way to socialize and connect with others. We may be drawn to activities in which we can interact with like-minded people, or we may want to do something completely different. But our underlying motivation is to develop social connections and be part of a community.

Physical and mental well-being might be motivating factors, or these could be the outcomes of volunteering. There is a growing body of research associating well-being and social connectedness. The National Institute on Ageing's 2024 survey of Canadians 50 years of age and older indicates that there is some connection between ageing well and social networks and engagement.

Doing what needs to be done for the benefit of humanity at large, or altruism, is a core value for many Canadians, and manifests itself in our strong tradition of community service.

Or you may simply find yourself with too much time on your hands. One solution is to do something new and interesting, i.e., switch things up. Volunteering is a good answer when extra stimulation is wanted or needed.

Lastly, contributing to one's community and society at large is an integral part of some cultures, or religions as well as individual family values.

These are all sound explanations for what inspires people to volunteer, and they may not be mutually exclusive. But understanding these varying motivations may help foster a culture of community and social cohesion. **Do these hit home with you? What reasons motivated you to become a volunteer?**

### REASONS WE VOLUNTEER

Give back to our communities and society.

Make a positive contribution.

Sense of fulfillment.

Personal development.

Socialize and connect with others.

Physical and mental well-being.

Altruism.

Need something stimulating to do.

Cultural, religious or family values.

### MORE FACTS ABOUT VOLUNTEERS

Canadian volunteers dedicated 4.1 billion hours of formal volunteering in 2023. This breaks down to 173 hours per year for each volunteer on average. Of course, averages can be deceptive as many individuals contribute significantly more per week and others less. Nevertheless, the aggregate of over 4.1 billion hours is an impressive statistic.

Seniors typically contribute the highest average number of hours per person but youths between the ages of 15-24 years have a slightly greater number of volunteers. In addition to the reasons identified above, young people often volunteer to meet school requirements or to gain experience that will be advantageous when looking for a job.

Volunteers from Turner & Townsend, a local firm, whose employees wanted to spend a morning volunteering with us in June 2025. *Eric Jones*

Reportedly, an equal number of females and males volunteer but there is a slight difference in the type of volunteer work with a greater tendency for females to volunteer in health and social services and males in sports and recreation.

One interesting trend noted is that following the COVID-19 pandemic, many organizations reported that in-person volunteering decreased and virtual or informal volunteering activities such as helping out a neighbour rather than getting involved in larger groups, increased. Perhaps that trend will be reversed in the future.


Perennial team volunteers, May 2025. *R. Hinchcliff*

### THE FRIENDS OF THE FARM VOLUNTEERS

What I have learned as Volunteer Director is that most of our volunteers have joined the Friends of the Farm because of some personal connection to the Experimental Farm. There is a love for the Farm. This is not only a great motivator, but also something that bonds and unites us. I have been told many stories, often with emotion: a childhood memory of catching bugs and frogs from the pond in the Arboretum with Dad; fond recollections of wedding photos taken in the Ornamental Gardens; cycling, jogging or walking through the Farm and appreciating its beauty; enjoying the serenity of this special place to meditate or heal emotionally and physically; and bringing young children to run free amongst the trees and enjoy a family outing in nature.

There are so many reasons people have for wanting to volunteer and specifically for choosing the Farm as the place they want to volunteer. Whatever has brought our volunteers to the Friends of the Farm, we are truly grateful for their contributions and for being part of this great team.

*Christina Fiedorowicz is Volunteer Director for the Friends of the Farm.*

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## FOR THE LOVE OF TREES IN WINTER *By Arthur Buckley, former Curator of the Arboretum (The Ottawa Journal, November 5, 1949)*

The lovers of trees will always, even in the dead of winter, be able to find some interesting pattern in the architecture of trees that will delight their aesthetic sense. The diverse outlines presented by the trees and the graceful arrangement of their twigs is appreciated much greater after the leaves have fallen. Perhaps the most glorious sight of all occurs during winter when the twigs and branches are coated with ice following a severe ice-storm; then each twig is brilliantly illuminated, and the beauty of the whole tree is magnified into a dazzling spectacle.

*Also delightful is the beauty and diversity of the bark of trees and shrubs in the Arboretum—see the article by Eric Jones in last fall's newsletter.*

# Greetings from Yves Garcia, our New Membership and Fundraising Director

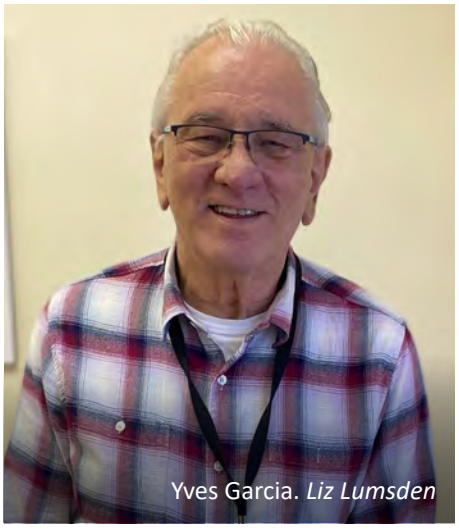
I am pleased to announce to my fellow Friends of the Central Experimental Farm that, after the Membership and Fundraising Director position being vacant for more than a year, I have joined the Friends' Board of Directors taking on the leadership in this vital area.

As you may know, FCEF thrives thanks to the dedication of our volunteers and the generous support of our members and donors. Their contributions help us maintain, enhance, and operate cherished spaces like the Ornamental Gardens, the Arboretum, and the Merivale Shelterbelt.

I bring to this new challenge over 50 years of professional experience across diverse sectors—including Healthcare, Government, Defence, Insurance, Pulp and Paper, and Consulting—and I'm excited to be able to apply this background in supporting FCEF's mission.

