



Potato Gene Resources

Number 21 – 2014

A “Likely” Story – The discovery of a Most Fascinating Potato¹

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Crop-Climates Project
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Genetic resources in terms of heritage varieties are discovered sometimes in most unusual ways. We recount the fascinating story of the emergence of a most interesting potato from the wilds of central British Columbia (BC). We also briefly describe, for the first time, our observations of the field phenology of this potato.

Emerging from the Wilds

In April of 2012, Jim Gibson and Wendy Tuerlings of Likely, BC came to the Royal British Columbia Museum in Victoria, BC with a small container of peculiar potatoes and an even more peculiar story. At the outset, we must acknowledge the forethought of Jim and Wendy in recognizing not only the heritage significance but also the biological value of the potato they had with them. It is important to note that Likely, BC is a tiny community on Quesnel Lake in the Caribou Mountains, elevation 730 m and mean daily January temperatures range from about minus 5 to minus 15°C.

Local cabin owner, Grant Morrison, brought the potatoes to Jim Gibson on Thanksgiving 2006; saying that they are edible and tasty. He then provided a remarkable account of their history. Combined with additional information from Jim and Wendy and, most importantly, a first-person interview published in BC Outdoors Magazine in 1978², we now have this story.

Captain Norman Evans-Atkinson, Englishman and adventurer, came to the shores of Quesnel Lake in 1921 drawn by the lingering tales of the 1860s gold rush, and intrigued by a contemporary gold rush on Cedar Creek (Cedar City). His 1921 season was unsuccessful, but he befriended a native man called Tillian from the Sugar Cane Reserve near Williams Lake, BC. In the fall of 1921, Tillian telegraphed Evans-Atkinson that there was indeed lots of gold near Quesnel Lake and that he should return. Cedar City at the mouth of Cedar Creek was a gold rush community established in 1867, but burned down by a huge regional fire in 1869. There was once a provisioning store there for the Gold Rush on a traditional aboriginal trading site.

Evans-Atkinson returned in the winter of 1921-22 and found trappers camped in the

area looking for gold. He staked a claim east of today's Cedar Point Provincial Park which he worked for the next 50 years. At the campsite, trappers gave him some "Russian" potatoes that resembled short fat fingers. When he asked where they found them, the trappers pointed to the lakeshore at the former site of Cedar City. On his return to Vancouver he learned that, apparently, the potatoes had been brought to North America by Russian fur traders nearly 200 years before, and were then passed on to First Nations people who eventually passed them on to the placer miners (presumably in the 1860s).

Evans-Atkinson was curious about these potatoes and dug them up, according to his own words, from the Cedar Point lakeshore patch. This connects the "Likely" potatoes explicitly to a naturalized population persisting from some time in the historical past (possibly since the 1860s to about 1922). It is also about this time that Mr. Morrison, a friend of Evans-Atkinson, and grandfather of Grant Morrison also acquired the potatoes.

From a direct quote recorded in BC Outdoors Magazine from Evans-Atkinson, "They'll grow anywhere, even in gravel," he said. "They're not marketed because they are so small but they are very easy to cook because you don't have to peel them—just boil them as they are and they'll never get soft. They taste just like regular potatoes but they contain a lot of vitamins and when bears raid my potato patch they always eat the Russian ones first."²

The potatoes no longer persist along Quesnel Lake. However, Jim Gibson noted that they had persisted until about 30-40 years ago in a large field on the Keithly Creek Road about a mile out of Likely.

Mr. Morrison also grew the potatoes at his cabin across the lake (west shore) from Cedar Point. No one lives in the old Morrison cabin permanently now, but it is still used by the family in summer. The potatoes were grown

and saved year to year in the unheated Morrison cabin in a wooden box below the floor. Grant Morrison lost all the potatoes at the cabin a few years back because of flooding but had fortunately passed them on to Jim Gibson.

In the first year, Jim Gibson and Wendy Tuerlings planted them in the spring in soil inside tires. The second year, they planted them in the garden. They now plant them in a trough. Jim has noted fall frosts do not kill off the leaves, and if left in the soil over the winter, some come up the next year. We noted earlier that the winters are very cold.

Jim and Wendy observed that these are unusual potatoes; each plant producing 30-50 small tubers. The ones brought to the Royal British Columbia Museum were narrow and up to 5 cm long and produced an extensive branching network from a terminal stem system. The plants never flowered in 2011 at Likely, but do produce small white flowers in some years (Figure 1).



Figure 1. White flower of the "Likely" potato.

In Likely, BC, the tubers are planted in the first week of June or sometimes on the May long weekend. On occasion, there is even snow on the ground. The tubers develop quickly and are ready around the second week of August, being dug up before the tops die down. The potatoes are very flavourful and, according to Wendy Tuerlings, only a few small ones are needed to fill you up. Limited comparison

taste tests suggest a flavour and texture superior to standard commercial varieties.

