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# History in Images

Lacombe Research Centre Centennial

1907-2007



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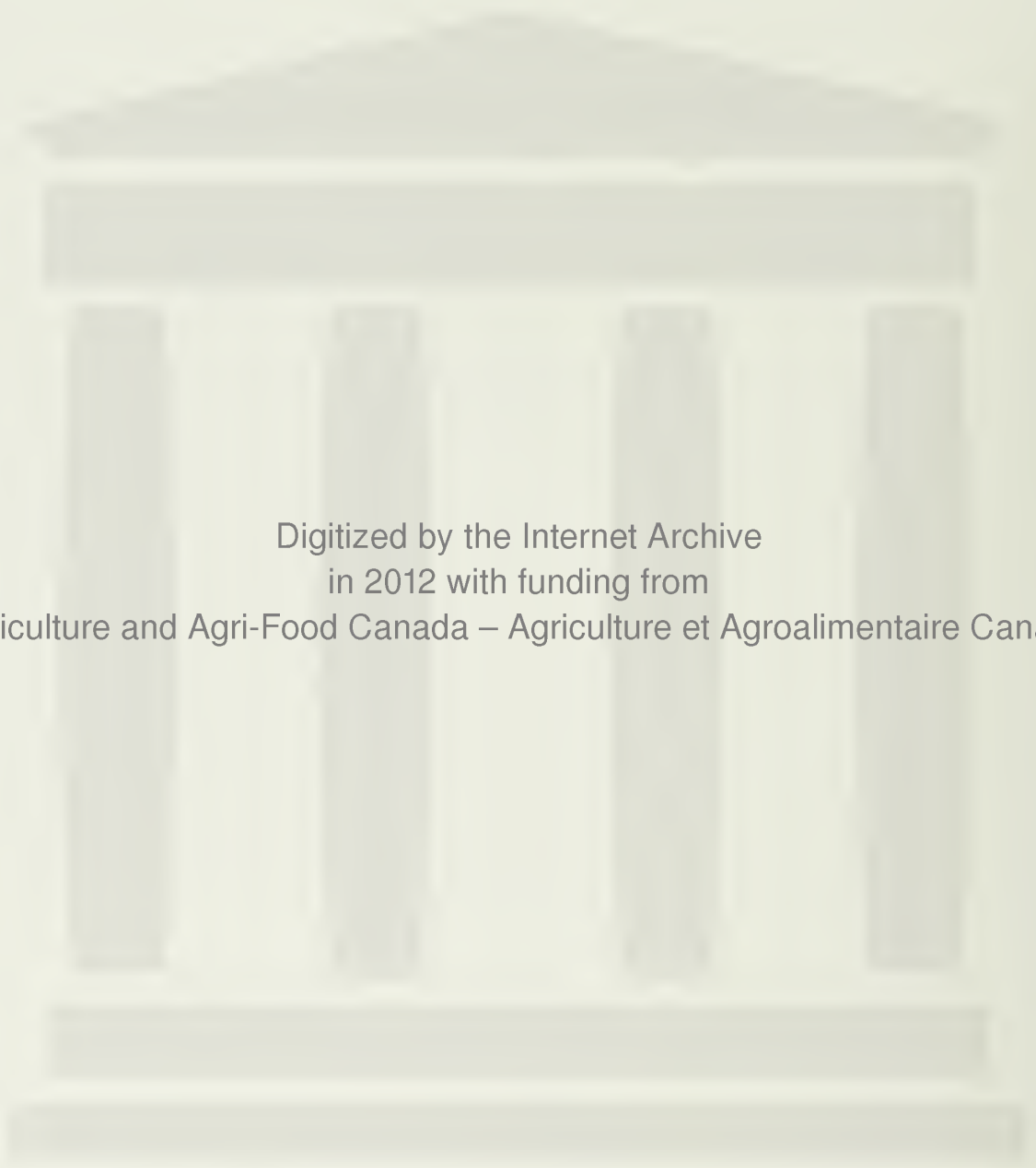


Lacombe  
Research Centre

Centre de recherche  
de Lacombe

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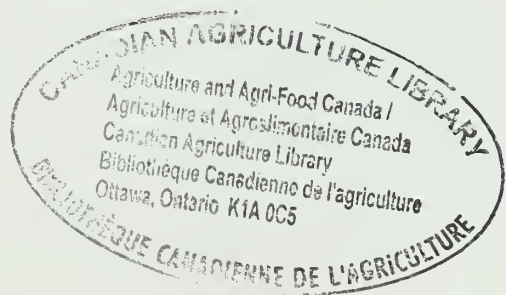


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# Lacombe Research Centre

## History in Images

Lacombe Research Centre Centennial History Book Committee  
Cover Illustration: Lacombe Research Centre East Lawns, Alan Tong, 2004



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# Forward

One hundred and three years ago, the newly formed Lacombe Board of Trade realized the importance of establishing an Agricultural Experimental Station at Lacombe. As a result of their initiative and the support of many parties, including key financial support from the community, the Lacombe Experimental Station was established in 1907 at its present site on a quarter section of land.

It was an impressive first year, by any standards, accomplished with only a staff of six. This same dedication and initiative has continued in the subsequent generations of staff that have worked at the centre. We now have more than 120 staff, linked at three sites, Lacombe, Beaverlodge and Fort Vermillion in central and northern Alberta, with over 1350 hectares at the three sites.

As with many institutes, our name has changed over the years. Although the first national sites were established as Experimental Farms, Lacombe was one of the first facilities to be established as an Experimental Station in 1907. In 1959, as a result of the unification of the research functions under a new Research Branch, we became known as a Research Station. Finally in 1992, as Stations took on national research mandates, our name changed again to the present Lacombe Research Centre.

There has never been a lack of challenges facing the Agriculture and Food sector in both Alberta and Canada. The direction of the Research Centre has changed significantly over the past century to keep in sync with continuously evolving challenges facing the agricultural industry. Research that was initially focussed on agricultural practices specific to the central Alberta parkland, now has a national mandate, and impacts on agriculture internationally. Although the issues and technologies of each successive generation of researchers appear to be more complex, the accomplishments of our predecessors were as significant in their era as ours are now, and we owe much of our present achievements to the knowledge platform they built, upon which we have grown.

Collaboration with outside parties has always been fundamental to our success. While we initially collaborated with local producers, we now collaborate with producers, producer groups, processor organizations and research institutes internationally. Scientists are now collocated at universities and benefit from close interaction with other scientists and graduate students. Amongst this ongoing century of change, our key strength, as in 1907, is still our employees, who continue to develop technologies that make the agriculture and food sector in Canada more competitive.

This book celebrates our history in images. We owe a great deal of gratitude to Howard Fredeen, who in 1982 wrote a detailed history of the centre on its 75<sup>th</sup> Anniversary, and from which much was borrowed in the preparation of this book. It was a daunting task by numerous volunteers over many days to sift through stacks of pictures to try to select the few images that would reflect the activities and changes that have occurred over the past century. To these volunteers, as well as the volunteers who organized our centennial celebration, thank you. Unfortunately, space precluded the use of all the images and I apologize to those that may have inadvertently been omitted. However, I hope that these images bring back memories and help keep alive our exciting history.



Rick Lawrence  
Research Manager, Lacombe Research Centre

## **Preface**

“History is the version of past events that people have decided to agree upon,” wrote French General Napoleon Bonaparte. As Agriculture and Agri-food Canada’s Lacombe Research Centre celebrates its 100<sup>th</sup> birthday few people would disagree that the Centre has played an important role in shaping the agricultural industry in Canada.

This history book is an attempt to capture some of the experiences and achievements that have taken place over the past century at Lacombe using images and few words. For a more detailed account of the history of the Lacombe Research Centre, please refer to Howard Frdeeen’s history book: “Lacombe Research Station 1907 – 1982,” which was written for the 75<sup>th</sup> anniversary of the facility. The committee recognizes the exceptional quality of this document and it was not our intention to be redundant. Rather, Howard’s detailed historical information was utilized as a valuable resource for our brief, written summaries of the first 75 years.

Apart from the photographic images within the centennial history book, the committee would also like to highlight the generosity of Alan Tong, who contributed images of his watercolour paintings depicting activities at the Lacombe Research Centre in more recent years. Alan was an innovative researcher and continues to be an internationally recognized watercolour artist. The paintings Alan selected offer a unique perspective of Centre life and make a very valuable complement to the text.

The Lacombe Research Centre Centennial History Book provides a photo-legacy of research in agriculture and it is hoped that the images will afford a glimpse of the culture, the growth and the achievements over the past 100 years.

## **Acknowledgements**

Apart from the substantial contributions of Alan Tong and Howard Fredcen which were noted in the preface, there are a number of staff both past and present who must be recognized for their important input and enthusiasm in the preparation of the history book.