In the coming year, I look forward to meeting as many of you as possible. I will be relying on your support as this organization reaches out to attract new members and meet our fundraising goals. I will do my best to answer any questions you may have about membership enrollment and fundraising efforts

Your voice matters. By becoming a member and participating actively, you help shape the strategic direction of the Friends of the Farm. Let's grow together.



Yves Garcia. *Liz Lumsden*

**Regards,**
**Yves Garcia, MBA**
membershipdirector@friendsofthefarm.ca

# ARBORETUM TOURS, FALL 2025

**THESE ARE A FEW OF MY FAVOURITE TREES**
**SEPTEMBER 21**

What makes a tree a favourite? It could be its form, its flowers, its leaves, or something else. Robert Glendinning shared some of those trees on a tour he led that had "a little bit of history and a little bit of horticulture."

*Eric Jones*

**URBAN TREE SPECIES**
**OCTOBER 19**

John Hoogendoorn led this tour which looked at what goes into urban tree species selection and some of the current and future issues facing urban trees in Ontario.

## INSPIRATION FOR GROWING FOOD

The very popular spring lectures by the Master Gardeners of Ottawa-Carlton, hosted by the Friends of the Farm, will return this spring. The virtual lectures will be held from March 3 to April 28.

This year's theme for five timely, informative presentations is "Inspired Gardening – Growing Food."

What's Bugging You? Integrated Pest Management for Your Garden – **EP Power | *Tuesday, March 3, 2025***

Nurturing Your Own Food Forest – **Andrea Knight and Angelina Singson | *Tuesday, March 17, 2025***

Cold Frames and Cold Crops – Extending the Season – **Odette McIntyre | *Tuesday, March 31, 2025***

Growing Unusual Edibles: Successes, Failures and Learnings – **Claire McCaughey | *Tuesday, April 14, 2025***

Tiny Gardens Big Harvest – **Judith Cox | *Tuesday, April 29, 2025***

All lectures start at 7pm and will be held online. A link for each lecture will be emailed to registered participants by 12:30 on the day of the lecture.

Fees for the series are $45 for FCEF and MGOC members, $55 for non-members.

Individual lectures are $10 and $12, respectively.

Watch for more details at the lecture page on the Friends' website.

# Oats Research Helps Solve Genetic Puzzle

AAFC research team, from left: Marwa Issa *(student)*, Saad Warsi *(student)*, Danielle Wolfe *(technician)*, Wubishet Bekele *(research scientist)*, Nicholas Tinker *(retired research scientist)*, Asuka Itaya *(technician)*, Charlene Wight *(data and knowledge management biologist) Photo by Agriculture and Agri-Food Canada.*

What could be less mysterious than a bowl of oatmeal porridge? We know it is warm, filling, rich in dietary fibre, and help keeps us healthy. But scientists have long been perplexed by the oat's genetic makeup, or genome, which compared to the genome of other cereals, is extremely complicated.

Scientists at Agriculture and Agri-Food Canada have been part of an impressive international research effort that has succeeded in creating the first-ever, fully annotated oat pangenome. A pangenome compiles many genomes, collecting all the genes and genetic sequences within a species.

Without a complete map of the entire genetic diversity of the oat, plant breeders have not been able to effectively introduce new traits from wild relatives or cultivated oat lines. Now, researchers' ability to develop oats with better disease resistance or higher nutritional quality will be enhanced. Focus can be placed on boosting the beta-glucan (a soluble fibre that lowers cholesterol) in oats. The fully identified pangenome will also help researchers who are working on climate resilience to develop oat varieties that can thrive despite low moisture, intense heat or cold, or other challenging growing conditions.

For farmers, this could lead to the development of a hardier oat, with improved sustainability and taste. For consumers, it means continued access to healthy oat products, such as breakfast food and oat-based dairy replacements.

*Read the full story of this research here, courtesy of Media Relations, AAFC.*

# Winter on the Farm in 1895

*Sarah Agnes Saunders and her husband William, director of Canada's experimental Farms, along with senior managers and key operations staff, lived at the Central Experimental Farm in the early days. In The Ottawa Journal on April 13, 1895, she expressed her delight in the landscape of flowers, trees, and shrubs throughout the seasons. Winter had its delights …*

"The question is sometimes asked: Is not this a very dreary place in the winter? And there are times when the winds are howling around and the snow falling so heavily that every feature of the landscape is obliterated—the thermometer perhaps standing at 30 below zero—when one would regard the shelter of a house in a row in one of our city streets with great complacency.

"But this state of things never prevails long, and when the storm is over, we forget the temporary inconvenience and enjoy the beautiful effects of it.

"How pure the surface of the snow; never sullied, as in town, by the smoke or dust of chimneys or workshops; how it enhances the beauty of the evergreens which adorn our lawns, as the branches droop beneath its weight; the bright crimson branches of the dogwood and the rich brown of the stems of other shrubs and trees, is heightened ten-fold by the dazzling whiteness around them. When the sun goes down to his early setting in the clear afternoon sky, the play of light on the snow produces colours of the most delicate and opalescent nature, giving an effect of exquisite beauty to which no onlooker could be insensible."

Sarah Agnes Saunders, 1905. *Western University Archives, RC20042*

## SPECTACULAR DISPLAY OF ANNUALS

Congratulations to Jeremy DiZazzo and his AAFC staff for the wonderful display of annuals in the 2025 beds. We applaud the huge investment of time and effort in its planning and preparation. The dazzling combinations of colours and textures captured the attention and admiration of visitors to the Ornamental Gardens.

*Photos by R. Hinchcliff*

The large spread and great girth of Bebb's Oak.

# Our Unique Tree

*By Eric Jones*

You may have wondered about "the tree with the fence around it" in the Dominion Arboretum. Or perhaps you are one of those who has been fortunate to share a long history with this Ottawa landmark. It has inspired many artists and photographers, supported numerous kids on its long branches, embellished scores of pictures of wedding parties, and hosted no end of others who have come to enjoy the view and shade.