Characteristics

“Likely” potatoes are fingerlings, in general, similar to the better known “Banana” (a.k.a. “Russian Banana”) potato also of deep historical origins in British Columbia³. Full-grown tubers are typically up to 10 cm long, pale to medium brown skin, shallow to medium depth eyes with a firm pale creamy yellow flesh. However, most tubers are much smaller and very numerous (Figure 2). For example, a typical group of 35 tubers grown in lightly irrigated land in Metchosin, BC yielded 0.45 kg corresponding to 0.013 kg/tuber. The production of the small tuberlets almost guarantees that you cannot harvest all of them, and some will remain in the ground for the next year.



Figure 2. Tuber yield from a single plant of “Likely”, grown in Metchosin, BC in 2013.

A somewhat distinctive feature is the tendency to have one main terminal bud that is the usual source of shoot production (Figure 3). Compared to other varieties, these shoots form very early and develop into branching networks rapidly. When The Royal British Columbia Museum received the first

tubers from Gibson and Tuerlings in April, they had only one growing point that had developed into much divided and elongated branches to 15 cm length. Usually, secondary shoots develop on the largest tubers. Jim notes that you have to eat the tubers by the end of December, otherwise they will have developed too many branches. However, storing them at near zero, unheated garage in Saanich 2013-14, delays major shoot development.



Figure 3. Growing point on “Likely” tubers after five months storage in a cool unheated garage, Saanich, BC.

Preliminary phenological observations reveal that “Likely” is a late-growing potato, taking 135 days to complete die-back in Saanich, BC in 2013 and never completely dying back in Gananoque, ON (Figure 4). Flowers formed in Saanich, BC but not in Metchosin, BC or Gananoque, ON. “Likely” was the latest maturing variety of 21 different potatoes grown in Saanich, BC, five of which are shown in Figure 5. “Irish Cobbler” matured fastest in 77 days, while “Banana” and “Chieftain” both took 116 days to mature. “Likely” and “Banana” had very similar progression through the growing season, with “Likely” generally growing more slowly and taking longer to die back.

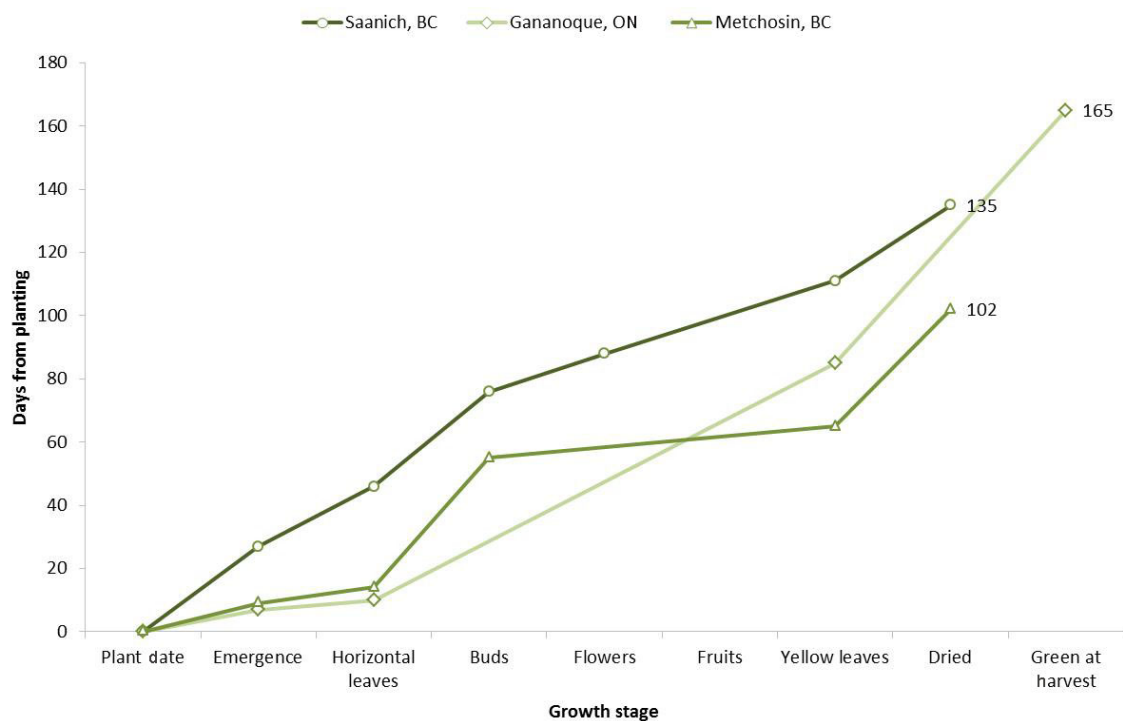


Figure 4. Comparison of phenological development of “Likely” potato in 2013 at 3 locations: Saanich, BC; Gananoque, ON and Metchosin, BC, (days from planting).