An important prerequisite to the selection of appropriate images was the organization of the photographs in a computer archive that could be readily accessed by the authors. Kathy Moore and Caleb Ficner in the library are to be commended for scanning the thousands of prints, slides and negatives in the historical files, labelling them and storing them in a computer data base. This required considerable time and commitment and the final result was a superb collection of readily accessible images. Marilyn Crawford then had the tedious job of organizing the images into specific categories by year and number on a spreadsheet. Marilyn did an excellent job in addressing this onerous task. These individuals are recognized for the creation of a very valuable resource that will be important to future historians.

The book was co-authored by different individuals and in this respect each chapter is largely singular in style and content. Members of the Lacombe Research Centre's Centennial History Book committee who were involved in preparing the specific chapters were Peter Mills, Duane McCartney, Denise Orr, Gordon Greer, Rick Lawrence, Debbie Olsen, Paul Martin, Marilyn Crawford, Kelly Turkington, and Ken Grimson. Others who made significant contributions by providing material for the book were Kathy Moore, Faye Swanson, Lorna Gibson, Loree Verquin, Dave Cahill, Sherri Nelson, and Dave Young. A special thanks to Brian Quick, who organized the printing of the document.

The committee would also like to acknowledge the contributions of Leona Soley, Dave Friesen, Howard Fredeen and Dick Gillespie who were kind enough to share personal reflections of earlier times at the Lacombe Research Centre.

It is also noteworthy that many current and retired staff undertook excellent critical reviews of the book and their valuable suggestions were considered in the final edit. In conclusion, the book was a communal effort and all staff who offered advice and images to improve the quality of the book are gratefully acknowledged.

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## Administration



Administration Building, Alan Tong, 2001

The role of Administration is to create an environment in which the art and science of research can thrive. All aspects of accounts, human resources, procurement, farm and animal management, buildings, word processing, computer services, library services and other administrative support functions are provided to the scientific staff to expedite their endeavours. In the absence of this level of support, research would cease.

The first offices were located in the dining room of the Superintendent's residence, which was completed in October of 1907 by Gladstone George H. Hutton. This building, which cost \$5,195 to complete, was renovated in 1947, and is still known as the Director's residence. It was not until 1914 that a separate office building was constructed on the site of the present Administration building. Before Lorne C. Long, the first typist-clerk, was hired in 1910, Alma Boyd and Miss Vickers were paid a flat rate of 10¢ per page of typing. A very good wage during this time would have been \$1.50 to \$2.00 per day.

Under Superintendent F.H. Reed (1920 to 1946), Annah Aldwinkle, with Miss G.M. Willis as her assistant, served for many years as both secretary and bookkeeper, providing continuity of office operations through the 1920s and 1930s.

In the post World War II era, Superintendent George DeLong (1946 to 1955) expanded the office space to accommodate the augmented scientific staff. This was accomplished by moving a former mess hall from a relief RCAF airport at Blackfalds to Lacombe. This new unit provided nine offices, a library and one small laboratory. During this time, office support included Irene and Leona Hopkins, Agnes Bruns, Marjorie Calder and Roger Dickson and farm support was supplied by Fred Stewart, Bob and Dunc McGeachy, Bill Greenlaw, George Sykes, and Griff Hughes. In the early 1950s long range plans were developed to modernize the station's utilities, some of which dated to 1907, and to construct a new office-laboratory building, new livestock facilities and greenhouses. On July 31, 1957 celebrating the station's 50<sup>th</sup> anniversary, sod was turned for the new office-laboratory building by Dr. Cyril H. Goulden, Director of the Experimental Farms Services and Superintendent Dr. Jack Stothart (1955 to 1976). When the new building was officially opened in 1959, it contained the re-located library in what was also the coffee room and it housed the first computing equipment installed outside Ottawa. In 1959, Agriculture Canada amalgamated the Experimental Farms Service with Science Service to form Research Branch, and Lacombe was renamed the Lacombe Research Station with Jack Stothart its first Director.

In 1968, Dr. J. Ansel Anderson, Director General of the new Research Branch, initiated "Management by Objectives" for all Research Stations that required the reorganization of all projects into programs, taking many hours of administrative input to make it operational. The same year saw a much improved phone system installed and Lacombe became a designated centre for statistical and computer services under Milton Weiss and Eva Reimer. The office staff in 1972 included Administrative Officer Bill Murray, Office Manager Mavis Kononoff, Marge Marshall, Avis Sayers, Mary Walushka, and Bonnie Chalmers, while outside staff included Larry Lock, Cliff Carlson, Bob Pountney, Howard Armstrong and Mike Goetz.

Building maintenance has been an ongoing requirement, and, like so many other things, has become more sophisticated over the years. While Jack Sharpe, Lance Forsberg and Fred Gilles would have maintained records by hand, Martin Jensen (1984 to present) and Gord Balaski (2006 to present) record information on pocket sized computers.

The tenure of Director Dr. Fred Kristjansson (1976 to 1979) was marked by a decentralization of program administration, with Lacombe now reporting to Western Regional Office in Saskatoon and the installation of the first Telex system (1979). In 1978, Dick Gillespie became the Supervisor of all operational staff, a unique position that ended with his retirement in 1987. July 1980 saw the arrival of the sixth Director, Dr. Don Waldern (to 1989), who initiated an in-depth external review program and the new project outline system.

Library duties were the responsibility of secretarial staff until the completion of the Library Conference Building in 1987 when the first librarian, John McIsaac, was hired. Librarians included Anne Marie Watson, Dixie Anderson, Shelley Pirnak, and the present librarian, Kathy Moore. Early library duties were mainly cataloguing incoming journals and books before circulating them to scientific staff, where they frequently languished on desks for long periods. With the advent of computers, scientists were able to order their reprints directly from Ottawa using the Agrinet system. Today the Internet provides electronic desktop access to scientific publications from anywhere in the world.

During the time of Director Dr. Jim Pantekoeck (1989 to 1994), the Centre gradually became more responsible for budget management. This level of independence from Ottawa increased under the leadership of the next Director, Dr. Steve Morgan Jones (1994 to 1996). Combined with a



substantial increase in the level of external funding for research projects, the responsibility of all aspects of Centre administration was greatly increased. This period of growth continued through the brief tenure of Dr. Perry Lidster (1996 to 1998).

Administration was challenged by a pronounced increase in the number of researchers and their support staff as well as the transfer of herd management to the Administration department. In this regard, demands for facilities, operations management, supplies, salary management, human resource requirements, central registry, literature searches and word processing were far greater. The number of publications increased and the preparation and routing of research manuscripts became an additional responsibility of administration staff. Departmental focus on commercializable technology created a need for further staff and the dissemination of research achievements necessitated an information officer.

The structure and management of the administration section has also dramatically changed. In 1991, the position of office manager was eliminated with the retirement of Marge Marshall (started 1969) and when Pete Anderson left, the position of farm manager was also eliminated. Administrative leadership was then solely the responsibility of the Administrative Officers who included Dale Jones (1984 to 1992), John Robinson (1992 to 1995), Steve Villeneuve (1996 to 1999), Donna Neve (1999 to 2001), and Danielle Girard (2001 to present).

In the 1980s, the federal government implemented the new Workplace Hazardous Materials Information System (WHMIS), which was developed to provide information on workplace handling of hazardous materials. In 1992, the duties of WHMIS officer were added to those of the Information Officer, Dr. Ann de St. Remy. Currently, Jeff Bryant, acts as the WHMIS officer as part of his duties as Health and Safety Advisor.

Prior to the 1990s, commercialization across the Research Branch was almost exclusively licensing of varieties and management of collaborative agreements related to a small number of outside grants. But as intellectual property was recognized and acknowledged as being equally important, Dr. Ann de St. Remy was appointed in 1993, the first professional dedicated to licensing and grant management. In 1997, a Commercialization Office was established when Rick Lawrence transferred to Lacombe.

Dr. David Bailey (1998 to 2003) proved to be the last Centre Director. Following a major restructuring in the early 2000s, the Administration Section became known as the “Enabling Team,” led by the Integrated Services Manager, Danielle Girard, who reports to Corporate Management in Ottawa. Computer support staff and commercialization officers also report to Ottawa. With the centralization of the Communications Branch there is no longer a Centre Communications Officer. Although off-site Science Directors manage the research programs of the centre, Rick Lawrence was appointed Research Manager in 2006 and is responsible for local management.

The role of the Administration support staff has changed drastically over the years. Duties have evolved from preparing reports on manual typewriters and answering all phone calls, to switch board duties at a time when not every office had a telephone, through to present day, where they are responsible for the day to day running of all aspects of the Centre.

