les amis de la ferme
friends of the farm

Friends of the Central Experimental Farm

Spring 2017 Newsletter Volume 29 No. 2

Leaf Out in the Arboretum

By Zoe Panchen

Zoe Panchen

Ginkgo Tree *(Ginkgo biloba)* leafing out, May 14, 2012

In 2012, I was invited to join a team of researchers from around the world monitoring leaf out times of woody plant species at botanical gardens and arboreta in Canada, China, Germany and the U.S.A. We were looking for patterns in leaf out times. Across the eight gardens/arboreta, we monitored about 1,600 species. In the Central Experimental Farm Arboretum I have been monitoring almost 200 species for the past five years. In this article I summarise findings from our 2012 and 2013 leaf out records with a special focus on the woody species in the Arboretum and my five years of observations.

My first introduction to the Arboretum was actually during the Winterlude Triathlon when I skied through the trees. At the time, I was focused on getting to the finish line and really didn't get to appreciate the trees I was racing by. My second introduction, when I was enrolled in Algonquin College's Horticulture Program, was far more in depth but still conducted at a rapid pace. On Saturday mornings we walked briskly through the Arboretum stopping frequently to learn about the myriad of trees and shrubs that could be used in an Ottawa area garden landscape.

Ken Farr, the dendrologist for John Laird Farrar's excellent book *Trees of Canada*, taught the courses, which we affectionately called Woody I and Woody II. These two courses inspired my love of trees. So it was a delight to be back in the Arboretum studying the leaf out of the woody plants at a more leisurely pace. We defined leaf out as the date on which leaves on at least three branches of the tree or shrub had unfurled to the point where their final shape could be seen.

Spring in the Arboretum

Here in Ottawa we often joke that if we blink we will miss spring, so it was quite surprising to see that in 2012 it was almost two months (59 days) from the first species leafing out to the last species leafing out. In 2013 and 2014 I was unable to monitor the last few species leafing out, but in 2015 and 2016 the leaf out start to finish was a week and a half shy of two months, still quite long at 49 and 47 days respectively. At the Arboretum the first woody species leaf out usually about the second week in April, but in 2012 it was the last week in March. There were some very warm days in early spring 2012 and perhaps this was the reason for the early start to leaf out that year.

Deciduous species such as maples and oaks are not the only species that leaf out in spring—evergreen species such as pines and spruces also produce a flush of new needles in spring. However, deciduous species tend to leaf out earlier than the evergreen species. The pine trees (*Pinus* sp.) at the Arboretum are always the last to leaf out. There are likely two different survival strategies at play here; the deciduous species need to leaf out early in order to start photosynthesising but risk damage by a late frost, while the evergreen species can continue to use their leaves/needles from previous years to photosynthesise and in so doing can avoid frost damage by leafing out later.

Continued on page 3

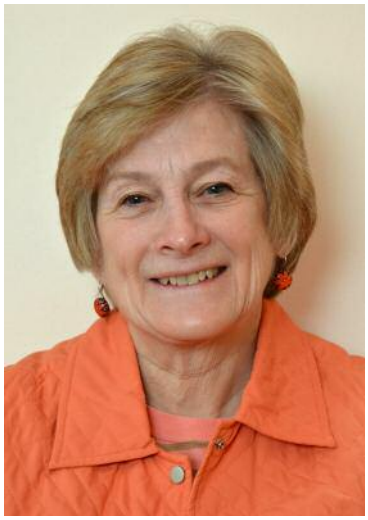
Letters to Minister McKenna and NCC on pages 8 and 9

President's Message

I keep thinking that the winter months should be a quiet time for the Board—as it is for the gardens. It never seems to work out. One issue on our minds is continuing encroachment on the Farm. Compared with the hospital, the Baseline Road transportation corridor is a very small encroachment and could result in a positive shelterbelt for those fields. However, it is one more source of development on this designated National Historic Site.

It is impossible to argue against a hospital or public transportation. We don't and aren't. These decisions are made and we certainly won't oppose them. But we do wonder if these are truly the only solutions for those crucial needs and whether the Farm will continue to be an easy source of land for future development. As you will see (on pages 8 and 9), we have written to government officials asking for their help in increasing the protection of this amazing public garden, national historic treasure, green space and research facility.

The other item the Board has been working on is moving our Annual General Meeting (AGM) from September to April, a move suggested by a Board member at our last AGM. While having the AGM in September after the bulk of gardening is finished is



Ken Young

Judy Dodds

appealing, it isn't an efficient way to review our finances.

Moving the AGM sounds easy but in fact it takes a bit of work. We reviewed our by-laws to make sure it's possible–it is. And to see if we need to make other changes–we do. The terms served by the current Board of Directors will expire in September of the appropriate year. We recommend moving them to the appropriate following April. Our members must make these decisions, so we will be recommending you approve the following:

Moved that a one-time exemption of By-law 7.2, "No member of the Board of Directors shall serve more than six consecutive years," as it would apply to currently elected members of the Board of Directors, be approved. Those currently elected Board members are: Yvonne Ackerman, Judy Dodds, Shirley Ewen, Shari Haas, Kate Harrigan, Richard Hinchcliff, Matthew LaCompte, Jeannine Lewis, Blaine Marchand, Donna Pape and Mary Ann Smythe.

Moved that the terms of current members of the Board of Directors be extended as follows: from September 2017 to April 2018 – Yvonne Ackerman, Judy Dodds, Kate Harrigan; from September 2018 to April 2019 – Shari Haas, Richard Hinchcliff, Matthew LaCompte, Jeannine Lewis, Donna Pape, Mary Ann Smythe; from September 2019 to April 2020 – Shirley Ewen, Blaine Marchand.

In addition to these changes, our own Richard Hinchcliff will be speaking and sharing from his book *"Blooms: An Illustrated History of the Ornamental Gardens at Ottawa's Central Experimental Farm"*. I hope to see you at the Neatby Building at 7:00 pm on Wednesday, April 19.

Judy Dodds

Message de la présidente

Je n'arrive pas à me détacher de l'idée que les mois d'hiver soient des moments de pure tranquillité pour les membres du Conseil d'administration, comme il en est pour les jardins. Pourtant, cela ne semble jamais se produire. Une question qui nous préoccupe est l'empiètement continu sur la ferme. Si l'on compare avec la situation de l'hôpital, le corridor du chemin Baseline représente un bien mince empiètement et pourrait être aménagé en un brise-vent favorable pour ces champs. Toutefois, il s'agit toujours d'une autre source de développement sur cet espace ayant été classé lieu historique national.

Il est impossible d'argumenter lorsqu'il s'agit d'un hôpital ou du transport en commun. Nous ne voulons pas le faire et ne le ferons pas. Ces décisions ont été prises, et nous ne n'y opposerons certainement pas. Nous nous demandons cependant si ce sont vraiment les seules solutions à envisager en fonction de besoins aussi importants et si on se tournera tout naturellement du côté de la Ferme comme la solution facile lorsqu'un bloc de terrain s'avérera nécessaire à l'expansion future. Comme vous le verrez (à les pages 8 et 9), nous avons présenté, aux fonctionnaires du gouvernement, une demande qui consiste à accentuer la protection de ce grand jardin public, ce joyau historique national, cet espace vert et cette installation de recherche que l'on peut tout simplement qualifier d'extraordinaire.