It is also referred to as the Bebb's Oak *(Quercus x bebbiana)*, a natural hybrid between a Bur Oak and a White Oak. In his 1980 book *Trees and Shrubs of the Dominion Arboretum*, Arthur Buckley, former curator of the Arboretum, said the tree "has the largest spread and greatest girth of all oaks in the collection."

## HYBRIDS

Hybrids are common among oaks for several reasons. Wind spreads their pollen far and wide to other oak trees. Many of them flower around the same time, and they are able to be fertilized by different species. So it's not unusual for them to hybridize. Also, this possibility doesn't end with one generation: many oak hybrids are able to reproduce. A Bebb's Oak, for example, can breed with its own or with other oak species.

This tree looks big for its age of about a century and a quarter. Some oak hybrids are known for "hybrid vigour," i.e., they grow quickly. They can also produce acorns at a young age and adapt well to changing environments. As genes keep mixing and flowing between trees, they introduce new traits, some of which are preferable to humans and some are better for the trees. When a desirable new hybrid appears, it can be cloned and sold through nurseries.

The Arboretum has another oak hybrid called Schuette's Oak which is a cross between Bur Oak and Swamp White Oak. It's a natural hybrid found in Ontario and Quebec. In Britain's Kew Gardens there's an impressive hybrid named the Lucombe Oak, a cross between a Cork Oak and a Turkey Oak. This tree is a clone rather than a natural hybrid.

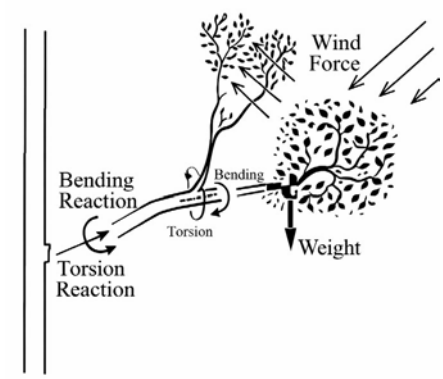
## THE TREE AT WORK

One of the Bebb's Oak's most striking features is its long, wide-spreading arms. This is partly due to its genes and partly a result of where it was planted. The open

ground (when it was planted) provided lots of sunlight for lower branches, and so the tree is broader than it is tall.

What does that mean for the tree? The weight of a long horizontal branch creates very heavy stresses where the branch is attached to the tree. You get a sense of that force by holding a 2 by 4 at its end, parallel to the ground. But it's the wind that creates the largest loads on trees. Wind gusts keep changing speed and direction, bending and twisting the branches (see figure).

IMPACT OF THE WIND



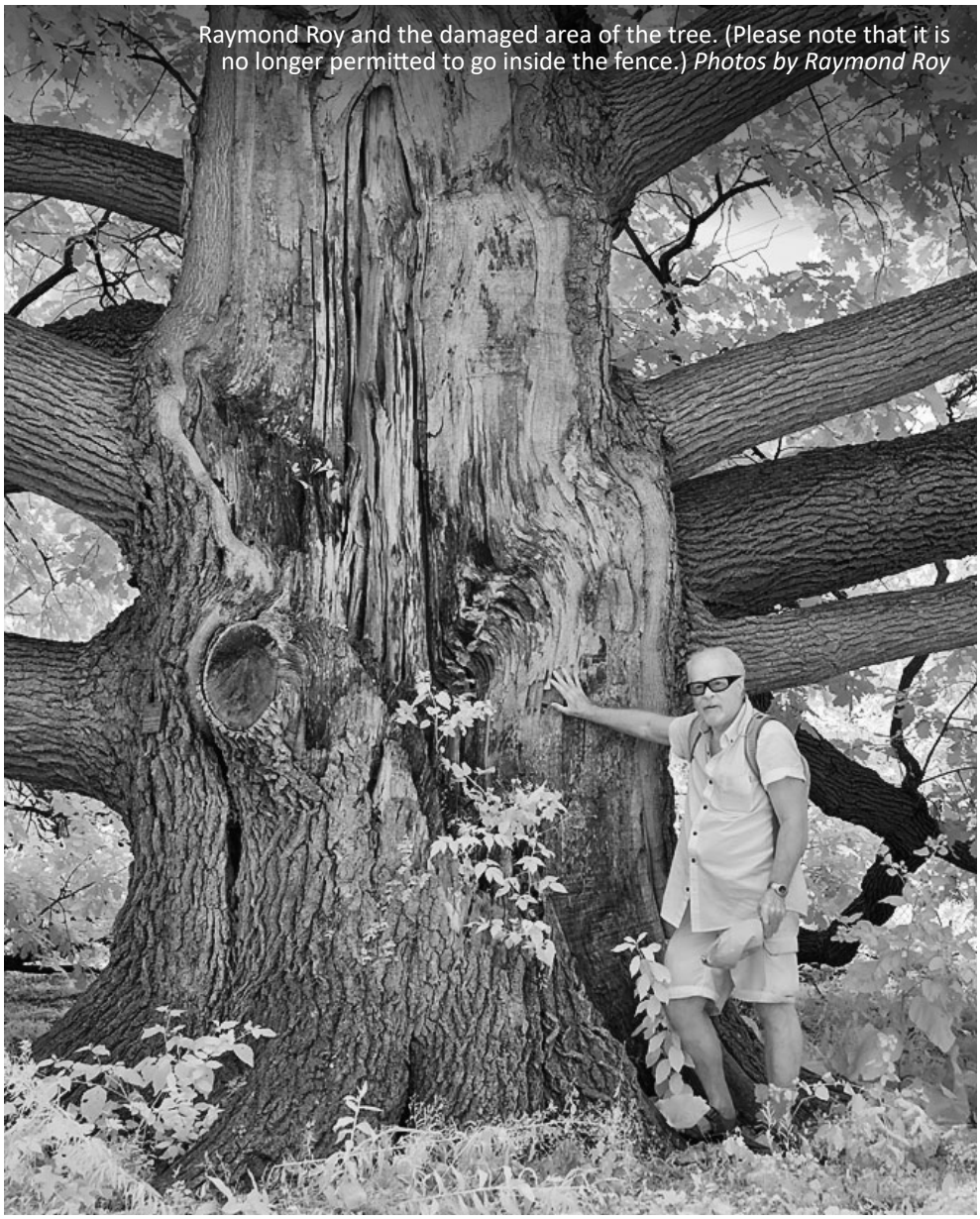

Due to technical reasons, tree stresses are hard to measure. But a hefty horizontal branch over 10 metres in length could exert a force of tens of thousands of Newtons on the tree. Now multiply that by the number of long branches that merge into the trunk in the same general area and you get an idea of the work this tree is doing!