## Office Buildings



Office and Superintendent's Residence, 1908



Built in 1914, moved in 1948



Former mess hall  
moved to Lacombe, 1956



Officially opened March 26, 1959



Administration Building, 2000

## Superintendents



G.H. (George) Hutton  
1907-1919



F.H. (Frank) Reed  
1920-1946



G. H. (George) DeLong  
1946-1955



J.G. (Jack) Stothart  
1955-1976  
First Director 1959



## **Directors, Site and Research Managers**



F.K. (Fred) Kristjansson  
1976-1979



D.E. (Don) Waldren  
1980-1989



J.F.C.A. (Jim) Pantekock  
1989-1994



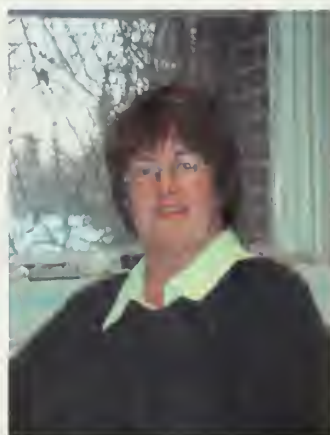
S.D. (Steve) Morgan Jones  
1994-1996



P. (Perry) Lidster  
1996-1998



D.R.C. (David) Bailey  
1998-2003



F.M. (Frances) Nattress  
2003-2004

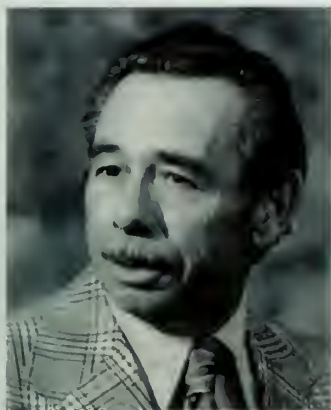


M.E.R. (Mike) Dugan  
2004-2005



R. A. (Rick) Lawrence  
2006 - present

## **Administrative Officers**



**Bill Murray**  
1972 - 1979



**John Jones**  
1979-1983



**Dale Jones**  
1984-1992



**John Robinson**  
1992-1995



**Stephen Villeneuve**  
1996-1999



**Donna Neve**  
1999-2001



**Danielle Girard**  
2001-present  
First Integrated  
Services Manager



## Administration Staff



George Delong, Lorraine Ans, Agnes Bruins,  
Leona Soley, 1954



Joy Ostapowich, Irene Thauburger, John  
Jones, Dick Gillespie, Lorraine Martin, Doug  
McBeath, Marge Marshall, Joyeelyn Carlson,  
Margaret Reber, 1979



Jan Walker, Mary Walushka, Donna Pier-  
son, Margaret Reber, Bev Moore, Irene Thau-  
berger and Marge Marshall, 1980



Heather Heystek, Leith Damiani, Colette  
Oehlerking, Val Erhart, Chris Meyers, Loree  
Verquin, Marilyn Crawford, Danielle Girard,  
Sandy Noble, Michelle Disberry, 2007



## The Changing Face of the Office



Manual typewriter, Agnes Bruns, 1956



Marie Fussel, Adena Bauer, Carol Lukat with electric typewriter, 1967



Switchboards - Bonnie Chalmers and Carol Lukat, 1970; Bev Moore, 1980; and Colette Oehlerking, 2007



Today everything is done by computer - Michelle Disberry, 2007

## Library



Library in Old Mess Hall, 1956



Library in Administration Building, 1975



Library in Conference Building, 2007



John McIsaac



Dixie Anderson



Kathy Moore

## Computer Services



Lawrence Fobert, Eva Reimer, and Milton Weiss,  
1980



Brian Quick, IT Site Manager, started at Beaverlodge  
in 1990 and transferred to Lacombe in 1996



Don Lamkin



Dave Best



## Maintenance and Shop Staff



Mike Susut, Ken Gram and Howard  
Armstrong in tin shed, 1976



Fred Gillies and Lance Forsberg,  
Stationary Engineers, 1982



Farm Crew: Noel Moorhouse, Sid Dauncey,  
Dick Gillespie and Pete Anderson, 1980



Mike Goetz, Carpenter  
1946-1977



Syl Dufresne - Mechanic



Bob Poutney and Cliff  
Carlson, 1979

## Current Staff



Martin Jensen  
Facilities Management Officer



Gordon Balaski  
Facilities Management



Dale Langevin and Gary Duff, Shop



Jeff Bryant, Health and  
Safety Advisor



Ann de St. Remy  
Commercialization



Faye Swanson  
Commercialization





## Field Crops



Header House at Sunset, Alan Tong, 1995

With the 40 acres (16.2 ha) of plots seeded in May 1907, the Lacombe Experimental Station began its first century of crops research. Early experimentation focused on testing existing varieties of cereals, field peas, red clover, alfalfa, Indian corn and various root crops, including turnips and mangels, carrots, sugar beets and potatoes, for their adaptability to Lacombe's climatic conditions. Superintendent George Hutton was responsible for early experiments on seeding date and rate, soil packing, the use of well rotten manure, as well as artificial fertilizers, and an early attempt to control ball mustard (*Neslia paniculata* L.) with sprays of iron and copper sulphates. He introduced replication in testing in 1909, studies of crop rotations in 1910 and cultural experiments in 1911. In 1907, Seymour Edmonds joined the staff and served as the farm foreman for 40 years until his retirement in 1951. When Seymour began working as the foreman, he was paid \$60 per month and after 4 years, in 1915, he would have reached the maximum princely sum of \$80 per month.

In 1913, early experiments in bee breeding and winter housing were expanded to Lacombe from Ottawa. The first year was less than successful, as no colonies survived that winter in the damp root cellar. The basement of the new office building (built in 1914) proved more amenable to the bees, and research proceeded. Beekeepers field days, sponsored by apiculturist Bill Cranna, were a community event, and included lectures as well as demonstrations. Over-wintering proved to be feasible and honey production provided another cash source for farmers. A maximum honey record of 158 kg from one hive was recorded in 1934, just 5 years before the program was discontinued.

The appointment of George Earl DeLong in 1920 began Lacombe's long history of crop

breeding, with emphasis on wheat, oats, barley and peas. Methods of seeding were standardized with the same number of kernels planted for each variety and tests were planted with a minimum of three replications. Experimentation with root crops was discontinued in the late 1920s when forage work with annual and perennial grasses and legumes was expanded. An evaluation in 1922 of the crop rotations started in 1910 noted, among other conclusions, that continuous cereal cropping resulted in a gradual buildup of weed problems. In the late 1920s, experiments with barnyard manure decreased as more work was undertaken with artificial fertilizers. The economic recession of 1928-1929 and the Great Depression of the 30s meant that Lacombe endured economic cutbacks, the ravages of outworms, extremely dry weather, and high winds that destroyed cereal and horticultural crops. In spite of this, construction of the first greenhouse began in 1935.

In 1946, after World War II, Don McFadden took charge of the cereal breeding work when Mr. DeLong was appointed Superintendent, and Buck Stelfox (1947 to 1957) was appointed to work on forage crops. In 1948 a property of 90 ha (known as the Gilmour Field) was purchased in order to expand the field crops research program. The first new crop variety produced at Lacombe in 1946 was *Larain*, an early maturing special purpose oat, followed by *Wolfe* barley, released in 1954. In 1949 breeding programs with wheat, oats and barley were intensified, as cultivated farmland around Lacombe increased dramatically in the post-war period. Buck Stelfox and Bill Doran (1953) introduced new avenues of work including breeding for resistance to northern anthracnose in red clover, weed control in native and cultivated pastures and cooperative work with the animal husbandry section. When analysis of early rotation studies indicated a need for more research into soils, Don Walker (1952 to 1981) was hired to identify the reasons behind the yield decline in continuous grain or grain-fallow rotations. This was followed by the appointment of Don Dew (1956 to 1981), an agricultural engineer, who worked on tillage methods of returning crop residues to the soil. Harry Leggett (1946 to 1953) and Henry Friesen (1953 to 1977) began work on the use of herbicides to control annual and perennial weeds and research expanded to include the combination of herbicides with tillage to control various persistent perennial weeds. In 1950, the wage for a labourer was 60¢ per hour, and it cost \$35 per month to be fed in the boarding house. The room was free.

Another major shift came in the pre-war years when emphasis changed from producing annual reports and information bulletins under the superintendent's signature, to the publication of scientific reports by individual staff members. Along with this change came a requirement for post graduate degrees for new appointees and an educational leave program to allow existing employees to obtain higher degrees. By 1960, a Ph.D. had become a prime requisite for new scientists. In the late 1940s statistical analysis was done using a hand-cranked Munro calculator. This was followed in the 50s and 60s by hand and machine punched cards, which were analyzed in Ottawa using a centralized computer. By about 1980, data was entered and analyzed using one central computer on site and by 1990 desktop computers linked to a central server were in common use in many offices.