Une autre question qui préoccupe le Conseil actuellement concerne le changement de la tenue de l'assemblée générale annuelle (AGA) de septembre à avril, selon la proposition d'un membre à la dernière AGA. L'idée de tenir l'AGA en septembre est en soi attrayante du fait que le gros du jardinage est terminé, mais ce n'est pas un moment propice pour passer en revue nos finances.

Le fait de déplacer l'AGA peut sembler facile au départ, mais cela exige un peu de travail. Nous avons fait l'examen de nos règlements afin de nous assurer que cela est possible – et ce l'est, et de voir si d'autres changements doivent être apportés – et c'est le cas. Les mandats que servent les membres actuels du Conseil prendront fin en septembre selon leurs années de service. Nous faisons la recommandation suivante : que les mandats se terminent en avril désormais. Nos membres doivent prendre ces décisions et, par conséquent nous soumettons à votre approbation ce qui suit :

Il est proposé que l'on approuve une exemption unique au règlement 7.2 « Aucun membre du conseil d'administration ne pourra servir plus de six années consécutives », laquelle s'applique aux membres élus qui siègent actuellement au conseil d'administration nommés ici : Yvonne Ackerman, Judy Dodds, Shirley Ewen, Shari Haas, Kate Harrigan, Richard Hinchcliff, Matthew LaCompte, Jeannine Lewis, Blaine Marchand, Donna Pape et Mary Ann Smythe.

Il est proposé que le mandat des membres actuels suivants soit prolongé tel qu'indiqué ci-dessous : de septembre 2017 à avril 2018 – Yvonne Ackerman, Judy Dodds, Kate Harrigan; de septembre 2018 à avril 2019 – Shari Haas, Richard Hinchcliff, Matthew LaCompte, Jeannine Lewis, Donna Pape, Mary Ann Smythe; de septembre 2019 à avril 2020 – Shirley Ewen, Blaine Marchand.

En plus de ces changements, l'un de nos membres et auteur, Richard Hinchcliff donnera une causerie et soulignera certains extraits de son livre « Blooms: An Illustrated History of the Ornamental Gardens at Ottawa's Central Experimental Farm ». J'espère donc avoir le plaisir de vous revoir le mercredi 19 avril à 19 h à l'édifice Neatby.

Judy Dodds

Leaf Out in the Arboretum … *(continued from page 1)*

In a similar vein, we found in our study that, on average, shrubs leaf out earlier than trees. We think this may be because shrubs often grow in the understory and hence, if the shrubs leaf out earlier than trees, they can get some good photosynthesis in before the trees leaf out and shade the shrubs.

Leaf out patterns

Woody species leaf out in approximately the same order year after year but what may be surprising is they also leaf out in that same order around the world. The first species to leaf out one year will be the first to leaf out most years everywhere and the second species next and so on all the way to the last species to leaf out will most likely to be the last species to leaf out every year and everywhere. Some of the earliest species to leaf out at the Arboretum are crab apples (*Malus* sp.), larches (*Larix* sp.), false spirea (*Sorbaria sorbifolia*), fragrant viburnum (*Viburnum farreri*) and common lilac (*Syringa vulgaris*).

All woody species trees contain vessels that carry water and minerals from the roots to the leaves. Woody species that produce large diameter vessels in the spring and smaller diameter vessels in the summer develop rings, which can be used to determine the age of a tree, and are referred to as ring-porous woody species. Some woody species, however, produce smaller diameter vessels throughout the spring and summer and have no clear rings; they are referred to as diffuse-porous woody species. Diffuse-porous species generally leaf out earlier than the ring-porous species. We think this is because the larger diameter vessels of ring-porous species tend to get air bubbles (known as embolisms) in them if there is a freeze-thaw cycle. Embolisms can damage the vessels hence it is more prudent for the ring-porous species to leaf out later when the chance of sub-zero temperatures has past.

We also found that some groups of closely related species leaf out particularly early while others leaf out particularly late.

Zoe Panchen

Shagbark Hickory (*Carya ovata*) leafing out, May 14, 2012

For instance, early leafing plants include the rose family (Rosaceae) such as cherries (*Prunus* sp.), apples (*Malus* sp.), spireas and cotoneasters; as do currents (*Ribes* sp.); dipsacales (viburnums, elderberries (*Sambucus* sp.) and honeysuckles (*Lonicera* sp.)); lilacs (*Syringa* sp.); larches (*Larix* sp.); and willows (*Salix* sp.). Groups of species that leaf out particularly late are magnolias; fagales (birches (*Betula* sp.), beeches (*Fagus* sp.), oaks (*Quercus* sp.) and walnuts (*Juglans* sp.)); ashes (*Fraxinus* sp.); catalpas; heathers (Ericaceae); and gymnosperms (pines (*Pinus* sp.), spruce (*Picea* sp.), fir (*Abies* sp.), hemlock (*Tsuga* sp.), junipers (*Juniperus* sp.) and yew (*Taxus* sp.)).

For those who are interested in all the nitty gritty details, the results of the study were published in the scientific journal *New Phytologist* in 2014 (volume 203 pages 1208–1219) in an article entitled "Leaf out times of temperate woody plants are related to phylogeny, deciduousness, growth habit and wood anatomy."

Zoe Panchen researches the responses of plants to climate change. She recently completed her PhD at Carleton University where she studied the impact of climate change on the flowering and fruiting times of Nunavut Arctic plants. She will be a guide on Spring tours in the Arboretum.

Ideas and Tips from Master Gardeners

Here are the 2017 talks by Master Gardeners, to be held from 7 to 9 pm in Building 72, Arboretum, Central Experimental Farm. See friendsofthefarm.ca for more information on each lecture. You can sign up for individual talks or the entire series. Individual talks: $12 members of the Friends, $15 others. Series of four talks: $40 members, $50 others.

April 11 – Pruning: the Good, the Bad, and the Ugly with Laura Moses.

April 25 – Is that a Dandelion or a Dahlia? Gardening for Beginners with Mary Reid.

May 9 – Gardeners, Contain Yourselves: Container and Balcony Gardening with Rebecca Last.

May 23 – Honey, I Shrunk the Lawn: Going Grassless with Julianne Labreche.

Upcoming Events

For more information, visit www.friendsofthefarm.ca or call 613-230-3276.

Volunteer Orientation

- Saturday, April 8, at 9:30 am.
- Free admission.
- Location: Building 72, Arboretum.