**THE INJURY**

A severe windstorm in September 2017 did a lot of damage in this part of Ottawa. One tree was reported to have fallen on a woman at the nearby Ottawa Hospital Civic campus. The Bebb's Oak was hard hit by the storm. Its leaf-covered branches were pummeled until they snapped. The tree lost some large limbs on its north side, pulling away about a third of its trunk.

Agriculture and Agri-Food Canada were faced with making a decision about the tree's fate. A tree expert was called in to assess its soundness using tomography (an imaging technique like a CT scan) and other methods. Based on the expert's report, AAFC decided against removing the tree. Instead, they erected the fence around it to protect the public from falling limbs.

Since that time the tree itself has been carrying out normal "repairs", i.e., working to grow bark around the outside of the injured area of the tree. This damaged area is very large, however, and open to fungi which eventually cause decay and loss of structural integrity. Another concern is the unbalanced loads on opposite sides of the tree. But so far the tree has been up to the challenge.



Raymond Roy and the damaged area of the tree. (Please note that it is no longer permitted to go inside the fence.) *Photos by Raymond Roy*

**THE SPECIES QUESTION**

Hybrids are hard to classify because their visible characteristics can vary, ranging between two or more different species. For example, some Bebb's Oaks look closer to White Oak than Bur Oak. Conversely the tree in the Arboretum looks much closer to a Bur Oak; so much so, that some have questioned whether White Oak is the other parent species.

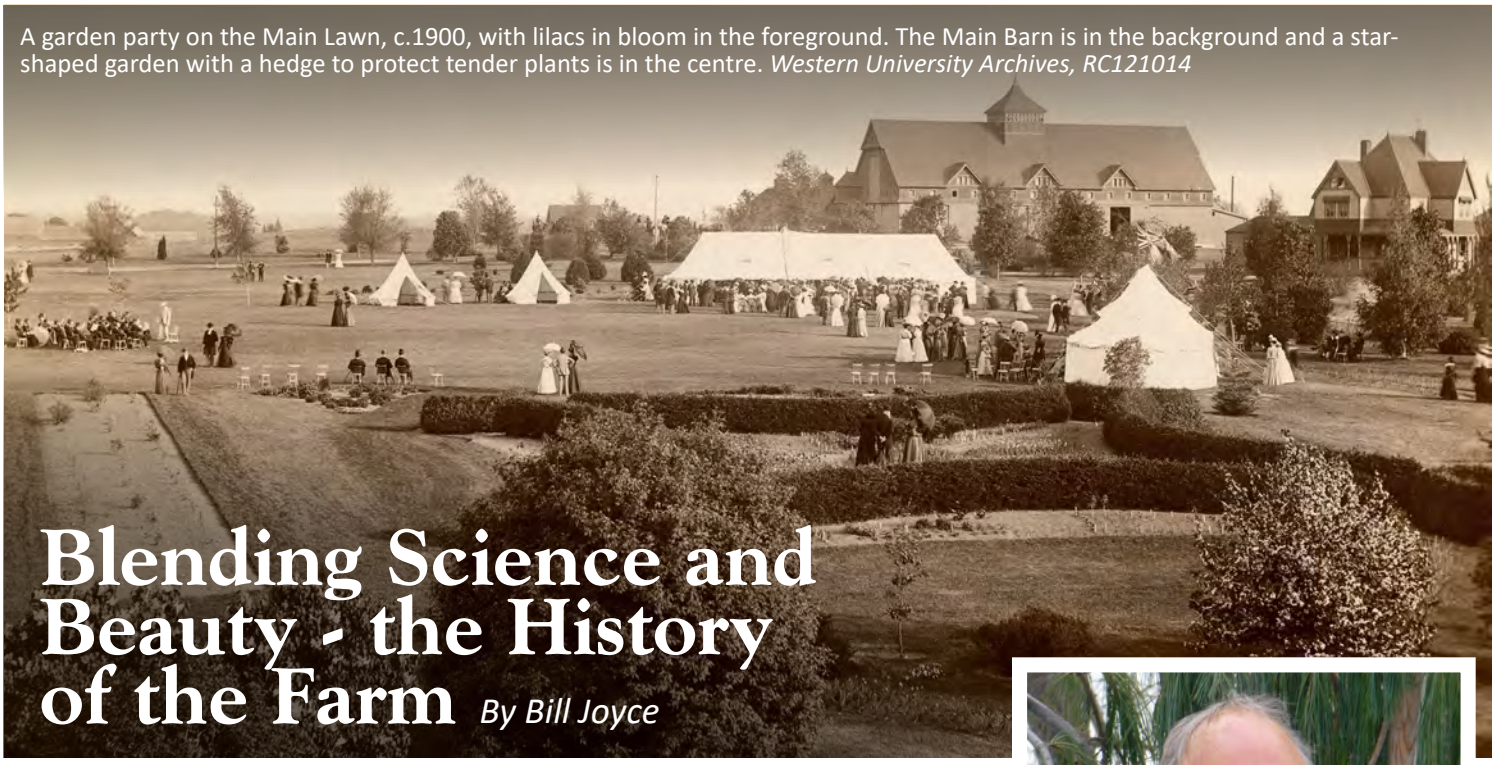
It's not possible to determine a tree's parents exactly based on leaf and fruit shape, and genetic testing is the only conclusive tool. As it happens, Natural Resources Canada was in the process of carrying out genetic testing of some trees including oaks, so AAFC asked if they could look at the Bebb's Oak. Preliminary results indicate that this tree is closer to a Bur Oak than its second parent. The second parent is still uncertain at this point, although it's certainly in the white oak group of species. The closeness to Bur Oak may be due to generations of crossbreeding, or other genetic reasons.