A reorganization of the Canada Department of Agriculture in the late 1950s saw the Field Crops section divided into Crop Management and Soils under Henry Friesen and Plant Breeding under Don McFadden (retired in 1971). The completion of the new office-laboratory building in 1959 meant that scientists could conduct more sophisticated research, including radioisotope work. Rapeseed (canola) production in the 1960s required new approaches to chemical control of weeds in this broad-leaf crop. In 1960 Martin Kaufmann (1956 to 1984) began using the unconventional single-seed descent method of breeding with oats, which has resulted in a great number of new varieties from Lacombe. The cereal pathology program began in Lacombe with Lu Picning (1965 to 1989) and his research on net blotch and common root rot of barley. Forage work continued under



Bill Doran (1953 to 1961), Hans Baenziger (1958 to 1968), and Len Folkins (1968 to 1980) and was augmented with the appointment of pathologist Bill Berkenkamp (1962 to 1987). Bill also dabbled in breeding trefoil, timothy and faba beans, producing *Orion*, a very early maturing faba bean. Doug McBeath (1962 to 1980) added information on plant nutrition, particularly for forage crops.

As the Station prepared to celebrate its 75<sup>th</sup> anniversary, new appointments included Ashley O'Sullivan as weed scientist and Head of Crop Management and Soils (1978 to 1985), Sukhdcv Malhi, soil chemistry, (1981 to 1997, when he was transferred to AAFC Melfort, Saskatchewan) and Vern Baron, forage physiology (1982 to present). Research on direct seeding was re-visited during this time, but it was not until the non-selective herbicide glyphosate (RoundUp™) was licensed for weed control in 1986 and it became the choice for pre and post-harvest burn-off when application costs decreased, that this technology found its niche. Malhi's soil research focused on efficient fertilizer management for perennial forages and for crops grown under zero tillage, by using a coulter-type disc to place urea fertilizer in bands near the seedrow. Forage research under Vern Baron changed focus from annual forages to include work on hay preservation (1985), and lately, monitoring climate flux to determine if aspects of agriculture are a net producer or user of CO<sub>2</sub>, a germane topic in today's concern about global warming. Pasture work with cattle, first visited in 1953, became a major focus of forage research starting in 1993.

Solomon Kibite was appointed to replace Martin Kaufmann in 1984, when Martin retired. Solomon developed and licensed many varieties until his untimely death in 2003. Most notable were *AC Lacombe* in 1991, still a popular silage barley, and *AC Morgan*, a milling and feed oat, in 1999. In 1985, Lu Piening became the Section Head of Crops, combining breeding and crop management, John Taylor was appointed as a plant physiologist specializing in plant hormones and their regulation, and Neil Harker was appointed as a weed scientist to replace Ashley O'Sullivan. Weed research has changed since that time from screening experimental herbicides to a more integrated crop management approach. All experiments are now conducted using zero tillage and emphasis is placed on preserving crop health, to the detriment of pests. The appointment of Peter Burnett in 1991 as Section Head and pathologist, heralded a major change in the direction of plant pathology research. Emphasis moved to screening barley lines for resistance to leaf scald for all the breeders in Western Canada, as well as a renewed activation of common root rot screening. Under Peter, the first of the Station's many collaborative agreements with the Province of Alberta began. This initial agreement, the Alberta Canada Barley Development Agreement, has brought together researchers from both governments to enhance barley and its production in Alberta. This work has been continued and enhanced by Kelly Turkington (1996 to present). Kelly has also been a major player in monitoring Fusarium head blight and its spread across the Prairies from Manitoba.

George Clayton moved from Beaverlodge to head up the Crops Section in 1996 when Peter Burnett transferred to the Lethbridge Research Centre. George's work as an agronomist focused on integrating research from other disciplines with his to present a unified story on crop management. George also championed long-term research and funding agreements with the Alberta Canola Producers Commission. John O'Donovan was transferred from Beaverlodge to Lacombe in 2006 as a cropping systems agronomist when George transferred to Lethbridge Research Centre. The forage program was expanded when Duane McCartney (1996 to present) moved to Lacombe from Melfort and more work was initiated under the umbrella of the Beef Forage Agreement between AAFC and Alberta Agriculture, Food and Rural Development. As the name implies, research focused on the relationship between forages and beef production, including studies on swath grazing. In 2003, Deng-Jin Bing (D.J.), the field pea breeder from Morden, Manitoba was transferred to Lacombe to become part of a third collaborative agreement with Alberta Agriculture, Food and Rural

Development. With pathology support from Alberta Agriculture, D.J. is breeding peas suitable for production on the Prairies.

Crops Research in the last 25 years has seen the consolidation of technical staff in one building, which was completed in 1992, and the demolition of all the older buildings and greenhouses that formerly housed the staff and their activities. Locating the staff in one building that contains offices, laboratories, growth cabinets, greenhouse and areas for all indoor work has encouraged collaborative work and more effective use of the facility and equipment.

The last 25 years has also seen two major reorganizations in the Department. In the early 1990s programs were consolidated at specific locations across Canada. Some programs at Lacombe were discontinued or transferred to other stations. At that time, emphasis was changed so that oats were the focus of the cereal breeding program under Solomon Kibite, and breeding wheat and barley was discontinued at Lacombe. Collaborative research among the weed specialist, Neil Harker, the agronomists, George Clayton, and John O'Donovan and the cereal pathologists, Peter Burnett and Kelly Turkington with entomological help from off station, began and is considered a model for other centres to follow. The latest major re-organization began in the early 2000s when research programs became national rather than local and emphasis is now being placed on collaborative research with other scientists at centres across Canada.

## Early Days



Field Day in front of cereal building and cattle barn, 1912



Lacombe educational display, 1917



Rumley oil pull tractor with plow, 1915



Four horse binder with Lacombe in background, 1920



## Some of Our Crops



Grain and sunflowers, 1925



Wheat plots, 1925



Oat plots, 1930



Forage plots, 1956



Henry Friesen and Eugene Whelan in weeds greenhouse, 1976



## Some of Our Crops



Len Folkins in corn, 1973



Orest Litwin and canola, 1973



Jack Stothart, Henry Friesen and Martin Kaufmann showing oats to a Chinese Delegation, 1975



Timothy plots, ca. 1990s



Express peas, 1992



Neil Harker and Canada Thistle, 1999

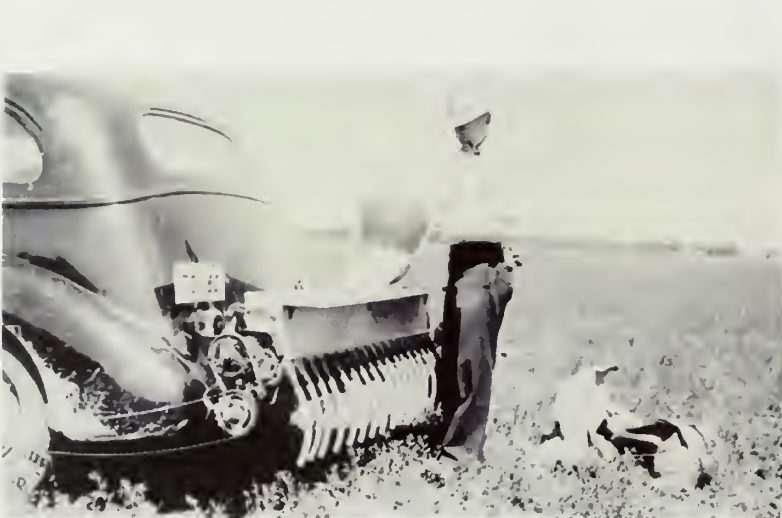
## Mechanization Through the Years



Hand seeding after plowing by horse, 1925



Horse drawn seeder, 1930



Fertilizing by car, 1938



Murray Forbes, staking  
after seeding, 1952



Hand seeding, 1956 - V-belt seeder  
still in use on Station in 2007



## Mechanization Through the Years



Direct seeding, 1957



Jack Deck, Bill Berkenkamp and Joan Meeres, seeding, 1977



Oats drying in sacks, South 40, 1989



Elizabeth Hartman, quad spraying, 2005



Larry Michielsen and Bob Pocock  
direct seeding, 1998

## Harvesting Methods over the Years



Scythe, ca. 1920

Bob Doyle and Al Potuer with  
plot harvester, 1976



Noryne Rauhala and Rod  
Werezuk with Wintersteiger  
combine, 1995



## Our Field Days



1931



1947



1953



Don Dew at the Weed Garden, 1980



Deng-Jin Bing at pea trials, 2004

## Staff



Threshing in the Old Tin Shed, 1955



Dick Gillespie, 1956



W.J. Doran and H.B. Stelfox with creeping red fescue, 1956



Doug McBeath, in Administration Building Lab, 1967



Lu Piening, Marg Friesen, Joan Meeres and Bill Berkenkamp, 1976



## Staff



Susan Low and Jack Deck harvesting, 1981



Brenda Lowles, Ed Daly, Mike Harris, Vern Baron, Peter Burnett, Bill Gibson, Dave Young, Bruce Wendel, Bob Pocock, John Taylor, Debbie Salmon, Denise Orr, Don Beauchesne, Solomon Kibite, Daryl Friesen, 1992