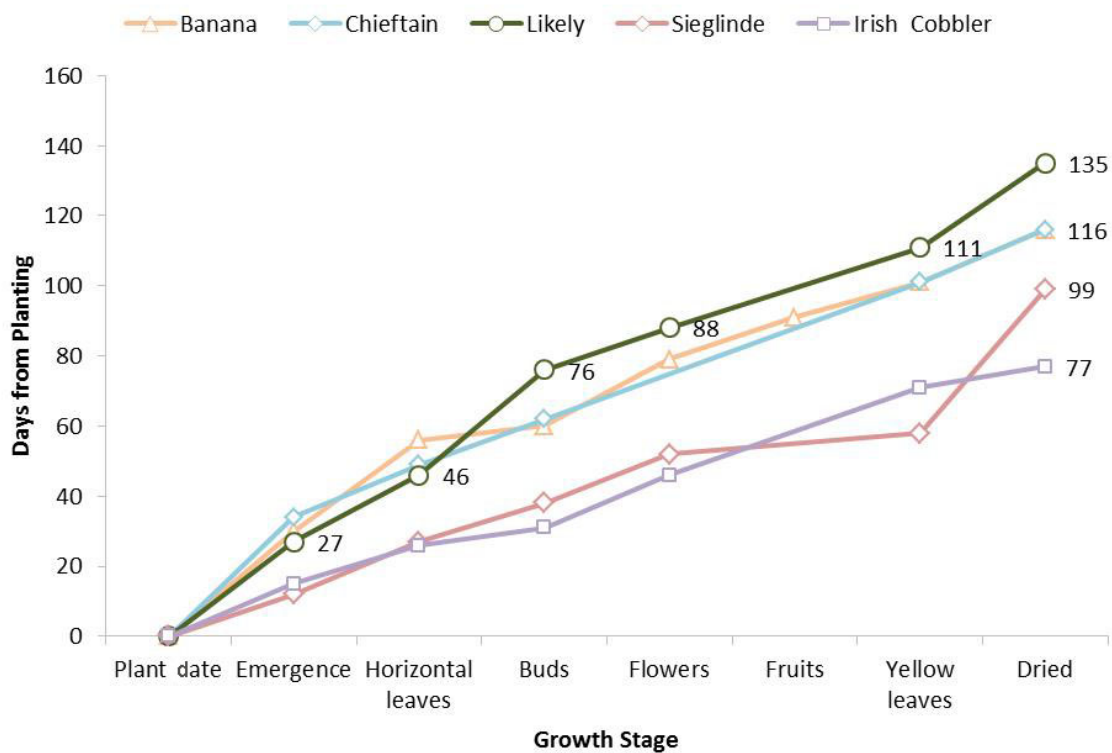


Figure 5. “Likely” growth stages compared to four other varieties “Banana”, “Chieftain”, “Sieglinde” and “Irish Cobbler”. Grown at Saanich, BC, (days from planting).