Annual General Meeting

- Wednesday, April 19, at 7 pm.
- Guest speaker will be Richard Hinchcliff on "Bloomers are the Craze." Richard is the author of *Blooms*, the new book about the Ornamental Gardens.
- Free admission and free parking.
- Location: K. W. Neatby Building, Salons A & B, Carling & Maple Drive.

Arboretum Tree Tour

- Sunday, May 7, 2 pm.
- "Flowering Trees" with Robert Glendinning and Zoe Panchen.

Friends' Plant Sale

- Sunday, May 14, 9 am to 1 pm, **rain or shine.**
- Enjoy the offerings of specialty growers and plant vendors.
- Master Gardeners of Ottawa-Carleton will be available with free advice.
- Volunteers will help carry your purchases to your vehicles.
- Location: Parking lot beside K. W. Neatby Bldg. at Carling and Maple Drive.
- Free parking on Maple Drive and in the Observatory parking lot.
- Free admission. Donations to the Friends of the Farm gratefully accepted.

Lilac Tour

- Saturday, May 20, 2 pm.
- Enjoy a guided tour of the CEF lilacs with the Friends of the Farm lilac team. Discover the many lilac varieties on display.

- Park at the Agriculture Museum lot and follow the signs.
- Free admission; donations gratefully accepted.

Arboretum Tree Tour

- Sunday, May 28, 2 pm.
- "Tree Leaves of Canada" with Zoe Panchen and t.b.a.

Fletcher Wildlife Garden – Native Plant Sale

- Saturday, June 3, 9:30 am to 12:30 pm.
- Fletcher Wildlife Garden, Prince of Wales Drive south of the Arboretum.
- Volunteers will be on hand to show you where to park and answer your questions.
- Free admission. For information call (613) 730-0714 or e-mail fletcher@ofnc.ca.

Insect Tree Tour

- With AAFC research scientists Christian Schmidt, Henri Goulet.
- Sunday, June 11.

June Blooms (see page 10)

- Saturday, June 10, from 10 am to 2 pm.
- Friends volunteers will offer guided tours of the historic peony, Preston lilac and rose collections at the Ornamental Gardens.
- Author Richard Hinchcliff will be on site to sign copies of the new book *Blooms: An Illustrated History of the Ornamental Gardens at Ottawa's Central Experimental Farm.*
- Free admission. No registration required.
- Location: Ornamental Gardens, southwest of Prince of Wales roundabout.

Used Book Sale

- Saturday, June 24 and Sunday, June 25, from 10 am to 4 pm.
- Choose from thousands of titles.
- Location: Building 72, Arboretum, CEF. Take the east exit off the Prince of Wales roundabout.
- Admission and parking are free at Building 72.

Bus Tour – Destination Ontario 2017

- June 18 - 20. SOLD OUT.
- Includes visits to Toronto Botanical Garden, Edwards Gardens, Point Pelee National Park, Brantford City gardens, and Whistling Gardens.

Victorian Tea

- Sunday, July 30, from 2 to 4 pm. (Will be cancelled in event of rain.).
- More information on website.

Art on the Farm

- Saturday, August 12, from 10 to 4 pm. Rain date: August 13.
- More information on website.

Gardening and Other Opportunities

Come and enjoy at close quarters our very special Ottawa greenspace. Join the Friends of the Farm's volunteer teams this year in the Ornamental Gardens, Arboretum and Merivale Shelterbelt. Young or old, skilled or unskilled, there are opportunities for all.

Gardening begins in early May so get your forms in. To obtain a volunteer form, please visit our website at www.friendsofthefarm.ca/volunteer.htm or call the office at 613-230-3276.

There are also many non-gardening volunteer opportunities for you to apply your skills or learn new ones, work on your own or in a team. For example, we are seeking a volunteer to coordinate our popular annual Art on the Farm event in August.

Please contact us at volunteer@friendsofthefarm.ca. We hope to see you at the Farm!

A Special Place

By Valerie Gourlay

The Rock Garden is a special place
Where trees, rocks, and plants share space
With chipmunks, birds and voles
It even has some groundhog holes,
Our team meets weekly and devotedly
To remove the weeds fastidiously,
We plant and transplant and spread manure
In order to create beauty for sure,
Our leader, Carolyn, has moved away
Annie now leads us most knowledgeably,
Our team I joined three years ago
As gardening in such a pleasant place
All cares and woes does erase,
Take the pathway to guide you through
This shady glen we groom for you
Do come and see and enjoy the space
You'll find the Rock Garden a special place.

Valerie Gourlay is the volunteer for April on the Friends' website.

Yvonne Ackerman: Weaving the Farm into the Fabric of Her Life

By Mary Ann Smythe

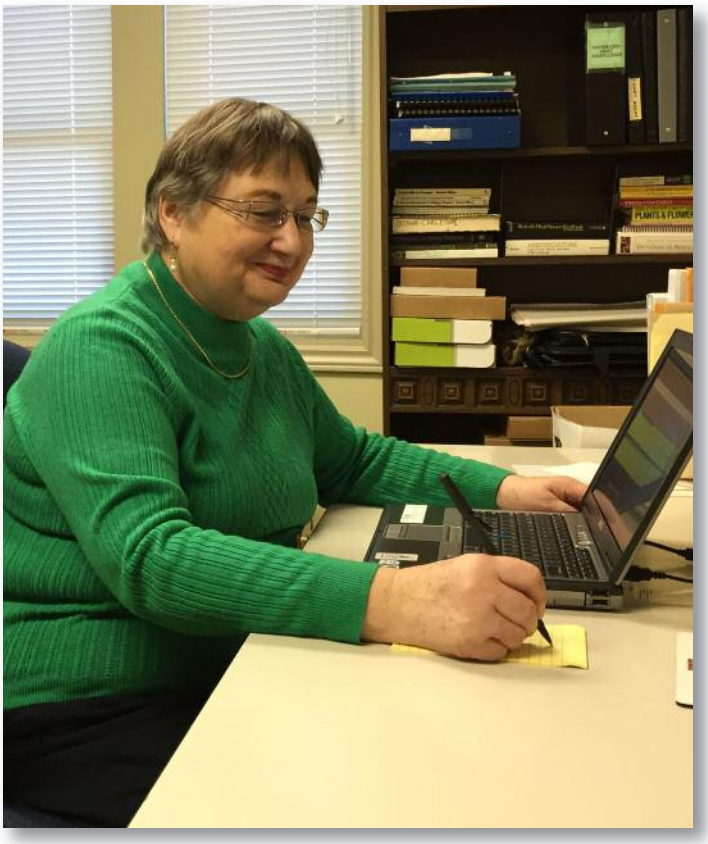
When Yvonne Ackerman was a young girl, she was nicknamed "the gypsy" by her mother. Tracing Yvonne's travels on the map that is her life, it's clear that the moniker fit her to a "T." Belgrade, Manila, Washington, Geneva, Helsinki, Oslo, Nairobi—a sampling of the cities that she called home during her career with the Department of Foreign Affairs (aka External Affairs and International Trade and, more recently, Global Affairs Canada).