Kelly Turkington, George Clayton, Neil Harker, Adrian Newton, 2004

Jim Pocock, Bob Pocock, Reg Warkentin, Liz Hartman, Larry Michielsen, Karly Grimson, Pam Zuidof, Trina Alexander, Brendon MacNeill, Patty Reid, Jennifer Zuidof, Agronomy/Weeds, 2004





## Greenhouses



1940

1962



1996

## Horticulture



Lacombe Research Centre Entrance, Alan Tong, 2004

On the occasion of the 100<sup>th</sup> anniversary of the Lacombe Research Centre, the development of this book would not be complete without providing a history of the significance of horticulture over the years. The grounds, greenhouses and garden crops were developed in an educational park-like setting, and served not only in research, but also afforded an opportunity for the visiting public to appreciate new ideas that could be used in their own gardens and home landscaping. Many changes have occurred through the past 100 years, yet some of the original trees and shrubs still remain as a living tribute to the hard work and dedication of the staff who cared for them. Here is a brief outline of some of the significant changes that have occurred and the many people who have been part of the development of the Lacombe Research Centre.

In 1907, when George Hutton was appointed as the first superintendent, he planted out 22 varieties of turnips and mangels, six varieties of carrots, three of sugar beets and 17 of potatoes. He also received from Ottawa 152 varieties and selections of apples, 20 of plums, and three of cherries, which were planted with a collection of raspberries, gooseberries, strawberries, and three species of currants. A large nursery was established, which consisted of Manitoba maple, caragana, cottonwood, Colorado spruce, and balsam fir, along with many varieties of shrubs. This nursery was the foundation for the many windbreaks and avenues at the Centre. It was these plantings that, starting in 1908, provided some assistance to farmers of Central Alberta in the form of caragana and maple seedlings for homestead and shelterbelt purposes, as well as pure seed potatoes. With a limit per



farmer of 100 seedlings and three pounds of potatoes, more than 100,000 seedlings were distributed that first year.

The Arboretum was established in 1908 with 193 species of trees and shrubs planted. During the next year, much of the boundaries of the farm were planted with green ash and Manitoba maple. Four species of shrubs were planted around the perimeter of the large building site and along the three main driveways, together with spruce and pine trees. These plantings were duplicated in 1910, framing the backdrop for the detailed landscaping of the premises in the spring of 1912. This was accomplished when Dr. William Saunders, Director of the Experimental Farms Service, drove his buggy around the farm and indicated with his buggy whip where a worker should place a colour coded stake identifying which tree or shrub was to be planted.

The first apple yields were recorded in 1913, although some had bloomed two years earlier, and small fruits and strawberries were recording favourable production. By 1914, the orchard had grown to more than 6000 apples, 59 varieties of currants and 8 varieties of raspberries. Vegetable trials had expanded to test plots of 20 species representing 162 varieties and the annual flower trial being conducted at this time included 131 varieties of 41 species. Records for all annuals included planting date, first bloom, vigour, duration and quality of bloom. This same information was collected for perennials and bulbs along with winter hardiness. The first planting of bulbs was made in 1907 and was augmented annually. The largest single planting occurred in 1913 when 4400 new bulbs were planted. That same year, 21 varieties of peonies, which had been imported from France, were planted along with 26 varieties of perennial flowers and 17 varieties of canna lilies obtained from Ottawa.

The spring of 1914 brought completion to the formal grounds at the Lacombe Experimental Farm. The extensive landscaping, flowers, and orchards attracted visitors through the spring, summer and fall. Starting in 1909, there was an advertised train excursion with reduced fares provided by the Department of Agriculture which attracted 700 visitors and more than 1200 visitors each successive year until 1917 when it was discontinued. On these occasions people were invited to observe varieties of plants and vegetables, results from experiments, and generally enjoy the grounds.

During the latter part of Mr. Hutton's tenure, John Walker, who later transferred to the Indian Head Farm as Superintendent in 1920, was in charge of horticulture. He had replaced Mr. G. Caldwell who left to manage the Lacombe Nursery. He was succeeded in turn by Bill Berggren (1920 to 1930), who left to establish Bowden Nurseries, which flourished to become one of Alberta's leading garden nurseries.

Breeding work with horticultural crops continued and in 1926, the best seven of 30 tomato varieties under test included five Lacombe selections. At this time, 10 of 20 garden pea varieties including two of the top three were Lacombe crosses or selections. In that same year, mention was made of a vigorous fine-fruited strawberry, the *Lacombe*, one of many seedlings produced and selected at Lacombe.

During the summer months, Berggren was assisted by a grounds crew that included R.H. Dickson, a trained botanist, who developed the first herbarium at the Station. The collection received no additional material until after World War II. Bill Berggren was succeeded by George McMillan Ramsay in July 1929, a graduate in horticulture from University College, Dundee, Scotland. George directed experiments with all horticultural crops, supervised grounds maintenance, addressed meetings, and served as a judge at fairs and exhibitions. The first greenhouse, built in 1935, came under his supervision.



Prior to the appointment of a professional horticulturist, the acreage at Lacombe devoted to horticulture consisted of 8 acres (3.2 ha), plus a field crop of potatoes. When Harvey Allen was appointed in 1947, the acreage was expanded, and by 1948 consisted of 17.2 acres (7 ha). Six acres (2.4 ha) of tree fruits were added in 1954, followed by a 10 acre (4 ha) picnic area in 1953, with a picnic shelter constructed in 1955. Mr. Ramsay retired in 1956 and was replaced by Mike Bachinsky, and then Pete Wynia (1958 to 1969). The horticulture program under Harvey Allen resulted in two licensed tomato varieties, *Rocket* in 1967 and *Booster* in 1971, early maturing varieties that received wide acceptance throughout the prairie region. A Canadian bred USDA developed potato seedling introduced by George DeLong in 1942, named *Canus*, was released in 1946. *Parkland* apple, released in 1979, was a Lacombe selection derived from 6000 seedlings received for testing in 1952 under the auspices of the Prairie Cooperative Fruit Breeding Project. This apple was the final product of breeding and selection with horticultural crops and occurred 7 years after the main program had been terminated. Harvey was assigned to the oat breeding program in 1972 and continued in that role until his retirement in 1981. Ernie Bollhorn remained as the horticultural work supervisor responsible for grounds maintenance and greenhouses until his retirement in 1982.

During the summer of 1983, Paul Martin, a Journeyman Landscape Gardener, who trained at Olds College with a background at the Muttart Conservatory in Edmonton, and the Provincial Government in park construction, was hired. Some of his first responsibilities were to update and reorganize equipment, and to design and implement new landscape features while maintaining some of the traditional elements that the public had come to admire. These changes were to accommodate modern equipment and landscape practices as well as reduce overall maintenance. He would still be responsible for all horticultural inquiries and some public speaking. In the greenhouse area, he recommends and implements changes to equipment and cultural practices, where possible, in support of research.

In the fall of 1988, an outdoor lighting project was initiated to raise the Centre's profile, and improve security and safety for people on site in the evening and winter months. This project included street, building and entrance sign illumination. The work was performed by the carpenter crew and grounds personnel, and employed a combination of photo cells and timers. Energy retrofits in the greenhouses during 1988 included replacing some fluorescent lighting with high intensity discharge lighting, insulating greenhouse sidewalls and the conversion of glass to twinwall polycarbonate in one area. Another introduction was the use of soil-less growing media, and slow release fertilizers, which eliminated the labour intensive use of soil for growing during the winter. At this time there was considerable pressure to reduce maintenance costs and an agreement was reached with the Town of Lacombe to purchase a 6.2 ha (15.3 acres) parcel of land formerly known as the "Pond Park". The Town was delighted to include this area into the Michener Park Master Plan and it was released to them in 1990.

With the completion of the new Plant and Soil Building in 1992, indoor growth facilities were to be consolidated in this one building. To this end, construction of a new greenhouse began in the fall of 1993 and finished in the late spring of 1994. At this time, many buildings were demolished as all Crops and Horticultural activities were consolidated in the new building. The old greenhouses as well as the root cellar and the original header house were removed during the winter of 1994 to 1995. This area later became a recreational site complete with horseshoe pits, basketball net court, and a sand volleyball court.