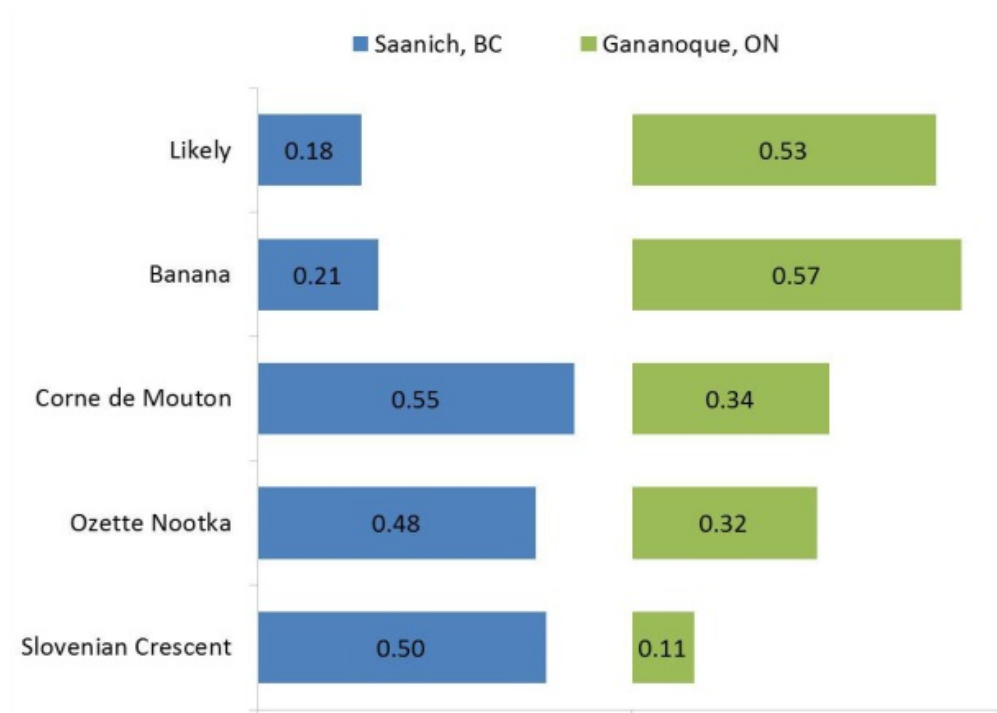


Figure 6. Tuber yields (kg/plant) of five fingerling potato varieties grown at Saanich, BC and Gananoque, ON.

“Likely” yields were similar to those of “Banana” in two locations where both were grown (Figure 6). When compared with other fingerling potatoes grown in these locations, a curious pattern emerges. In Gananoque, ON, “Likely” and “Banana” outperformed “Corne de Mouton”, “Ozette/Nootka” and “Slovenian Crescent”, whereas at Saanich, BC, the opposite was true.

“Likely” potatoes indeed resemble the heritage variety “Banana” which has obscure origins in BC. It too might have been introduced to early settlers and natives by Russian fur traders and has been known for at least 90 years. However, the flowers of “Banana” are lavender not white.

The “Likely” potato has a uniquely British Columbian history, linked to First Nations and Gold Miners. It exhibits unique features, among them an apparent strong resistance to frost and a capacity to survive in the wild. These characteristics may have made it ideally suited as a local food crop for miners. Whatever its history, it now appears to

preserve adaptations that may be valuable in developing special potatoes for northern climates.

References

- ¹A “Likely” Story – The Discovery of a Most Fascinating Potato. “Likely” is the informal varietal name assigned to this potato by the Crop-Climate project in recognition of its origin in Likely, British Columbia.
- ²Farrow, M. 1978. Norman Evans-Atkinson; the prospector who never retired. BC Outdoors 34 (9): 55-58.
- ³Canadian Food Inspection Agency. Potato Varieties: “Banana”. <http://www.inspection.gc.ca/plants/potatoes/potato-varieties/banana/eng/1312587385647/1312587385648> (Accessed March 3, 2014).

Acknowledgements

We thank Grant Morrison, Jim Gibson and Wendy Tuerlings for conserving the “Likely” and Jim and Wendy for bringing it to the Royal British Columbia Museum.

We thank Mrs. Gretchen Bauta and the W. Garfield Weston Foundation for supporting the preservation of heritage potatoes and for supporting the Crop-Climate project to grow, observe and record the climatic characteristics of Canadian potato varieties. For more information visit www.heritagepotato.ca.

Editor's Note: "Likely" has been added to the Potato Gene Resources collection and is currently undergoing virus eradication and tissue culture establishment. "Likely" will likely be available for request 2015-2016.

The Crop-Climate Project

Richard J. Hebda and Valerie J. Huff of the Crop-Climate Project are from Trail, BC. The Crop-Climate Project uses farmer-scientists across Canada to observe the growth of heritage varieties of potatoes and grains under different climate conditions. We believe that conserving heritage varieties of crops is an important way to contribute to food security in an era of changing climates. Heritage varieties can provide adaptation options to farmers and Canadian society in the coming times of climatic uncertainty – but only if we conserve and observe them now.

The project is looking for farmer-scientists from the prairie provinces and central Canada for the 2015 growing season. If you are interested in participating, please email vjhuff@telus.net.

Good things grow at Fort George!

Suzanne Kavanaugh, Heritage Interpreter
Fort George National Historic Site
Niagara-on-the-Lake, ON

For centuries, the Niagara region in Southwestern Ontario has been renowned for its agriculture. Two hundred years later at Fort George National Historic Site (NHS) in Niagara-on-the-Lake, I have the pleasure of seeing how seasonal temperatures, sun and soil continue to create ideal conditions for

plants to flourish in our historic soldiers' garden. This season, Agriculture and Agri-Food Canada were a big help in adding a new element to our garden – the potato.

As a Parks Canada Heritage Interpreter, I have devoted years to researching, planting and harvesting heritage vegetable varieties in the garden at Fort George NHS; with the ultimate goal of connecting Canadians and international visitors to an activity that we do every day in our modern life – eating. Through my guided tours of the soldiers' garden, visitors are better able to understand the living conditions of the average soldier at Fort George, the events that contributed to the creation of the garden and how the vegetables grown there improved their daily diet and general health.