Born in Victoria and raised in Regina, Yvonne was first introduced to the travel opportunities at External Affairs when she was just 17. "I was captivated by a recruitment poster that read: 'How would you like to spend New Year's Eve in Cairo?'" Yvonne was hooked; however, there was one big stumbling block—she was a year short of the age requirement. She then headed to Victoria, B.C. at the urging of a friend and, two years later, started the application process.

When Yvonne presented herself for an interview, she caught sight of a feature story in the Star Weekly, a captivating recruitment tool, perhaps. She laughs at the memory of the magazine article "It featured a beautiful bikini-clad woman on a yacht who was a champion marlin fisherwoman. And guess where she got the start to her now charmed life? Working at External Affairs. I couldn't fish and certainly couldn't wear a bikini in public, but I could type and take shorthand." Yvonne's shorthand, however, wasn't quite up to government standards, and she was sent off to practice her skills. The second time was a charm and Yvonne headed to Ottawa to begin her storied career.

In 2005, 39 years and 11 postings later, Yvonne returned to Ottawa. "I always came here between assignments and had always enjoyed the city so decided to call it home. When I retired I didn't have any real plans, I just thought that things would flow into place." And, of course, they have. Yvonne leads a very busy life. She curls, lawn bowls, travels far and away with a colleague from Foreign Affairs, volunteers with Music and Beyond and the Big Soul Christmas Concert, is a member of the Friends of English Theatre, and performs with and is treasurer for the Nepean Songsters. After years of living abroad without a garden to tend, a small garden committee was established at her condominium and she is responsible for one of the beds.

And a big part of Yvonne's life is volunteering for the Friends of the Farm. A "part" that's grown exponentially since she joined in 2005. She originally worked with the Arboretum team—"It was late in the season and the only team with a vacancy"—but later switched to both the Shelter Belt and Macoun Garden at the gentle, but persistent, urging of Polly McColl and Denise Kennedy, leaders of the respective teams. When Yvonne also indicated that she would help at events, she went onto Polly's frequent-caller list, helping at the book sale, the annual Shelterbelt Ceremony and the Victorian Tea. From there, one door opened onto another. Soon Yvonne found herself helping Denise Kennedy (then Director of Membership) with membership and with promoting the Friends at both Farm and community events. She laughs at the remembrance of those early, tentative days. "At first I really didn't know what I was doing." Yvonne was a quick study and in 2013 was invited to join the Board of Directors. She now serves as Director of Membership.



Mary Ann Smythe

Yvonne recently acquired the services of a capable volunteer assistant, Norma Howes-Benoit, to help with membership, and has woven the promotion of the Friends of the Farm into the fabric of her everyday life. "When someone at the Curling Club asked about the Farm, I turned up with an application form and a newsletter. And in November when I volunteered at Homes for the Holidays for Hospice Care Ottawa, I went armed with membership application forms and newsletters, just in case.

"I have travelled around the world and have never encountered a farm in the middle of the city. I enjoy the garden teams and being out in the fresh air—even if my bones sometimes ache afterwards. When I'm at the Farm I'm out in nature and it's easy to forget that we are in the middle of the city. It (the CEF) is a wonderful institution and I try to promote it whenever it comes into conversation."

Mary Ann Smythe is a freelance writer/editor and active volunteer with the Friends.

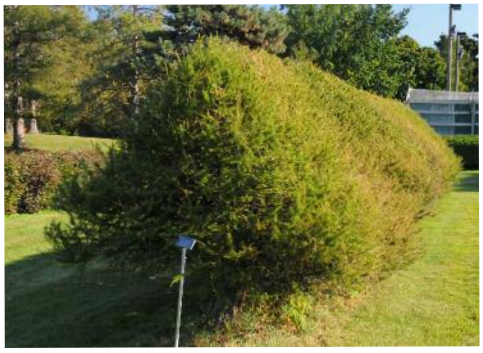
The Farm's Hedge Collection

By Roman Popadiouk

Agriculture and Agri-Food Canada

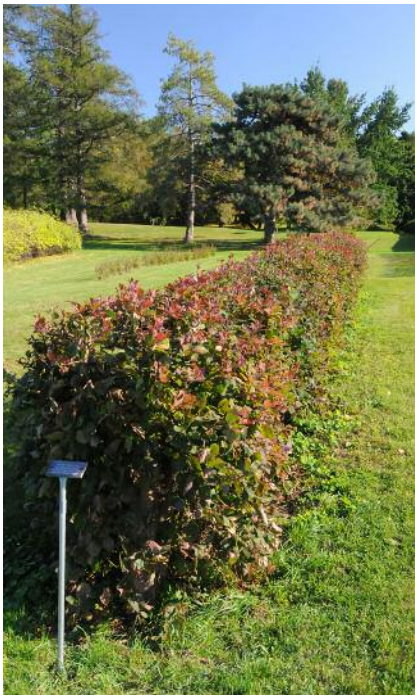
The Farm's hedge collection, 1902.
Photo by Charles Saunders

Hedges, 2011



European Larch *(Larix decidua)*

Highbush Cranberry *(Viburnum trilobum)*



Photos by R. Hinchcliff

Niedzwetzky's Crabapple
(Malus niedswetzkyana)

A very mild autumn with many warm days lasted almost to the end of November last year. Suddenly, in just a few morning hours fall turned into winter. A northern wind layered our first snow on the ground and covered still-not-completely-leafless trees. This first touch of winter happened on a day when a tour of trees and shrubs used in hedges was scheduled. Despite less than cooperative weather, a dozen garden enthusiasts arrived and the tour commenced as planned in the Farm's hedge collection.

In the late 19th century a collection of hedges was created on the campus south of the Dominion Observatory complex. The Farm's semi-rural landscape was ideal to present a variety of trees and shrubs that performed different functions around houses and other buildings, and along roads and lanes. More than 20 tree and shrub species from the Northern hemisphere were used to grow hedges in this collection.

Evergreens

Douglas-Fir, Spruce, and Swiss Stone and Scots Pines are all large evergreen coniferous trees that have a rather rigid, "conservative" growth habit and a symmetric branching pattern. Their prominent main trunks and noticeable layers of thin side branches appear to be difficult material to use to create a green screen around a house. However, beautiful dense hedges 10-15 feet high can exist for decades if these trees are regularly trimmed.

Yew and White Cedar are also evergreen non-flowering trees, but these trees grow slowly and have a chaotic mesh of side branches pointing in all directions. Also they do not grow very tall, even in natural forests. This biological background facilitates the creation of a variety of desired hedge shapes with rectangular or rounded profiles. Also such trees are easy to keep low if someone does not want to obstruct the view over the hedge.

Deciduous trees and shrubs

Deciduous flowering trees and shrubs have more diverse growth and branching patterns because many dormant buds along their stems and trunks can create innumerable generations of twigs to fill up trimmed tree crowns. Of course, opposite (i.e. maples, viburnums) or alternate (i.e. oaks, willows) bud arrangements along stems and branches impose certain limitations on hedge design, as well as on single- or multiple-stem tree architecture.