The new greenhouse is a twin bay system gutter connected to provide one large growing area. The large movable growing benches have automated ebb-and-flow watering and the concrete floor is

sloped to drain into an outside cistern. Automated vents and horizontal fans provide cooling and air movement, while high pressure sodium lamps augment the sun's illumination. The roof is constructed of tempered glass while the sidewalls are 8 mm twin wall acrylic. In keeping with today's technology, the various atmospheric elements that may influence growing conditions (wind speed and direction, rain, frost, temperature, and hours of daylight) are monitored by computer.

In 1995, the Arboretum underwent a major renovation, which included some tree and shrub removal and a new red shale path which connected the Pond Park and the Central Alberta Agricultural Society Pavilion area with a small parking area. Labour assistance was provided by the Bowden Work Release Program. This project was designed to provide visitors an opportunity to view some of the more interesting specimens and enjoy a walk in the woods.

The Lacombe Research Centre's trees and shrubs are considered on a whole to be historically significant and the Centre is recognized as a heritage tree site. Most recently two trees, the Swiss Stone Pine, *Pinus cembra*, located by the perennial garden, and the Horizontal Weeping Birch, *Betula pendula horizontalis*, in the circle park, have been nominated to the Alberta Historical Tree Project and will appear in a directory publication in the summer of 2007.

Over the last 25 years the Centre has seen many physical changes, as some of the older trees and shrubs have been removed. When the storm/sanitary lines were upgraded in the late 1990s, it was decided to minimize disruption to traffic and ongoing operations. Where possible roads would not be excavated, instead construction went alongside or through adjacent landscaped areas. Mother Nature has also played a hand in changing the face of the Centre. What began as a summer storm in July 2001, suddenly became a violent windstorm, leaving many large trees sheared in half or completely ripped from the ground. Environment Canada later described this phenomenon as a "wet micro burst." With changes in buildings over the years, new landscaping has been designed to be less labour intensive, and to use modern techniques and materials. Changes have maintained the original park-like atmosphere that has always attracted and served to educate the public. The grounds are still the number one choice for graduation, family and wedding portraits and if you want to book a wedding here, you should book a year in advance!

Welcome to Our Facilities



1920



1955



1982



1997



2006



## **North Entrance ca. 1929 and 1985**



## Horticulturists



Harvey Allen and George Ramsay in the root cellar examining potatoes, 1956



Harvey Allen and George Ramsay in the greenhouse examining tomatoes, 1956



Pete Wynia sorting onions, 1965



Jim Heath in greenhouse, 1967



Harvey Allen with Ernie Bollhorn, 1980



Paul Martin in greenhouse, 2007



## Early Crops



Black currants, 1920



Flower garden, 1930



Looking east across garden plots, 1930



Vegetable garden, 1930



Squash display, 1949



Horticultural display for 50th anniversary  
celebrations, 1957



## Greenhouses



Greenhouse A in 1957, built in 1937



Greenhouses B and C, May 1962



Gardener's Shed, 1962



Root cellar and north side of Header House,  
1962



Green houses after energy retrofit with additional Staff Parking, 1987



New Greenhouses with gutter connection  
attached to Plant and Soil Building, 2006

## **Lawn Mowing Then and Now**



Mowing the  
front lawns,  
ca. 1930 and  
2006





## Equipment Changes Through the Years



Horse and wagon, ca. 1920



Ernie Bollhorn mowing, 1980



Summer student on  
Cub Cadet tractor  
pulling Toro gang  
mowers, 1983



Hedge trimming, 2000



Paul Martin training staff, 2006



## Field Days



Clockwise from top:  
Refreshment tent at the  
Field Day, 1917; Field Day,  
1919; Field Day, 1930;  
Pavilion, 1940; Field Day,  
1915

## Centre Events and Play Areas



Picnic shelter, 1962



Pond, 1975



New picnic area, 1997



Beef seminar tent, ca. 2000



Volleyball and basketball, 2000



Bride at her wedding, front lawn, 2005



## **Devastation from a “Wet Micro Burst” July 17, 2001**



**Mother Nature is always with us**





**Landscaping Through the Years**



1908



1921



1933



1945



1976



2006

## Trees Nominated to the Alberta Historical Tree Project



Top: Horizontal Weeping Birch, *Betula pendula horizontalis*;  
Bottom: at photo right, Swiss Stone Pine, *Pinus cembra*



## Landscape Colours





## **Landscape Colours**





## Livestock



Shorthorn in Cage, Alan Tong, 2004

Livestock have been an integral part of the Lacombe Research Centre from the very beginning. In 1912 significant livestock research began when two adjacent farms were purchased, increasing the size of the Experimental Farm by 380 acres and providing the pasture and hay land required. In 1912 the swine herd consisted of 5 bred females and a single boar and they wintered in an A-frame house covered with straw. By 1915 the breeding herd had increased to 31 sows and a piggery was constructed that contained 10 farrowing pens. In those early years and even until the 1970s, it was not uncommon to see pigs roaming freely outside. Since those beginnings considerable change has occurred in the housing and rearing of swine and now pigs rarely see the light of day. A modern swine facility was completed in 1995 and renovated in 2006. This facility is a 100 sow farrow to finish operation with a feed mill, automated feeding systems, effluent management, natural ventilation, biosecurity and a number of welfare friendly housing and animal management systems. A research wing has a penning structure to house experimental animals in different treatment groups.

Herds of beef cattle were also established in 1912 when 20 Aberdeen Angus were purchased, with an additional fifty steers assigned to feeding trials. Beef herds would increase over the years, and during the 1960s and 1970s there were times when the largest breeding herds in the history of the Research Station of approximately 600 cows were maintained and feedlot performance data were collected on as many as 1200 head annually. Infrastructure has changed over the years from the 100 head cattle barn constructed in 1912 to a modern beef handling facility completed in 1997, enabling



data collection on 120 head per hour. In 2007, there is a 300 cow beef herd supported by 650 acres of pasture, a feedlot capacity for 1000 head and automated systems for monitoring feed intake.

In the early years, the Experimental Farm housed a diversity of livestock species, including horses (1907 to 1958), dairy cattle (1913 to 1924), beef cattle (1912 to present), swine (1912 to present), poultry (1912 to 1972) and sheep (1913 to 1924). Horses played a pivotal role in the development of the Lacombe Experimental Farm and under the direction of Superintendent Reed (1920 to 1946), showcasing horse breeds became a prime mandate. In the early years, horses were used to clear land, seed crops, and harvest. By 1917, there were 27 head onsite including Percherons, Clydesdales, and Hackneys. Clydesdales were the only breed of horse after 1929 and four Clydesdale stallions at Lacombe served 428 mares from 1934 to 1944. In 1958, horse breeding came to an end when the horse groomer, Harry Churchill, retired. Horses have been periodically utilized in more recent history to work cattle.

Initial livestock research was primarily focused on highlighting different breeds, as well as nutrition and production practices that would assist the farming community. In subsequent years, poultry (1955 to 1972) and mice (1960 to 1980) were also used in selection studies as genetic models for larger livestock species, but by the late 1940s livestock research was largely devoted to beef and swine. Alternative livestock species that were periodically housed at the beef unit feedlots during the 1990s included emu, ostrich and bison. These animals were used in studies to examine the impact of ante-mortem management practices upon stress, carcass value and meat quality.

Staff instrumental to the early success and recognition of the livestock programs were Superintendent George Hutton (1907 to 1919), the head of livestock research, H.E. "Happy" Wilson (1926 to 1948) and the head swine herdsman, Bev Harrington (1924 to 1970).

As early as 1918, Lacombe was recognized as a centre for extensive cross breeding studies with beef and pigs and Lacombe researchers played a critical role in the design of National Record of Performance testing policies. But it was not until pig breeding research was initiated in 1947 and cattle selection studies began in 1949 that the program was more focussed on breeding and genetics. Howard Fredeen (1947 to 1984), Jack Stothart (1949 to 1976), and Jack Newman (1955 to 1991) ultimately rejuvenated the livestock science programs with profound results. A notable achievement was the development of the Lacombe breed of hog, which was the result of 10 years (1947 to 1957) of breeding research. At this time, the beef breeding program at Lacombe became the largest in the world. Highlights of major programs included the shorthorn selection project (1957 to 1970), which provided the first evidence of the value of selection criteria within a single breed. This was followed by an evaluation of performance and carcass traits for European breeds of cattle, and involved crossing Limousin, Simmental and Charolais with domestic breeds (1970 to 1990). Cooperators in this project included the Research Stations at Lethbridge and Brandon, as well as cattle ranchers in Alberta, Saskatchewan, and Manitoba. Other foreign breeds were also evaluated at this time, but the least popular at the Beef Unit were the Chianina, who with their exceptionally long legs, were often up and over the fences.