Suzanne Kavanaugh preparing the garden at Fort George National Historic Site, Parks Canada.

In 1803, living conditions for the British soldiers stationed at Fort George were rather bleak. Harsh discipline, back-breaking labour and a lack of diversions eventually lead a

group of soldiers to develop a mutinous plan. Thankfully, General Isaac Brock, upon arriving at the fort, was able to calm these tensions. He reasoned that if soldiers were given productive activities to occupy their down time, they would not be tempted to mutiny.

And so the soldiers' garden at Fort George was born. In addition to their standard two meals a day consisting of porridge or gruel, to break their fast, boiled meat with a ration of flour, butter, dried rice or peas, and coffee or tea mid-afternoon, the soldiers could now vary and enrich their diet with the bounty from their large garden. Harvests mainly consisted of root vegetables, whose seeds were imported from England. Based on articles in the local papers, recipes from the time period and historic journals from local residents of the town, onions, carrots, turnips, leeks, beets, parsnips, melons and –yes – potatoes would have been some of the most popular varieties planted; mainly because they would last longer through the winter months if stored properly.



The garden in full swing at Fort George National Historic Site.

In 2014, I had the pleasure of growing potatoes for the first time, and I was very excited about this. Potato Gene Resources at Agriculture and Agri-Food Canada in Fredericton, New Brunswick, very kindly provided Fort George with five tubers of the heritage potato variety *Pink Fir Apple*. After months of tender care, I cultivated approximately 25 pounds of this heritage

potato. Potatoes were then prepared in the fort's Officers' Kitchen, using recipes from early 19th century cookbooks, and offered to our visitors – much to their delight. They were particularly happy when they were able to take a treat from the garden home with them as a tasty reminder of their trip to Fort George NHS.

In all, the *Pink Fir Apple* is a sweet, tasty heritage potato that stores well. I was very pleased with the results. Thank you to all the staff at Agriculture and Agri-Food Canada for helping us grow a piece of Canadian heritage at Fort George NHS.



Heritage potatoes, "Pink Fir Apple", pulled from the garden at Fort George in December 2014.

<http://www.pc.gc.ca/eng/lhn-nhs/on/fortgeorge/index.aspx>

PROCINORTE/NORGEN GRIN- GLOBAL Workshop

Axel Diederichsen
Agriculture and Agri-Food Canada,
Saskatoon, SK and
Martin Reisinger
USDA Agricultural Research Service,
Beltsville, MD

The Germplasm Resources Information Network (GRIN)-Global is a software suite that enables genebanks to store, manage and communicate information associated with plant genetic resources. This software is designed to support efficient management of large plant genetic resources collections and

was initially created to serve the Genetic Resources Network of the United States Department of Agriculture (USDA). An earlier version of the software dates to the early 1980s and was used by the USDA and other genebanks including Canada. This software became outdated due to new developments in technology, but also due to a massive pressure to more efficiently manage genebank collections. It was internationally recognized that an update was urgently required.

Open access to plant genetic resources, and associated information and exchange of germplasm has been a common practise among genebanks and botanical gardens for centuries. Global food security has been based on genetic resources exchange for millennia. The International Treaty on Plant Genetic Resources for Food and Agriculture, to which Canada is a party, emphasises the national obligations regarding stewardship for the genetic diversity and the open access to these resources and associated information internationally. This also motivated the goal to establish a Global Information System for Plant Genetic Resources, and GRIN-Global may be a step in that direction. The GRIN-Global software is available to genebanks around the world, free of charge.

PROCINORTE, a cooperative program promoting collaboration in Agricultural research to the countries of IICA's (Inter-American Institute for Cooperation on Agriculture) Northern Region, supported the training while Agriculture and Agri-Food Canada hosted the GRIN-Global PROCINORTE workshop through Plant Gene Resources of Canada (PGRC). It was held from September 9 through September 11, 2014 at the Saskatoon Research Centre in Saskatoon, Saskatchewan. The twenty-one participants included scientists, genebank curators, database managers and technicians from different locations in Mexico and Canada (Figure 1). Four Mexican participants were affiliated with the Instituto Nacional de Investigaciones Forestales, Agrícolas y

Pecuarias, including experts of cryopreservation, *in vitro* culture, molecular data and data management. The 17 Canadian participants included 1 each of the AAFC locations Harrow, Ottawa, Ontario and Fredericton, NB who cooperate closely with PGRC by hosting special collections of importance to data management within AAFC. The database manager for the Canadian Animal Genetic Resources also participated with the anticipated release of Animal-GRIN.