**THE HEIRLOOM**

The tree also marks a very personal story, as a plaque was placed on it over 20 years ago in honour of Ardeth Wood, a young graduate student who, tragically, was murdered. Reading this plaque provides a poignant reminder of mortality.

The Bebb's Oak is undoubtedly special. It has been called Ottawa's most storied tree, and its heritage goes beyond genes. Somehow its injury serves to heighten its allure – like being able to see the muscle and bones of an athlete in the open. It's a sculpture in the Arboretum.

*Eric Jones, leader of the Arboretum volunteer team, is co-author of the book Pathways to the Trees at the Central Experimental Farm, which is available on the Friends' website.*



A garden party on the Main Lawn, c.1900, with lilacs in bloom in the foreground. The Main Barn is in the background and a star-shaped garden with a hedge to protect tender plants is in the centre. *Western University Archives, RC121014*

# Blending Science and Beauty - the History of the Farm

*By Bill Joyce*

The 2025 Friends of the Farm Speakers Series concluded on October 22 with a presentation from Blaine Marchand entitled "The Central Experimental Farm: a History." Check out his PowerPoint show here.

Blaine's prose and poetry will be familiar to readers of this Newsletter. He has served as a volunteer with the Friends of the Farm since 2011. A past Director of the Ornamental Gardens, he continues to give his time as a member of the Peony Team. His attachment to the Farm goes back considerably longer. He recounted childhood memories of the Farm and recently discovered that his maternal great-grandfather was a gardener at the Farm in the early 1900s.

To begin his talk, Blaine took the audience back to the Canadian context of the 1880s—an agricultural economy in recession—and the establishment of a network of experimental farms to conduct research into new farming techniques and share this information with farmers. Agriculture Minister John Carling appointed Willian Saunders as director of experimental farms.

Blaine described how the Central Experimental Farm was designed to harmoniously integrate administrative, scientific and functional barns and farm buildings, all within a beautiful landscape. He explained the mandate of the Farm to develop better science-based farming practices, and how the results of the research were widely distributed.

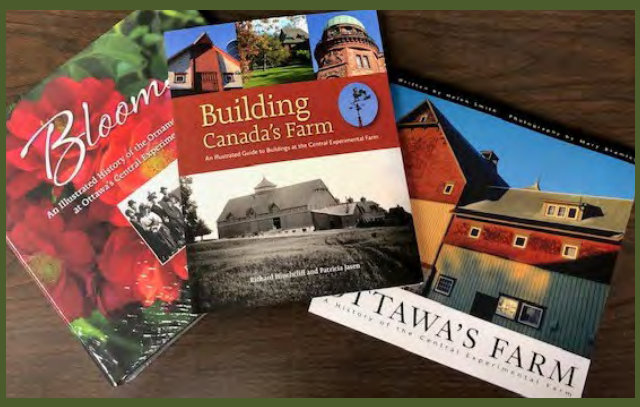
The Farm became a National Historic Site in 1998, and the important scientific research, experimentation, and practical verification has continued.

Blaine concluded his talk discussing each component of the present-day Ornamental Gardens and Arboretum. Each of these spaces is a beautiful spot to enjoy the gorgeous trees and flowers, but together they are more than that—they are also a portal that allows visitors to peek back in history at the creative work by the Farm's renowned researchers and dedicated staff.

*Bill Joyce is Office Manager for the Friends of the Farm.*

Blaine Marchand. *Polly McColl*

## FOR MORE HISTORY OF THE FARM …




Living at the Farm in the early days is just one of many aspects of the history of the Farm described in fascinating detail in the Friends of the Farm book entitled *Ottawa's Farm.* (Click to find it at the Friends' website boutique.)

The buildings at the Farm have played a key role in the aesthetics of the landscape as well as meeting the ongoing functional needs of scientists. The Friends of the Farm book *Building Canada's Farm* introduces the heritage buildings and some of the renowned research that has been conducted in them.

Gorgeous photographs—archival and contemporary—illustrate the history of the Farm's Ornamental Gardens in the Friends book *Blooms*; from the first beds established by William Saunders to the peony, rose, iris, lilac, annual, perennial, and other garden areas we enjoy today.

'Lobo' apples, Ottawa, 2025. *R. Hinchcliff*

# Apples from the Central Experimental Farm

*By Richard Hinchcliff*

'Sunpunch' is a new apple expected to arrive in Ontario stores sometime over the next couple of years. With the gold-orange-red colour of its skin and a long shelf life, it is claimed to be "radiating sunshine all year long."

The new variety comes from Agriculture and Agri-Food Canada's Summerland, B.C. Research Centre, which has been introducing new apples since 1924. 'Spartan' is one commercially successful variety from the Centre.

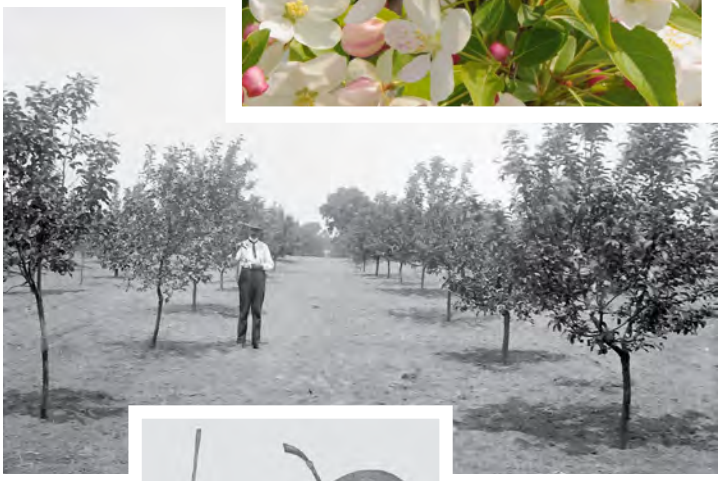
But long before Summerland began its apples, many new varieties were being introduced at the Central Experimental Farm.