Animal Science became a section in 1955 with Howard Fredeen as head, and key longtime members of the section were Gordon Bowman (1952 to 1962), Jack Newman, and Huib Doornenbal (1956 to 1987). Milton Weiss (1956 to 1985) and Eva Reimer (1955 to 1982) provided support on experimental design and statistical analyses and Archie Martin joined the group in 1964 to strengthen the research expertise in carcass and meat quality. Al Sather (1974) and Alan Tong (1977) were also members of the section until their transfer into meat science. Worthy of note are the long time senior

herdspersons who made significant contributions to the management of livestock: Bill Jardine (1924 to 1946), Ed Linton (1946 to 1963), Ian Turnbull (1969 to 1995), Darrell Neal (1970 to his untimely death in 2001); and in the piggery, George Open Dries (1955 to 1984), and Lorne Tannis (1984 to 1996).

Howard Fredeen resigned as section head in 1979 and Jack Newman assumed the responsibility as head of a dwindling animal breeding and genetics program. Part of restructuring at this time involved the development of a Meat Science Section under the leadership of Archie Martin. The next few years would see a remarkable change in direction with animal breeding and genetics being terminated and meat science experiencing a period of rapid growth. The last remnants of an animal breeding and genetics program would disappear with Jack Newman's retirement in 1991. Livestock breeding programs would be remembered internationally for valuable contributions to animal production, performance, selection criteria and carcass merit with notable contributions to basic and applied animal science.

The livestock herds were used largely by the Meat Research Section from 1980 until about 1994 as a source of meat animals which could be controlled prior to slaughter. The beef and swine units reported as operational groups to the Meat Research section head. In 1995, Bill Starr became Farm and Cattle Manager and was responsible for the management of the swine and beef units, eventually reporting to Centre Administration. When the Western Forage Beef Agreement was signed in 1994, beef cattle at Lacombe were utilized in new research which included grazing studies, pasture management, feed efficiency and cattle identification systems, and often involved the collaboration of provincial researchers. Upon the departure of Bill Starr in 2005, Ken Grimson became the Farm Operations Manager and the unit supervisors are presently Cletus Sehn (beef) and Sheri Nelson (swine). The current research swine herd was produced from purchased Hypor F1-Manor hybrid sows bred to Duroc boars, with 60% of breeding done by natural mating. In 2007, the Swine Unit began breeding their own replacements using Hypor GP Large White females artificially inseminated by Hypor Landrace boars to produce their own F1-Manor hybrid sows. The Lacombe Research Centre beef unit has four breeding herds; two calving in the spring and two calving in the fall. Currently Lacombe is using Charolais-Red Angus and Hereford-Black Angus cows.

Apart from providing a source of meat of known origin, there has been and continues to be considerable research on the impact of livestock management practices, including feed and nutritional modulation upon animal welfare, carcass value and meat quality. With modern handling and rearing facilities, it has become more feasible to treat and evaluate animals in controlled environments. Jon Meadus (1997 to present) has also developed a molecular program relating to the genetic determinants of meat quality. Recent research has utilized herds to detect and determine the origin of meatborne bacterial pathogens in livestock that could be transmitted through the meat production and processing chain to humans.



## Early Staff and The First Animal Science Building



Animal Science office building, 1961



Old Animal Science building, painted by Alan Tong, 2001

Lacombe Research Station 75th anniversary. Standing from left: Bill Jardine, Lin Bolton, Tom McBeath, Don McFadden, Hugh McFadden and Frank Brewster. Seated from left: Happy Wilson, Mrs. Seymour Edmunds, Bev Harrington, 1982



Bev Harrington, 1956



Harry Churchill (1943-1958) and Ed Linton (1946-1963)

## Animal Breeding and Genetics Researchers



Ed Linton with Shorthorn Bull, 1946



Jack Stothart with Doura Ambassador,  
1967



Howard Fredeen with Members of  
Parliament in cattle pen, 1969



Al Sather talking to Chinese delegates, 1978



Jack Newman receiving 35 year award, 1990



Right, Alan Tong presenting Bill Starr with a painting at  
his retirement with Jackie Busaan, President of Social  
Committee in background, 2006



## Swine Program



Aerial view looking east of Swine unit, 1999



Left: Hogs in wood and straw sheds, 1940;  
Below left: Lottery draw for a Lacombe hog,  
made by Alex Ellis, Jack Stothart, Howard  
Fredeen, and Lorraine Malmas, 1959;  
Below right: Sheri Nelson in Swine Barn,  
2006



## Piggery Staff



Frank Fawcett, Mitch Thevenaz, Karen Brassington, George Op den Dries,  
Bonnie Hunt and Ed Chalmers, 1980

Standing from left: Bill Starr,  
Jim Rudy, Nicole Lee  
Seated from left: Sheri Nelson,  
and Shane Sroka, 2005



Radar, Piggery mascot, 1991





## Swine Housing and Management Practices



Pigs feeding in winter, 1910



Pigs in winter rye, 1931



Feeding on the ground, 1960



Breeding Barn constructed 1915, renovated in 1935, photo from 1962



This was called the Toy Barn, because children's toys were used for swine animal welfare research in late 1950s, photo from 1962



Piggery, 1990

## Modern Farrow to Finish Swine Facility



From left: Steve Morgan Jones, Minister of Agriculture Ralph Goodale and Alberta Minister of Agriculture Walter Paszkowski at the ribbon cutting ceremony, 1995



Gestation Wing, loose sow housing



Natural ventilation in the gestation wing



Hog research wing



"Piggy Decks" increased survival rates in piglets



Hogs are sorted automatically at market weight



## Beef Program



Beef Unit aerial view looking west, 1982.



Left: Shorthorn, grazing, 1940;  
Below left: cattle grazing, 2007;  
Below: Adonis, first Simmental  
born in Canada, 1960



## **Beef Unit Staff**



Standing: Glen Flewelling, Neil Majeski, Lawrence Christianson, Gary Young,  
In front: Ian Turnbull, "Scotty", Trudy Grimson, and Dave Carlson, 1980



Back row from left, Cletus Schn, and Aaron Fedusenko; front row from left  
Jenna Wiess, Kerry Jay, Dave Cahill, and Ken Grimson, 2006



## Cattle Housing and Management Practices



Holstein and Angus herd, 1916



Men and horses digging a pit silo, 1922



Holstein cattle, ca. 1925



Silaging corn for feed, 1956



Beef barn, 1962

*Livestock*



Load of hay headed for hungry livestock, 1930s



Hay bale storage, ca. 1950



Loading silage, 1960



Loading silage, 2007



Swath grazing, 2006



Winter feeding in Feedlot, 2007



## New Beef Handling Facility



Beef handling facility, 2006



Darrel Neal, Gord Greer, Bill Starr opening of  
new beef handling facility, 1997



Modern feedlot office, 2007

## Other Livestock



Sheep moved to spring pasture in front of Administration building, 1925



Hauling wool sacks, taken in front of Director's Residence, 1930



Clydesdales standing in harness, 1933



Chickens, 1952



Dawn Sumner and mice used as genetic models for larger livestock species, 1982



Bill Starr on horseback, 2006





Emu are rich in oils used for  
pharmaceuticals, 1993



Ostrich, 1996



Bison, north feedlot, 2003

## Meats



Yellow Aprons, Alan Tong, 2000

The importance of animal breeding and genetics to the industry and the farming community was reflected in the mandate of the animal science programs but the relevance of carcass merit was recognized as early as 1952 when carcass research was undertaken. Non-destructive, electronic and physiological techniques were developed to estimate carcass lean and fat in live animals. Realizing the need for carcass dissection data, Howard Fredeen collaborated with the industry to collect information which enabled the development of a new hog carcass grading system in 1968 and a new national beef carcass grading system in 1972. Archie Martin, who joined the Animal Science Section in 1964, contributed to the early grading research. Archie Martin was the first true meat scientist at the Lacombe Research Station in that his research did concern objective and subjective post-mortem measures of pH, colour, carcass ageing effects, tenderness and taste panel evaluations.

A notable deficiency at that time was the lack of resources and expertise to establish a comprehensive research program to investigate factors affecting meat quality, particularly during post-mortem processing, storage and distribution. To address this need, Howard Fredeen and Archie Martin recruited three new scientists and by 1978 a meat research group was established with expertise in muscle biochemistry (Austin Murray), carcass and meat quality (Archie Martin), microbiology (Gordon Greer) and sensory evaluation (Les Jeremiah). Subsequently, Animal Science was divided into a Breeding Research Section with Jack Newman as Head and comprising Howard Fredeen, Al Sather, Alan Tong, and a Meat Research Section, with Archie Martin as Head. At this time Huib Doornenbal (animal physiology) was transferred into the Meat Research Section.