The main objective of the workshop was to enable genebank curators to actively enter and extract information from the GRIN-Global database system designed for managing genebank collections. Martin Reisinger, working for the USDA, led the training with the support of Eugene Timmermans, PGRC Database Manager.

The participants explored how to integrate their current data and workflows with the GRIN-Global schema and software. Participants learned how to use the GRIN-Global applications: Curator Tool, Search Tool and Public Web Site. The training covered essential functions of the complex relational database, such as data entry including passport, inventory and characterisation data, interaction of GRIN-Global Software with standard software for efficiency, data queries, accession requests and handling of requests. All basic functions a genebank curator deals with on a daily basis were covered.

During the workshop, all participants reached a certain level of sovereignty in using this software. While a few simply overcame the initial threshold to further explore this powerful tool, the majority reached a great level of comfort in using the software. The participants were encouraged to actively use this software when handling their collections to ensure a routine is developed.



Figure 1. Participants of the GRIN-Global Workshop in Saskatoon.

The last day of training was Thursday, the 11th of September, and while this date is related to mourning, it also reminds us that different cultures need to communicate and cooperate to achieve progress, prosperity and peace. The great treasure of genetic diversity in crop plants, which is presently to a large extent in stewardship of genebanks, is a result of many cultures shaping crop plant evolution over millennia. Having an international and very diverse group working together in improving skills to preserve and utilize this great human heritage is a positive signal.

Related Resources

Centro Nacional de Recursos Genéticos :
<http://www.inifap.gob.mx/sitepages/centros/cnrg.aspx>.

GRIN-Global overview: http://www.ars-grin.gov/npgs/gringlobal/training/What_is_GRIN-Global.pdf.

GRIN-Global training pages:
<http://www.grin-global.org/index.php/training>.

Plant Gene Resources of Canada web site:
www.agr.gc.ca/pgrc-rpc.

PROCINORTE:
<http://www.procinorte.net/pages/default.aspx>.

USDA, National Genetic Resources
 Information Network: www.ars-grin.gov/npgs/searchgrin.html.

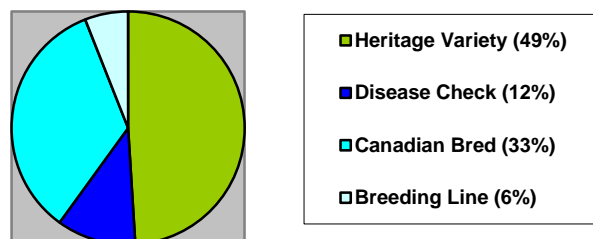
Annual Report 2014

Potato Gene Resources
 Teresa Molen

The Collection

1. Holdings

• The Potato Gene Resources is the potato node of Plant Gene Resources Canada and holds 170 clones within its genebank. Of this total, 168 are maintained *in vitro*, and 113 clones were grown for tuber production at our Benton Ridge Potato Breeding Substation, Benton, NB. The following chart illustrates the types of clones in each category.



2. New Accessions

• Three heritage varieties were accepted into the Genebank in 2014. Virus free *in vitro* plantlets of the historically important “Burbank” were obtained from the USDA Agricultural Research Service, Potato Introduction Project in Sturgeon Bay, WI. “O’Higgins Blue” and “O’Higgins Calico” were donated by William Higgins of Christmas Island, Nova Scotia.

Burbank

• “Burbank”, a seedling selected in 1873 from “Early Rose” (male parent unknown) by Luther Burbank of Concord, Massachusetts¹ was introduced by Mr. J. H. Gregory of Marblehead, MA in 1876¹. A mutation of “Burbank” produced “Russet Burbank”, the world’s foremost French fry processing

cultivar¹. “Burbank” tubers are large, long, cylindrical, or slightly flattened, with smooth thin white skin, numerous shallow eyes, short, curved, inconspicuous eyebrows and white flesh². Readers may recall an article in the 2013 edition of the Potato Gene Resources newsletter describing the history of “Russet Burbank” and its progenitors. This article can be found at the following link:

<http://publications.gc.ca/site/eng/468168/publication.html>.



“Burbank” tubers grown in Florenceville, NB (2006)¹.

O’Higgins Blue³

“O’Higgins Blue” was bred and selected by William Higgins of Christmas Island, NS. This seedling of “Black Rock” is a consistent producer in dry or wet summers with great flavour. Tubers are long with purple skin with a thin layer of white between the skin and blue flesh.



“O’Higgins Blue” Photo by William Higgins.

O’Higgins Calico³

“O’Higgins Calico” was bred and selected by William Higgins of Christmas Island, NS. This seedling of “Black Rock” produces round tubers with splotted tan and blue skin. The flesh is white and good for boiling and baking. High yields are seen in all growing conditions.