Beeches, oaks and crabapples can regrow new trunks from their tree base, but predominantly keep their original trunk despite any trimming of top and side branches. Shrub-type trees—viburnums, willows, dogwoods—often produce numerous stems from an early age, but each stem has a relatively short life span and stem maintenance is required.

Leaf Out in the Arboretum

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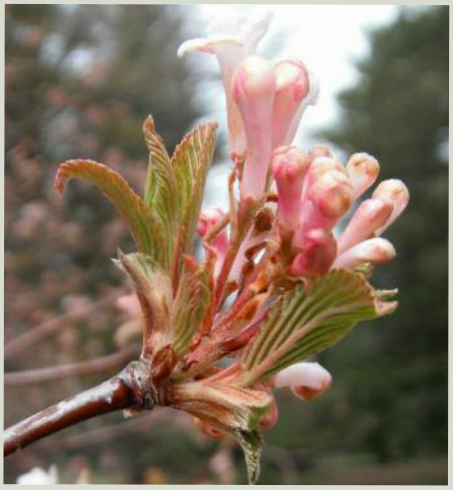
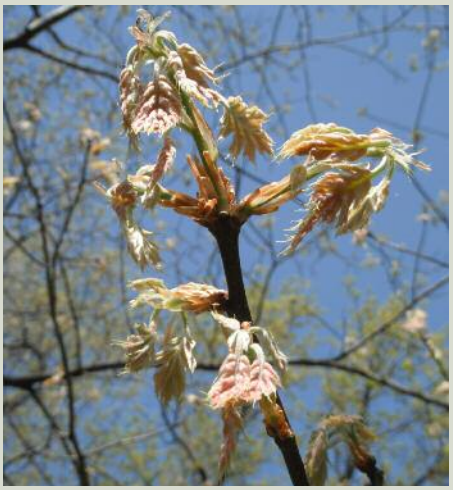


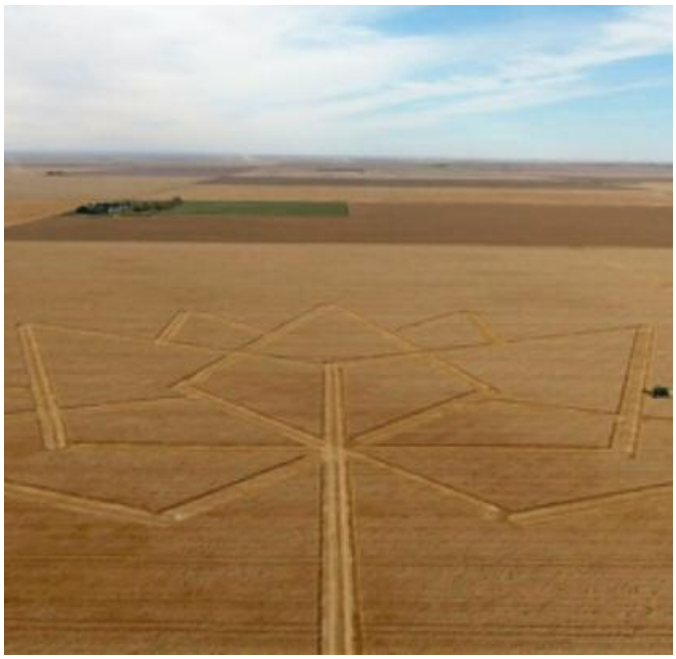
Fragrant Viburnum *(Viburnum farreri)*
leafing out and flowering April 3, 2012



Photos by Zoe Panchen

Black Oak *(Quercus velutina)*
leafing out May 14, 2012

Celebrating 150 Years of Agriculture



AAFC

Canada's 150th logo in Saskatchewan wheat field

(From Agro-info Newsletter, Agriculture and Agri-Food Canada, February 2017)

Celebrations are underway for Canada's 150th and Agriculture and Agri-Food Canada (AAFC) will be joining in on the festivities.

Agriculture has deep roots in our nation's history, and AAFC has been there since the beginning. Did you know that the Department of Agriculture was created on July 1, 1867? At AAFC, we're celebrating 150 years of leadership in the growth, development and sustainability of the Canadian agriculture and agri-food sector.

In the fall of 2016, AAFC employees worked together to produce an innovative video showcasing Canada's 150th anniversary logo cut out in a wheat field in Saskatchewan. This inspiring Canada 150 – It's Just the Beginning video reflects the Canadian prairies, history, farming, culture and Canada's future.

Come celebrate 150 years with us at agr.gc.ca/agriculture150. We'll be updating the page regularly throughout 2017 with videos, events and more, so bookmark us and check back for new content and events. You can also stay connected through Facebook and Twitter as we celebrate agriculture throughout 2017.

The Farm's Hedge Collection …

(continued from page 6)

European Larch, Boxwood

Two stand-alone hedge examples exist in the collection. The deciduous conifer European Larch makes a wind and light transparent barrier almost all year round, but the lightest appearance occurs in winter when these trees lose their light green needles. Evergreen fruit bearing Boxwood keeps its dark green leaves all the time and many thin branches fill a hedge from ground level to the top (which is just a few feet tall). Trimmed trees do not usually flower, however even trimmed Boxwood can have numerous tiny flowers in early spring and not many hedge owners will identify the flowers as the source of this evergreen's honey-flavoured aroma.

All these biologically predetermined growth and branching features have to be considered prior to planting to create the desired green barrier on a property. And do not forget that sunny or shaded, wet or dry, sandy or clayish, all locations have to match a tree's particular tolerance. But this is a separate topic to learn about and the Farm's hedge collection is of little help in this matter because it faces neither soil extremes nor heavy shade.

Dr. Roman Popadiouk, a volunteer with the Friends, has introduced many tour groups to the trees at the Central Experimental Farm.

[The hedge collection is located on the Farm site chosen for the new hospital.]

Letter to Minister McKenna January 29, 2017

Minister Catherine McKenna
Minister Responsible for the Historic Sites and Monuments Board and Federal Heritage Review Office
catherine.mckenna@parl.gc.ca

Dear Minister McKenna:

I am writing to you as President of the Friends of the Central Experimental Farm to urge your department to strengthen the National Historic Site Act, in particular regarding the Central Experimental Farm (CEF). As you know, the CEF was designated a National Historic Site in 1997. An Advisory Council was established in 1999 to ensure public participation in the CEF's management and to safeguard the historic site. A CEF National Historical Site Management Plan was drawn up to provide a framework to balance the CEF's dual role as a National Historic Site and as an active research centre. This plan refers to the cultural landscape of the 400-hectare farm in the heart of the Nation's Capital. It states: "…the Central Experimental Farm has become a symbol of the central role agriculture has played in shaping the country." In addition, the CEF is many other things, including the green lungs of the capital city.