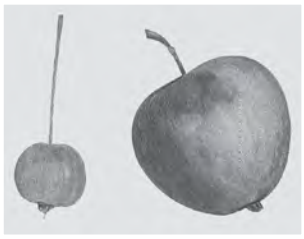
Apple breeding at the CEF was intended to give viable and rewarding options for apple growers, both commercial and private. Experiments fell into two groups—those designed to find hardy apple varieties that would grow in prairie provinces and those that sought new dessert varieties for growers in eastern Ontario and Quebec.

## HARDY APPLES FOR THE "GREAT NORTHWEST OF CANADA"

Settlers coming to Canada often brought apple seeds or seedlings with them, and in many parts of the country were soon able to enjoy a fresh apple. William Saunders, the first director of Canadian experimental farms, wanted newcomers to be able to grow their own apple trees wherever they settled across the country. Testing varieties of apples for hardiness became one of the Farm's research goals. "More than 200 of the hardiest sorts of cultivated apple trees obtainable in northern Europe and other northern countries were thoroughly tested," wrote Saunders, "especially at the experimental farms at Brandon, Manitoba, and at Indian Head, Saskatchewan … but in no case were any fruits produced."[1]

Saunders hoped, through breeding, to add hardiness to the size and appeal of common apples. He asked the Royal Botanic Gardens in St Petersburg, Russia, to ship him seeds of a hardy Siberian crabapple *(Malus baccata)*, which arrived in 1887. In a nursery at the Farm in Ottawa, he grew young trees from this seed and in 1890 and 1891 sent specimens to the experimental farms in Brandon, Manitoba and Indian Head, Northwest Territories, where they proved to be hardy.





TOP: Siberian crabapple *(Malus baccata). R. Hinchcliff* MIDDLE: William Macoun in the apple orchard. *LAC, Dept. of Agriculture fonds, 1993-239.* BOTTOM: Size comparisn of Siberian crabapple (left) with Saunders hybrid 'Columbia'. *CEF Annual Report, 1904.*

By 1894, he had enough varieties of the common apple in the new orchard at the CEF to begin his breeding experiments. He used the pollen from these varieties, such as 'Tetofsky', 'Duchess', and 'Wealthy', to fertilize the Siberian crabapple. A Siberian crabapple is tiny, about as big as a good-sized pea. The fruit resulting from these initial crosses were somewhat larger—about an inch to one-and-a-half inches in diameter. Two of the hardiest, determined by tests at the experimental farms in the prairies, were 'Osman' and 'Columbia'.

These initial hybrids were used in later crosses by Saunders and, after his retirement in 1911, by William Macoun. The most promising were sent to the research stations in the prairie provinces for testing. Meanwhile, those stations were building up their own orchards. In 1923, Macoun reported that the Morden, Manitoba station had "what is believed to be the best collection of hardy fruits in America, so that improvement work may proceed on the prairies for the prairies." Including Morden, there were eight Agriculture Canada research farms or stations in the prairie provinces, and they each began their own breeding programs. Also, breeders at universities and among the general population got into the race to find the perfect prairie apple.

The search became one of "almost frenzied zeal … It is evident that a kind of 'applemania' took hold of the prairie region, starting in the 1920s and continuing through the hard years of the 1930s."[2] But it was without success. "After the Second World War the impetus for the search had diminished, and it was generally considered that fruit growing should be left to the milder regions of the country. In short, it was far easier to ship apples into the prairie market than to attempt to establish commercial orchards on the prairies."

Although Saunders' original goal of having a good eating apple at prairie orchards proved elusive, his hardy hybrids were essential in later experiments as breeding parents or rootstock. They were also grown

for their own sake for juice, preserves, or as ornamentals. The University of Saskatchewan's Fruit Program continues to seek and promote prairie-hardy dessert apples.

### NEW DESSERT APPLES FOR GROWERS IN EASTERN ONTARIO AND QUEBEC

William Macoun was Saunders' protégé in horticulture, hired by him at age 18 and given increasing responsibility until appointed Chief of the Horticulture Division in 1898. In that year, there were between 400 and 500 named varieties of apples in the orchard at the Farm, including many from Europe. They were being used in Saunders' program of hardy apple breeding, providing the pollen to be dabbed onto the stigma of the flower of the Siberian crabapple.

Macoun realized that with all those trees in the orchard "all sorts of combinations of characteristics would be taking place by natural pollination and that the chances of obtaining some good seedlings by sowing seeds from some of these varieties would be very great."[3] He saw an opportunity to find new dessert apples for the region's growers that were earlier or later ripening than common varieties like McIntosh. Thus, he saved and germinated seeds of apples in the orchard, choosing the best-flavoured, highest-quality, hardy varieties.

Since each apple seed is unique, there is no guarantee that a seedling has the same characteristics of its mother plant. If five seeds from a McIntosh apple, for example, were sown and the seedlings planted, the result would be five different varieties of apple tree, with or without characteristics of a McIntosh.

The seedlings that grew from the seeds that Macoun had collected were planted out over the years until about 2,000 trees were planted, "this being all we had room for." The results were good: 1211 bore fruit, 378 were propagated for further testing, and 99 were named.