“O’Higgins Calico” Photo by William Higgins.

References

- ¹ Bethke, P.C., A.M. Nassar, S. Kubow, Y.N. Leclerc, X.-Q. Li, M. Haroon, T. Molen, J. Bamberg, M. Martin, and D.J. Donnelly. 2014. History and Origin of Russet Burbank (Netted Gem) a Sport of Burbank. *Am. J. Potato Res.* 91:594-609.
- ² Clark, D.F. and P.M. Lombard. 1946. Descriptions of and key to American potato varieties. Circular No. 741. Washington, DC. USDA. p. 37.
- ³ Personal communication with William Higgins.

Editor’s Note: In Memoriam of William Higgins – It is with great sadness that we learned of the untimely passing of William Higgins of Christmas Island, NS on February 17, 2015. Among many other interests, Bill was an avid potato gardener and contributor to the Potato Gene Resources; “Calico” (1995), “Christmas

Island Rose” (2013), “*O’Higgin’s Blue*” (2014) and “*O’Higgins Calico*” (2014).

3. Evaluations

- Twenty-four varieties were grown in an evaluation trial at the Potato Research Centre. Two replications of fifteen hills of the following varieties: “Newfoundland Elephant”, “Poorlander”, “Rose Gold”, “Makah”, “Raritan”, “Arran Victory”, “Hindenburg”, “Richter’s Jubel”, “Chinook”, “Sable”, “Grand Falls”, “German Butterball”, “Chieftain”, “Congo”, “Blue Victor”, “Superior”, “Cow Horn”, “Shepody”, “Early Ohio”, “OAC Temagami”, “Gold Coin”, “Rose Finn Apple”, “Ratte” and “Pink Pearl”. Samples were also taken for Total Glycoalkaloid (TGA) Analysis, photographs and culinary evaluation.

- Thirty clones were grown in 20 hill plots at the Benton Ridge Potato Breeding Substation, Benton, NB, to provide material for demonstration and cooking quality evaluation throughout the winter and spring.

4. Management

- Passport data for 167 PGR accessions is available online at the Genetic Resources Information Network-Canadian Version (GRIN-CA). GRIN-CA may be accessed through the Plant Gene Resources of Canada web site <http://pgrc3.agr.ca/>.

- Disease testing was conducted for new *in vitro* accessions and clones which have been maintained *in vitro* for five years. Thirty-six clones were grown in the greenhouse and

tested twice in 2014. All clones were negative for PVA, PLRV, PotLV, PVS, PVX and PVY. Results for PSTV and BRR are pending. Extra mini tubers from the greenhouse grow out will be offered to genebank clients in the spring of 2015.

- All *in vitro* clones were screened for bacterial and fungal contamination using Potato Dextrose Broth and Richardson’s Broth, twice during 2014. All clones currently in the Genebank are negative for these contaminants.

- A total of 982 microtubers were harvested from 167 of the PGR clones in 2014. Approximately half of the microtubers were sent to Saskatoon in August 2014 to be stored as back up at Plant Gene Resources of Canada, AAFC. The viability of the collection is protected by this remote location storage arrangement.

Dallas Kessler, of Plant Gene Resources Canada, Saskatoon, SK, continues to monitor the microtubers. The remaining microtubers are stored at the Genebank in Fredericton, NB.

5. Distribution

- Twenty-six requests for 611 clones were received in 2014. Of this number, 119 clones were distributed as *in vitro* plantlets, 457 clones as field grown tubers, and 35 clones as greenhouse grown mini tubers. “Banana”, “Russet Burbank”, “All Red”, “Congo”, “Lumper” and “Candy Cane” were the most requested accessions in 2014.

Distribution of Clones by Purpose - 2014

Purpose of Request	Number of requests	Clones	<i>In vitro</i> plantlets	Field tubers	Mini tubers
Research	13	330	100	195	35
Teaching or Demonstration	2	22	0	22	0
Conservation	11	259	19	240	0
Total	26	611	119	457	35

Requests by Destination – 2014

Destination	Number of requests
Newfoundland and Labrador	2
Nova Scotia	1
New Brunswick	5
Quebec	3
Ontario	9
Saskatchewan	1
Alberta	2
USA	3
Total	26

Five-Year Compilation of Clone Distribution for Potato Gene Resources 2010-2014

Year	Research	Education	Conservation*	Total	Field tubers or mini tubers	<i>In vitro</i> plantlets	Total
2010	4	15		19	295	171	466
2011	6	3	23	32	456	212	668
2012	20	2	7	29	806	172	978
2013	15	2	3	20	422	85	507
2014	13	2	11	26	492	119	611
Total	58	24	44	126	2471	759	3230

*This category of clone request was added in 2011.