The comments arising from the public consultation by the National Capital Commission on the future hospital are telling indeed. On the proposed Sir John Carling site, it stated that this site's choice would "impact on cultural heritage due to intrusion into the boundary of the Central Experimental Farm National Historic site, proximity to the Rideau Canal UNESCO World Heritage Site and the presence of heritage buildings." The CEF is unique in North America.

Looking toward the future, and wishing to protect the remaining acreage of the CEF from any further intrusion by the Ottawa Hospital and others, the Friends would like to know if the Central Experimental Farm is incorporated into and protected under the Historic Sites and Monuments Act, 1985? If not, are there plans to do so in the near future?

In the Central Experimental Farm National Historic Site Management Plan, there are references to "streetscape treatments that support the special landscape qualities of the Farm for all roadways around and through the site" and "consolidation of parking areas using sustainable approaches, such as soft surfacing and orchard plantings". The plan states: "the widening of roads, particularly parkways, through the Central Experimental Farm should be avoided. Replacement of rural streetscape character with curbs and concrete sidewalks is discouraged adjacent to field areas". Given that the new Ottawa hospital on the Sir John Carling site will necessitate entrances and roadways and that the proposed configuration of the hospital includes 15-20 acres just for parking, will these treatments be honoured? Will the current landscaping along the Prince of Wales Drive, which features heritage trees developed at the CEF, be maintained?

The National Capital Commission plays a critical role in overseeing the planning for national historical sites in the National Capital region. With this in mind, the Friends would like to know if the NCC will be given greater authority so that it can exercise its full authority at arm's length and with full public consultation and that any decisions they reach following consultation are respected.

To provide you with background information on the Friends of the Central Experimental Farm, we are a volunteer organization helping to care for the Arboretum, the Ornamental Gardens and other public areas of the Central Experimental Farm, in partnership with Agriculture and Agri-Food Canada. We have over 500 members, of whom more than 200 are active, providing in excess of 10,000 volunteer hours annually help to maintain the Farm, to ensure the educational benefit and enjoyment of the public, and to promote the Farm's historical significance. While our particular interest is in the CEF, we are concerned about the lack of protection for our national historic sites. We urge you to strengthen legislation so that Canada's national historic sites are not lost. They are very vulnerable under current legislation, and we need to find ways to protect our history and our future.

We look forward to your reply to these questions. Our hope is that a strengthened Historic Sites and Monuments Act will ensure that the Central Experimental Farm, its buildings, fields and gardens, will continue to be enjoyed by future generations of Canadians. It will recognize the important role the Farm has played in the development and settlement of our country.

Yours sincerely,

Judy Dodds,
President, Friends of the Central Experimental Farm

c.c. The Honourable Lawrence MacAulay, Minister of Agriculture and Agri-Foods Canada, lawrence.macaulay@parl.gc.ca
The Honourable Mélanie Joly, Minister responsible for the National Capital Commission, melanie.joly@parl.gc.ca
The Honourable Judy M. Foote, Minister Responsible for Public Works and Government Services Canada, minister@pwgsc.gc.ca
The Honourable Yasir Naqvi, Attorney General, ynaqvi.mpp@liberal.ola.org
Dr. Mark Kristmanson, National Capital Commission, mark.kristmanson@ncc-ccn.ca
Mr. Jim Watson, Mayor, City of Ottawa, jim.watson@ottawa.ca

Letter to National Capital Commission February 7, 2017

Dr. Mark Kristmanson,
Chief Executive Officer, National Capital Commission
202-40 Elgin Street
Ottawa, ON K1P 1C7
mark.kristmanson@ncc-ccn.ca

Dear Dr. Kristmanson,

The Friends of the Central Experimental Farm (FCEF) were very supportive of the NCC process and review of the new site for the Ottawa Hospital. Unfortunately, the decision to choose a site on the Central Experimental Farm (CEF) has prevailed. We believe that the potential impact of this decision on the grounds of the CEF needs to be stated. The specific site chosen for the hospital will challenge the public areas that are an integral part of the history and *raison-d'etre* of the Farm. Public interaction has always been part of the mandate of the Farm, and that objective is reinforced in the National Historic Site Management Plan.

The Dominion Arboretum provides many benefits to residents and visitors to the capital: removing air pollutants, reducing stress, cleaning groundwater, providing a cool retreat, reducing climate change, supporting wildlife and much more. In addition, the Arboretum provides a living historic record of trees planted on the Farm site since 1889.

The Ornamental Gardens are of historic and natural significance to all Canadians, as explained in a new FCEF publication, *Blooms: An Illustrated History of the Ornamental Gardens at Ottawa's Central Experimental Farm*. These gardens comprise unique plant collections found nowhere else in Canada. FCEF volunteers provide thousands of hours annually, under the direction of AAFC staff, demonstrating invaluable community involvement.

The first challenge to both of these areas by the intended development can be seen in the layout plan for the new hospital, including the location of parking areas. Buildings and paved surfaces will be located across Prince of Wales Drive from the Arboretum, changing both sight and sound of the area. The construction will also directly displace many trees and hedges that were planted on the northwest side as an extension of the Arboretum. It's also worth noting that while a number of Farm buildings, i.e., the Dominion Observatory complex and other heritage buildings, will be in the buffer zone between the research fields and the new construction there won't be a similar buffer zone on the east side of the development.

The second significant challenge will come from the re-design of roads and traffic management on the repurposed site. Any widening of Prince of Wales Drive to accommodate increased traffic and emergency vehicles will diminish both the Arboretum and the Ornamental Gardens. Any change to the NCC Driveway, Birch Drive or Maple Drive will have a similar impact. Both will interfere with the intended landscape design as specified in the CEF National Historic Site Management Plan.

A third and most significant threat will come from the precedent that this project will make for future development. New encroachment could come from another border of the Farm, or it could come from the hospital administration's interest in continuous improvement to its facilities.

The Friends of the Farm are dedicated to preserving and enhancing the public areas of the Farm. We believe that the NCC should be very specific in its guidance on this project, drawing on the NHS Management Plan, the CEF Advisory Council, and all resources available to protect these invaluable grounds. The NCC will be in a unique position to influence the design and construction so as to minimize the damage and additional encroachment on this National Heritage Site. We urge you to exercise your full oversight responsibilities to ensure the Farm is preserved for all Canadians.

Yours sincerely,

Judy Dodds,
President, Friends of the Central Experimental Farm

c.c. The Honourable Mélanie Joly, Minister responsible for the National Capital Commission, melanie.joly@parl.gc.ca
The Honourable Lawrence MacAulay, Minister of Agriculture and Agri-Foods Canada, lawrence.macaulay@parl.gc.ca
The Honorurable Catherine McKenna, Minister Responsible for the Historic Sites and Monuments Board and Federal Heritage Review Office, catherine.mckenna@parl.gc.ca
The Honourable Yasir Naqvi, Attorney General, ynaqvi.mpp@liberal.ola.org
Mr. Jim Watson, Mayor, City of Ottawa, jim.watson@ottawa.ca

les amis de la ferme
friends of the farm

The Friends of the Central Experimental Farm is a volunteer organization committed to the maintenance and protection of the Ornamental Gardens and the Arboretum of the Central Experimental Farm in Ottawa, Ontario, Canada. Membership for the Friends of the Farm costs $30 per year for an individual, $50 per year for a family, $25 for seniors/students. Payment by PayPal available on website. Membership fees support the many projects of the Friends of the Farm.