## 'LOBO'

In 1898, Macoun sowed McIntosh apple seeds and planted seedlings in the orchard in 1901. One of them, which produced fruit for the first time in 1906, was promising, so he named it 'Lobo' after the wolf in Ernest Thompson Seton's nature story and distributed it to experimental farms and research stations for testing. It proved successful and, in 1923, won the American Pomological Association's silver medal for superior merit in a new introduction. Reporting on the award, the Ottawa Journal wrote: "The 'Lobo' is an apple very similar to the McIntosh, but is ready for use about a month earlier ... It has proved very promising not only in the provinces of Ontario and Quebec but in the State of New Jersey, where it has been fruiting for several years."[4]

'Lobo', painted by Faith Fyles, Botanical Artist, Horticulture Division. *Ingenium, 872404.*

Canadian Bob Osborne in his 2022 book entitled Hardy Apples: Growing Apples in Cold Climates noted that the 'Lobo' "is slipping in popularity as newer cultivars steal the spotlight, and the world gives short shrift to the older standby … It is a lovely apple that is gradually slipping into the assisted living quarters for retiring apples." Nevertheless, it was offered by local growers at farmers' markets and grocery stores in Ottawa in the fall of 2025 and continues to be enjoyed more than 125 years after its seed was first sown at the Central Experimental Farm.

## 'MELBA'

'Melba', painted by Faith Fyles. *AAFC Bulletin 55, 1926.*

Another McIntosh apple seed that Macoun sowed in the fall of 1898 and planted out in 1901 grew into a tree that produced fruit for the first time in 1908. Determining that it was promising as a commercial apple, he named it 'Melba' for the Australian opera singer Dame Nellie Melba, who performed in Ottawa in 1915 on a Canadian tour. In 1920 Macoun reported that the apple "appears to be finding a place in commerce. It is a very beautiful, high quality, early apple of good size."

"Undoubtedly the highest-quality early variety grown in Canada," according to a 1975 bulletin from Agriculture Canada, "this apple has been planted heavily. It is a short-season variety desirable for local-market and roadside-stand trade. The attractive fruit resembles McIntosh, being washed and streaked with red, and it is medium to above average in size. The tree is vigorous, hardy, and an early bearer."[5]

Unlike 'Lobo', it isn't seen for sale any longer in Ottawa and has presumably slipped into the "assisted living quarters for retiring apples."

## 'SANDOW'

In the fall of 1898, Macoun saved a seed of a 'Northern Spy', an apple that had been popular since it was discovered in New York state earlier that century. The seed germinated, a seedling was planted in the orchard in 1902, and the tree first fruited in 1911. Named 'Sandow' for a then-famous strong man, it was described in 1928 as "a good dessert apple. Is particularly promising as a winter apple in New Brunswick."

'Sandow' garners high praise almost a hundred years later from Osborne, owner of a nursery in New Brunswick: "Sandow is superb as both an eating and culinary apple. Its flavor is a unique set of aromatics that places Sandow in a class by itself. I think Sandow is one of the most intriguing flavors among apples .... Though Sandow will never become an important commercial cultivar, let us hope it will still be grown in smaller orchards and backyards. Those who have bitten into a fresh ripe fruit or made a pie with it most often become instant converts."[6]

The Sandow Farm in New Brunswick specializes in its namesake apple.

'Sandow' apples. *Bob Osborne, Hardy Apples, 2022.*

Apple picking at the Central Experimental Farm, 1961. *LAC, 1B/DAP/15A-20*

APPLES

MELBA

The highest quality early eating apple grown in Canada, a McIntosh seedling, originated in Ottawa.

6 Qt. Basket, Fancy . . . . 85c

1 Bushel Basket, Fancy . . $3.50

Other apple varieties available later: Joyce, Lobo, McIntosh, Cortland, Wolf River, Lawjam Spy, Talman Sweet, Russet, Sandow, Hyslop and Dolga Crabs.

Store hours:
Monday to Saturday — Noon to 8 p.m.

APPLEHILL ORCHARDS
PRESCOTT HIGHWAY 16
½ Mile Past Intersection of Woodroffe and Prescott Highway 16

Apples for sale in Ottawa, 1965. *Ottawa Journal, September 2, 1965*

### MORE THAN 200 VARIETIES

Macoun named many other new apple varieties, some of which were commercially successful, such as 'Joyce' and 'Atlas'. "Whereas in 1887, when the work was begun, there were not more than five or six hardy, long keeping apples available to the fruit growers," wrote Macoun in 1923, "there are now, mainly as a result of the work at the Central Experimental Farm, more than 200 long keeping varieties under test at Ottawa."

Unfortunately, confusion arose among growers, and stores resorted to selling "Apples" rather than a particular variety. In 1926, Macoun clarified his goals: "It is not the purpose to encourage the planting of a large number of new varieties in a commercial way, as there are too many sorts already, but it is expected that some of the best of these new sorts will gradually take the place of the older ones." In the 1930s, the Farm began waiting until after selections had been thoroughly tested before giving them a name.

### APPLE BREEDING AFTER MACOUN

During the 1920s, apple breeding work by the Horticulture Division was conducted under Macoun's supervision by Malcolm Davis as assistant in charge of pomology. After Macoun's death in 1933, Davis became Dominion Horticulturist and in 1936, he passed responsibility for pomology to Donald S. Blair, who had begun work at the CEF in 1932. Through controlled crosses, Blair had success in finding early-ripening, high-quality apples. Using 'Melba' as one parent, he selected, tested, and named 'Ranger' and 'Caravel'. His colleague Lloyd P.S. Spangelo selected, tested, and named 'Quinte'. They were winter-hardy trees with high-quality fruit, which ripened five to six weeks before 'McIntosh'. [7]

These three new varieties took the total number of apples and crabapples bred in the Horticulture Division at the Central Experimental Farm to 333. Most had been named by Macoun on the promise of success, rather than on the result of rigorous testing. Given the length of time between sowing a seed and commercial success—Macoun estimated it took 40 years—he was keen to contribute names to likely candidates. He didn't live to see the outstanding success of the one he named 'Lobo', for example.