Repository Items of Interest

Communication

- In addition to the requests for clones, many requests for information about the genebank, the availability of clones, clone descriptions and pedigrees, and techniques for handling *in vitro* material were received throughout 2014.

- The annual Potato Gene Resources newsletter has a distribution list of 300 recipients and is made possible with the administrative support of Ms. Sylvie LaForest.

- The current newsletter and several back issues may be accessed on the Weekly Checklist of Government of Canada Publications. Browse for the newsletter by title at: <http://publications.gc.ca/>.

Training

- Teresa Molen, Potato Gene Resources Technician, attended training on the updated Germplasm Resources Information Network (GRIN)-Global held at the Saskatoon Research Centre in Saskatoon, from September 9 through September 11. For more information, please see the detailed article also included in this newsletter.

Meetings and Miscellaneous Information

- The 2014 annual Technical Advisory Committee (TAC) meeting of the USDA potato genebank NRSP6 project was held at Prosser, WA, July 25-26, 2014. Information on the genebank and minutes of TAC meetings can be found at the genebank web site: <http://www.ars-grin.gov/nr6/>.

Visitors

- April 16, 2014 – Dr. Joyce Boye of Kentville, NS, while Acting Director, Research Development and Technology, AAFC, Fredericton, NB.
- July 18, 2014 – Dr. Shirlyn Coleman, Manager of the New Brunswick Propagation Centre, Department of Agriculture, Aquaculture and Fisheries.
- Aug 19, 2014 - Members of AUSVEG, the National Industry Body for vegetable and potato growers in Australia.

Potato Research Centre Web Site

- <http://www.agr.gc.ca/researchcentre/fredericton> offers an overview of the mandate, resources and achievements of the Centre. The research studies being conducted at the Centre as well as the staff associated with those studies is highlighted. Links to the Potato Research Network and to other agriculture and potato-related web sites are also available.

Plant Gene Resources of Canada

- Plant Gene Resources of Canada (PGRC), the national Canadian genebank, preserves, characterizes and distributes plant genetic resources for food and agriculture. PGRC is based on collaboration between AAFC Research Centres and people dedicated to preserving the genetic diversity of crop plants and their wild relatives. PGRC plays

a significant part of AAFC's commitment to the Canadian Biodiversity Strategy in response to the Convention on Biological Diversity and the International Treaty on Plant Genetic Resources.

- The Plant Gene Resources of Canada (PGRC) web site located at <http://pgrc3.agr.ca/> includes information on the PGRC multi-nodal system of germplasm conservation in Canada and allows searching for germplasm information on the Genetic Resources Information Network – Canadian version (GRIN-CA). Dr. Axel Diederichsen, Research Scientist and Curator at PGRC can be contacted at the Saskatoon Research Centre of AAFC at axel.diederichsen@agr.gc.ca.

The Genebank and the Seed Potato System

- The Potato Gene Resources provides *in vitro* plantlets and greenhouse or field tubers for breeding, research and heritage preservation. While extensively tested for freedom from disease, the plantlets and tubers distributed by the Potato Gene Resources are produced outside the Canadian Seed Certification System and are not eligible for certification.

The Canadian Seed Potato Certification System operates under the *Seeds Act* and its regulations. Certification begins with tested plantlets established *in vitro* in a facility accredited for this task by the Canadian Food Inspection Agency. The plantlets are used to produce greenhouse tubers which then go to the field in a limited generation system, at each step, meeting strict standards specified in the regulations. More information on potato seed certification can be found at the following web site:

<http://www.inspection.gc.ca/plants/seeds/eng/1299173228771/1299173306579>.

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The Potato Gene Resources Newsletter is available as an electronic version. If you are still receiving a paper version and wish to receive future Newsletters by e-mail, in pdf (portable document format), please send your e-mail address to: Teresa.Molen@agr.gc.ca. We will continue to send the printed Newsletter to those who do not ask to receive it electronically. Maintaining contact with you is important.

Personnel of the Potato Gene Resources Repository and Potato Breeding Program, Potato Research Centre

Benoit Bizimungu – Potato Breeder and Germplasm Curator
Agnes Murphy – Plant Pathologist

Teresa Molen – Potato Gene Resources Technician
Stephen Allaby – Potato Breeding Technician
Deborah Campbell – Potato Breeding Technician
Jean-Louis Deveau – Potato Breeding Technician
Denise LeBlanc – Potato Breeding Technician
Cynthia Murray – Potato Breeding Technician
Esther Tremblay-Deveau – Potato Breeding Technician
Donna Wilson – Plant Pathology Technician
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Lana Nolan – Greenhouse Person

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Potato Gene Resources

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