The Friends of the Central Experimental Farm publish the Newsletter (ISSN 1702 2762) four times a year (Winter, Spring, Summer, Fall). All members receive the newsletter and it is sent by regular mail or e-mail. Editor: Richard Hinchcliff. Assistant Editor: Barbara Woodward. Design & Printing: Nancy Poirier Printing. Contributors: Eric Jones, Blaine Marchand, Zoe Panchen, Roman Popadiouk, Mary Ann Smythe. Translator: Lise Anne James.

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Charitable Number 118913565RR0001

Celebrating the significant contributions of the Farm

By Blaine Marchand

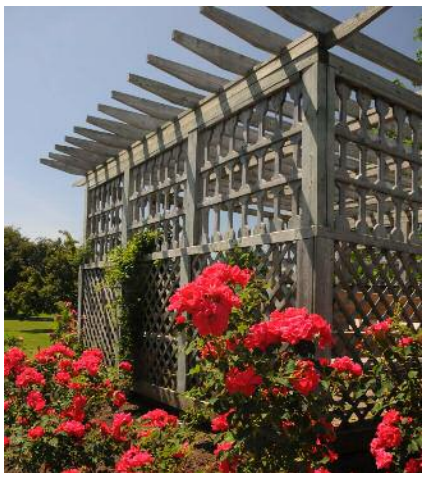
This year marks a double anniversary—Canada's 150th since Confederation and the 125th anniversary of the founding of the Ottawa Horticultural Society (OHS). To celebrate these, the OHS proposed to the Friends that together both organizations undertake a commemorative project in the Ornamental Gardens at the Farm.

The project will have two components to it. The first would create information plaques about noted plant hybridizers connected to the Central Experimental Farm—Isabella Preston, A.P. (Percy) Saunders and Dr. Felicitas Svejda, as well as a general plaque on hybridization at the Farm. Each plaque would contain a QR code, which would allow visitors with a smartphone to access more information on the Farm's illustrious history of hybridization in Canada as well as on the important work done by Preston (lilacs), Saunders (peonies) and Svejda (Explorer Roses). This information will be housed on the OHS and Friends websites and would not only be text but also photos. Both the texts and photographs will largely be taken from the beautiful Friends book, *Blooms: An Illustrated History of the Ornamental Gardens at the Central Experimental Farm* by our own Richard Hinchcliff. All panels will be in French and English.

The plaques will be located in the pergola surrounded by Explorer roses and close to the Preston lilac collection. It seems a fitting structure to house these information panels. Twenty-five years ago, the OHS worked with the Friends to construct the structure to honour the OHS's 100th anniversary. Both societies believe that it is important that visitors to the Ornamental Gardens learn about the critical role the Farm and these individuals played in creating Ornamental plants that are so beloved by gardeners today.

The second component of the project will be a planting of historical perennials in the Macoun Memorial Garden. As you may know, this garden was opened in 1936 to commemorate William T. Macoun, Dominion Horticulturist from 1910 until 1933, on the site of his former house. With its sunken garden, sundial and pond, the garden is a favourite spot for photos. Macoun, by the way, was President of the OHS in 1899.

Drawing upon historical documentation, perennials favoured by Macoun will be planted in the northeast and northwest entrance to the garden close to the Driveway. This will be a two-year project as time will be required to learn about the conditions, soil and light in this part of the garden and to access perennial plants from Macoun's era that will do well in this environment. Most likely 2017 will see an array of annuals while the learning process is underway. But the colour scheme will respect colours preferred by Macoun in his plantings.



Pergola surrounded by Explorer roses

So 2017 will indeed be a year of celebration. What better way than to have two of the key horticultural organizations in the capital working jointly to celebrate the significant contributions of the Farm.

Blaine Marchand is the Friends' director in charge of the Ornamental Gardens.

June Blooms: Strolling Through Garden History

A gem in the heart of Canada's capital, the Central Experimental Farm's Ornamental Gardens have enchanted visitors for more than a century.

As a tribute to Canada's 150th anniversary, the Friends of the Farm will offer tours of the gardens at this National Historic Site. On Saturday June 10th, from 10am to 2pm, free guided tours of the spectacular collections of peonies, Preston lilacs, and roses will take place.

In addition to the tours, the Friends of the Farm's new book, *Blooms: An Illustrated History of the Ornamental Gardens at Ottawa's Central Experimental Farm*, will be available for purchase. Its author, Richard Hinchcliff, will be on site to sign copies.

Although there is no admission for the event, donations are always kindly appreciated. For more information, visit www.friendsofthefarm.ca.

NEW MEMBER REGISTRATION FORM

NAME: _____

ADDRESS: _____

CITY: _____ POSTAL CODE: _____

PROVINCE: _____

TELEPHONE #: _____

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INTEREST IN VOLUNTEER OPPORTUNITIES

YES ❑ NO ❑

TYPE OF MEMBERSHIP

FAMILY	$50/year
ADULT	$30/year
SENIOR/STUDENT	$25/year
BASIC CORPORATE	$250/year
NON PROFIT ORGANIZATION	$25/year
INDIVIDUAL LIFE	$600
SENIOR COUPLE LIFE	$650
DONATION	$_____
TOTAL	$_____

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Please make cheque or money order payable to: "Friends of the Farm." A receipt for income tax purposes will be issued for all donations of $10 or more. Payment by PayPal is available on website.

We are located at Building 72 in the Arboretum. You can visit us or mail this part of the form with your payment to:

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Trees of the Field, How do They Grow? … *(continued from page 12)*

the rich and abundant fruit that has resulted from breeding apple trees. The same could be done for other types of tree fruits, just as it has been done for the grains we eat.

At present, **half** the world's cereals are used to feed livestock. If we want to have enough food to feed the growing population of humans and animals, we'll need to find a balance. We can no longer assume that trees are marginal to our food supply. Research in the USA has shown that well-managed silvopasture can reduce winter feed costs by about 20%.

One other important fact: forests are also habitat for key pollinators of food crops.

United Nations reports

The UN Food and Agriculture Organization (FAO) promotes wider use of agroforestry, a system of growing trees or shrubs around or among crops and pastureland. The UN is interested because food production will have to increase by over 60% to meet the demand for food by 2050. As well, non-sustainable land use practices will have to be changed if we are going to increase goods produced from farms and forests.

The FAO reports that agriculture accounts for about a fifth of greenhouse gas emissions. The Central Experimental Farm, along with international groups, is carrying out important research on this subject. It's a critical problem for food production everywhere.