To help test selections made in Ottawa (as well as to conduct other research), a new station was established in 1944 in Smithfield, Ontario, a few kilometres from Trenton. Of its 80 acres under cultivation, 35 were set aside for long-term apple experiments.[8] It operated as a unit of the CEF's Division of Horticulture under the direction of Blair. He and Spangelo conducted apple, strawberry, and raspberry variety testing there. Spangelo started to develop a series of hardy, hybrid, seedling apple rootstocks suitable for Canadian orchards. He also began a project to find commercial apples that were scab-resistant. Smithfield provided the space needed for the seedlings generated by these projects.

Blair died suddenly in 1959 and in the following year Smithfield became an independently operated experimental farm. Meanwhile, the fruit and vegetable research program at the CEF was being gradually phased out. Spangelo became head of the Beaverlodge Research Station in Alberta in 1969 and responsibility for apple research was passed from Ottawa to Smithfield and the Saint-Jean-sur-Richelieu Research Station in Quebec. This ended 80 years of apple research at the Central Experimental Farm.

*Continued on page 12...*

### FOOTNOTES

[1]William Saunders, "Progress in the Breeding of Hardy Apples for the Canadian Northwest," Bulletin No. 68, Department of Agriculture, March 1911.

[2]Roger Vick, Edible Apples to 1990: as *Grown in the Canadian Prairie Provinces*, Friends of the Garden, University of Alberta Devonian Botanic Garden, University of Alberta, 1991.

[3]W.T. Macoun, *The Apple in Canada: its Cultivation and Improvement*, Bulletin No. 86, Department of Agriculture, 1916.

[4]"New apple at Farm wins highest award," *Ottawa Journal*, Nov 14, 1923.

[5]A.D. Crowe, "Apple Growing in Eastern Canada," Agriculture Canada Publication 1553, 1975.

[6]Bob Osborne, *Hardy Apples: Growing Apples in Cold Climates*, Firefly Books Ltd., 2022.

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[8]Agriculture Canada, "Smithfield Experimental Farm, 1944-1985," Historical Series No. 26, 1986

**WHERE WERE THE TREES?**

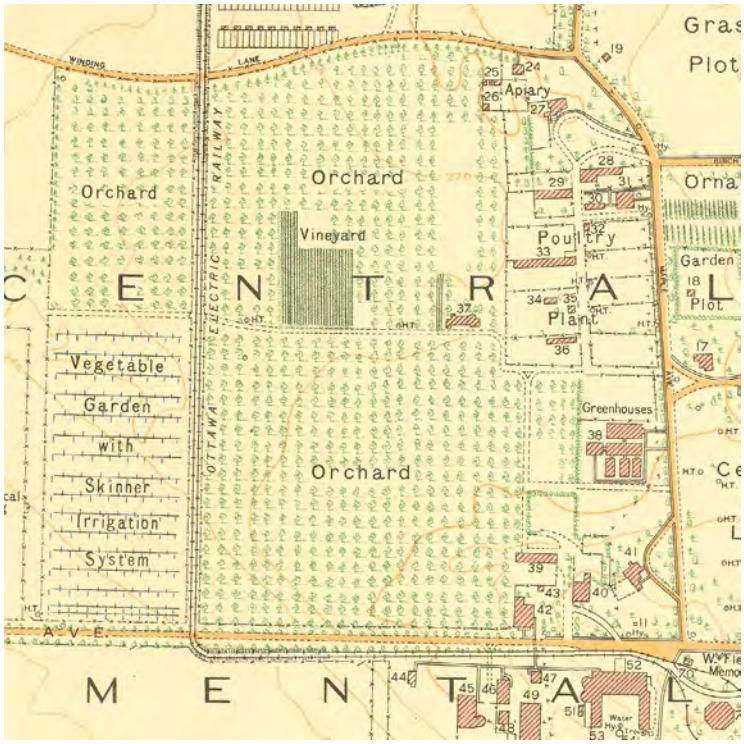
Where were the thousands of apple trees at the Farm? The site was chosen initially by William Hilborn, who was appointed as first chief of the horticulture division by William Saunders as soon as the Farm began in 1886. Knowing he was going to be busy travelling across the country getting the other four new experimental farms going, Saunders gave instructions to Hilborn to plan an orchard and prepare for planting the following spring.

In his report for 1887, the first full year the Farm was in operation, Hilborn wrote that "a fine piece of sandy loam was selected for the orchard; it was manured early in the season, well ploughed and the soil got into good condition for planting." By the end of that year, he wrote, 903 apple trees had been planted, with 297 varieties, of which 174 were from Russia and other parts of Northern Europe.

The location chosen was between Elm Avenue (now the NCC Driveway) to the south and Winding Lane to the north. By 1904, apple orchards covered 28 (11.3 ha) of the 42 acres devoted to the testing of fruits and vegetables.

Most of the orchard area at the Farm indicated in a 1926 map (see detail) was devoted to apples. Research began to be phased out in the 1960s, and by 1966 orchard acreage was reduced by about a half (see 1966 aerial photo). It was completely removed by the early 1970s.

LEFT: 1926 Map of the Farm (detail). Winding Lane is north, Maple Drive is east, and Elm Avenue (now NCC Driveway) is south. *AAFC* | RIGHT: Aerial photo, June 17, 1966. *NAPL, A30013-21*




**EDITOR:** Richard Hinchcliff
**ASSISTANT EDITOR:** Joan Butcher
**DESIGN:** Kat B. Design Studio | www.katbdesign.com
**PRINTING:** Nancy Poirier Printing
**CONTRIBUTORS:** Christina Fiedorowicz, Yves Garcia, Eric Jones, Bill Joyce
**TRANSLATOR:** Lise Anne James
**COVER HEADER IMAGE:** Raymond Roy

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info@friendsofthefarm.ca | 613-230-3276 | CHARITABLE NUMBER 118913565RR0001
Building 75, Central Experimental Farm Ottawa, ON K1A 0C6

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