Deforestation—mainly in tropical areas—is another major source of emissions. The FAO "State of Food & Agriculture 2016" report has identified farming changes required to stabilize the climate. The report on "State of the World's Forests 2016" identifies the need for collaboration between farming and forestry. As an example, agroforestry helps slow down climate change, and tree-based farming also helps protect against extreme weather events.

Agroforestry around the world

Many people throughout the world depend on forests for food and income. Grains became the dominant food crop when farmers started to plow lands, but we are starting to question the effects of continual plowing on the soil resource. Agroforestry has the potential to modify practices and add diversity to attain more sustainable food in many areas.

In tropical countries, people harvest spices and medicine from trees. More recent interest in tree farming stems from other reasons. Trees help to reclaim unusable or arid land. Cattle and pigs and chickens graze under food-giving, nitrogen-fixing and shade-offering trees, giving back manure to fertilize the trees. It's only natural: most livestock originally came from forest environments.

There's a long tradition in England to let some hedgerow trees grow large for eventual use as timber. Other trees are coppiced (i.e. cut back) from time to time to supply small branches for use on the farm. Countries such as France and Italy grow rows of poplars and plane trees as windbreaks. In the Mediterranean, olive trees are grown next to broad beans and other crops. Cork oaks, used to make bottles for corks, produce acorns that are grazed by pigs. Farm animals, such as chickens, can benefit from being raised under the sheltering branches of trees.

In North America

The Prairie Farm Rehabilitation Administration Shelterbelt Centre in Indian Head, Saskatchewan, was set up in 1901 to grow and distribute seedlings in the prairies. During 100 years, the Centre distributed over 650 million seedlings. The Agroforestry Development Unit station in Indian Head has been closed; however, the federal government continues to fund related research.

The provinces are also active. The University of Saskatchewan has a Centre for Northern Agroforestry and Afforestation involved in research on the role of shelterbelts in mitigating greenhouse gases. Work is being done in Alberta on shelterbelts, silvopasture and other agroforestry subjects. British Columbia does similar work and adds research on fruit and nut trees, and there are studies in Ontario and Quebec on maple, nut and Christmas trees.

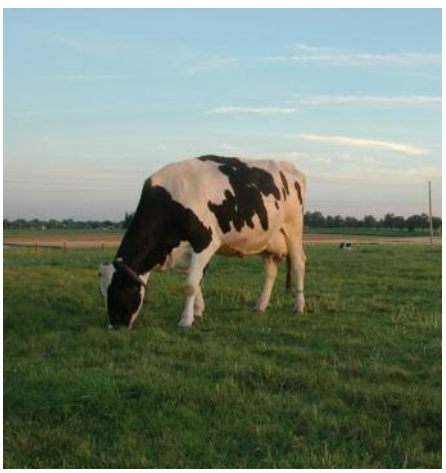
The University of Guelph in Ontario has research underway in both tropical and temperate countries. One multi-researcher project led at Guelph is looking at tree-based intercropping *vs* conventional cropping on several sites in eastern Canada.

There are lots of reasons for new interest in tree plantations on farms: one is to use them for carbon sinks to help reduce global warming. Another is to diversify farm income. Biomass for fuel is a third. In all cases, the effect is to benefit the environment and the soil.

On the Central Experimental Farm, tree planting continues. The Friends have used donations from a large number of people to fund Shelterbelt tree planting along the Merivale boundary of the Farm. While many of the tree species have been selected for their tolerance of cold winds, drought and road salt, there are also some unusual specimens for this location (e.g., yellowwood). This row of trees helps shelter the Farm's western flank while providing a warm place for remembrance of loved ones, and a lovely place to stroll in and admire the landscape.

Trees and crops of the field, side by side.

Eric Jones, past president of the Friends, leads the Arboretum volunteer team and organizes the popular Arboretum tree tours.



R. Hinchcliff

"Well-managed silvopasture can reduce winter feed costs by about 20%"

Trees of the Field, How do They Grow?

By Eric Jones

Aren't trees what you get rid of so you can farm? Why is the Arboretum part of the Central Experimental Farm? What do trees have to do with farming anyway?

Tree research was part of the original plan for Canada's experimental farms. The 1886 *Experimental Farm Station Act* included a goal to develop tree nurseries that would grow seedling stock to plant in a third of the prairies. This work was directed by the same goal that drove the rest of the research: to discover what would work in Canada's climate and soils, and to act on it.

Settlers were interested in planting orchards and hedgerows. They needed to know which trees would serve well as windbreaks and be eventually harvestable to make fences and build barns. But they had no experience with Canadian tree species and the climate.

Trees were planted on the Farm, not just in the Arboretum but also along Carling Avenue and elsewhere, for these reasons. Many trees were clustered near the north-west corner of Holland and Carling to study the effects of tree spacing on the rate of growth.

There still is a traditional view that forestry and farming are in opposition, but consider the following points:

Trees and soil

Trees change soil conditions for the better; their roots stabilize the soil and protect it against rainstorms. Over time, organic layers build up to create rich and porous soil with nutrients and many life forms that make it more fertile. Some of these organisms even have the potential to help protect plants from disease.

As trees move water through soil they slow down water runoff. The traditional view is that trees reduce the available water for growing plants, but recent studies have shown that trees can soak up water during wet periods and release it slowly during dry periods, helping to recharge groundwater.

If there is an "optimum" number of trees present, water yields can be increased. These effects depend on soil type, climate and tree species. Ottawa isn't an arid environment and so this effect isn't as critical here as it is in other locations, but summers can be very dry here: witness last year's summer!

Trees and carbon

Trees store carbon. The term "carbon farming" describes cropping and agricultural practices that sequester carbon in the soil and in perennial vegetation like trees. Used widely, these practices have the capacity to store large amounts of carbon from the atmosphere in the coming decades.

A new book by Eric Toensmeier called *The Carbon Farming Solution* promotes the idea of "silvopasture," the practice of grazing livestock among trees that are spaced apart to allow enough sunlight to reach the fields, as compensation for the carbon released by the animals.

Library and Archives Canada, PA-130413

Trees along Carling Avenue. 1920s photo taken from Civic Hospital

R. Hinchcliff

Merivale Road shelterbelt

Trees and weather

Trees shelter adjacent land from wind and erosion. They act as living snow fences, helping to save lives by improving driver visibility, and saving money by reducing snow plowing and keeping highways open for travel.

Tree shelterbelts also:

- conserve fuel and energy, and produce food and habitat for wildlife and pollinators;
- capture up to 12 times more snow than slatted fencing; and last 40-50 years, while a slatted fence lasts only 7-20 years.
- tree shade can lower temperatures to protect both plants and animals. In sufficient numbers, trees can actually promote rainfall. They also act as buffers to protect riverbanks and keep streams clean.

Intercropping

Food grows on trees. Fruit, nuts, leaves, roots, mushrooms, as well as associated insects and animals sustain people around the world. We tend to think of it as marginal food for humans, but we need diversity in our diets and food supplies. Think of

Continued on Page 11