Over the next five years meats research laboratories were housed in an office building vacated in 1959 upon completion of a new office-laboratory complex. Although this structure had been condemned, it was renovated to accommodate a muscle biochemistry laboratory, a walk-in cooler, tables for fabricating meat cuts, crude facilities for the sensory evaluation of cooked meat and a retail display case. The rear wing of the building contained the back-up mouse colony, which was maintained to support small-animal breeding research. There was no room for a microbiology laboratory in this building and the first microbiology laboratory was located in the Administration Building in 1978. Despite the difficulties associated with conducting research in this environment, the Meat Research Section continued to gain national recognition and under Archie Martin's leadership, the Lacombe Research Station became recognized as the Centre of Excellence for meats research in Canada.

Although the Lacombe Research Station did have its own swine and beef herds which enabled a level of control over the ante-mortem phases of animal production, meat researchers were still reliant upon commercial processors for the slaughter and dressing of meat animals. Thus, Archie Martin's next challenge was to design, fund and construct an on-site slaughter and processing facility with associated meat quality laboratories. His dream came to fruition with the completion of the new Meat Research Centre and its official opening in 1984 by the Minister of Agriculture, Hon. Eugene Whelan. The building housed a federally inspected slaughter and processing facility and five meat research laboratories. Five experienced meat processors were hired to operate the plant under Ray Wilson, the first plant supervisor. Lacombe was now in the enviable position of having the only program in Canada and one of few in the world with the infrastructure and expertise to conduct research on factors affecting meat quality throughout the entirety of the meat production continuum from animal conception to consumption.

Howard Fredeen retired in 1984 and following Archie Martin's retirement in 1985, Steve Morgan Jones was appointed to the position of Section Head, Meat Research. Steve brought considerable meat science knowledge to the program and his academic and industry experience and recognition were foremost. As a leader, he cultivated a team approach among meats researchers at Lacombe. Steve stressed the importance of industry collaborations and over the next decade strong links were forged with the meat production and processing sectors and the Lacombe Meat Research Section became a credible and frequently consulted resource for the Canadian industry. A beneficial working relationship with the Canadian Food Inspection Agency (formerly the Food Production and Inspection Branch) was also an important aspect of the program both in grading and hygienic processing.

New scientist appointments included Al Schaefer in 1985 who established a research program in animal physiology, growth and behaviour. In 1990, meat microbiology was expanded with the addition of Colin Gill to work in meat hygiene and preservation, and Jennifer Aalhus added new research expertise in the cellular basis of meat quality. Jennifer had the distinction of being Agriculture and Agri-Food Canada's first permanent female scientist at Lacombe and the number of female researchers in the Meat Research Section has now grown to four.

A major change during this period of time was the elimination of the animal breeding and genetics program and the transfer of the management of swine and beef production operations to the Meat Research Section Head. Alan Tong became the station statistician in 1984. Al Sather moved into meat science in 1987 to investigate pre-slaughter influences on pork quality, Huib Doornenbal retired in 1987, and Jack Newman retired in 1991.

This was also a period of diversification in that alternative livestock species were investigated. That is, meats research traditionally conducted on swine and beef, was now undertaken on lamb and alternative species including ostrich, emu, elk, deer, bison and muskoxen. In view of this, Don Brereton, who became the plant supervisor in 1988 and his staff were charged with the development of innovative slaughter and dressing methods for processing those unique species and the lairage area was completely renovated to accommodate them. Further modifications to the processing plant allowed controlled research on commercially relevant chilling technologies (blast, spray).

Steve Morgan Jones became the Centre Director in 1994 and Gordon Greer became the next Meat Research Section Head. The program continued to experience growth over the next 7 years with the recruitment of additional scientists and the relocation of others. Alan Tong initiated a program in computer vision research to support the meats program in 1995. Also in 1995, Wayne Robertson became a beef grading and carcass quality researcher, while André Fortin was transferred from Ottawa to take a position in pork carcass and meat quality. In 1996 Frances Nattress (microbial safety and quality of meat) and Mike Dugan (meat lipids) joined the section. Jon Meadus was appointed to the position of molecular geneticist in 1997 to examine molecular determinants of meat quality and yield. Meat microbiology continued to grow with the recruitment of Mueen Aslam in 2000. Les Jeremiah retired in 2002.

Collaborations with the province of Alberta enhanced research capabilities on animal welfare and nutritional manipulation of meat yield and quality. Several scientists within the section were now adjunct professors at the University of Alberta and this created new opportunities for research collaborations and the training of graduate students. Research, historically restricted to red meats, was expanded to include poultry quality and microbiology. A new laboratory wing (1750 sq.m., \$4.3 million) was constructed to accommodate the growing programs of all researchers and to enable the co-location of students and collaborators from the universities and from industry. This new facility was opened by the Minister of Agriculture, Hon. Lyle Van Clief in 1998. By 2002, the Meat Research program was comprised of about 40 full time and 10 term staff. Of these, 12 were permanent scientists and 13 were permanent technicians. A significant addition to the meat dressing operation was a hot water pasteurizer to decontaminate carcass surfaces. With these state-of-the-art facilities and experienced staff, Gordon Greer continued to promote the section as an integrated team of researchers with a research mandate to develop methods by which the industry could produce, process and distribute meat of consistent and predictable quality, storage life and guaranteed safety.

In 2002, Gordon resigned as the Section Head and was succeeded by Jennifer Aalhus. With impending retirements, Jennifer's initial goal was to maintain a core of expertise in grading and meat quality. She was also a visionary, recognizing a need to diversify the research program and broaden the horizon to areas that would include research on value added meats. A notable achievement in this area was her level of commitment and role in securing support for a value-added meat initiative under the newly formed Institute for Food and Agricultural Sciences, Alberta (IFASA). In the animal production and meat processing aspects of the program, Jennifer was successful in maintaining herds of animals dedicated to meats research projects and, in consultation with Chuck Pimm, third supervisor of the meat plant processing operations (2004), she developed plans for the staffing and upgrading of the slaughter and processing facility.

Agriculture and Agri-Food Canada underwent a re-structuring in 2004 in which all sections within the Research Branch, including the Meat Research Section, were dissolved and a hierarchy of management for scientific programs was established in Ottawa. Lacombe Meat Section scientists now report to different programs, managed by distinct Science Directors, but research on the



fundamental and applied aspect of meat science continues to thrive. The meats section lost three senior scientists with the retirement of Austin Murray, Alan Tong and Gordon Greer in 2006. However, Bala Sampathkumar was hired to replace Gordon and the meat microbiology team had grown to five scientists, with the addition of a new program on foodborne viruses led by Tineke Jones (2005). There are now sufficient staff and resources to conduct research on most aspects of meat safety, spoilage and preservation.

The meat quality team, initially shrinking to four researchers due to retirements, is now in the process of rebuilding. Lorna Gibson was promoted in 2004 to become a meats sensory evaluation biologist. In 2006, new scientists hired, namely William Caine, meat bionutrients and health and Bethany Uttaro, applied bioinstrumentation. Additionally, two researchers in the areas of molecular genetics, and animal physiology and welfare complement the group. This team of knowledgeable staff continue to design and conduct relevant research to evaluate and improve carcass value (yield) and meat quality (colour, marbling, tenderness, palatability, nutrient composition) in the ante- and post-mortem phases of meat production.

## Beginnings of Meat Research



Howard Fredeen (middle) using radiography, 1956



Huib Doornenbal (left), Physiology, 1958



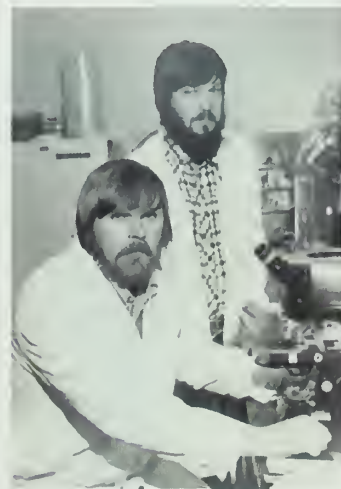
Archie Martin taking meat yield measurements, 1967



Leon Jarmoluk (right) conducting photographic imaging of carcass sections, 1967



Les Jeremiah conducting carcass quality tests, 1976



Gordon Greer and Bryan Dilts, Microbiology, 1980



## **First Integrated Meats Laboratory, 1977-1984**



First meats laboratory building just prior to demolition, 1985



Austin Murray (second from left)  
explains muscle biochemistry, 1980



Les Jeremiah, Lorna Gibson (Skyrme), Bryan  
Dilts, sensory evaluation, 1981



Lorna Gibson (Skyrme) and  
Bryan Dilts, taste panels, 1981

## Eugene Whelan, Minister of Agriculture, opens new Meat Research Facility, 1984



Eugene Whelan, Stan Schellenberger, Don Waldern, Jim Graham, Barry Mehr, Mick Price, Bill Pelton, J. Andrews



Don Waldern and Eugene Whelan



Archie Martin, Peter McCann and Eugene Whelan tour facilities

Ralph Burt, one of first Food  
Production and Inspection  
Branch Inspectors at the facility,  
1985





## **Agriculture and Agri-Food Canada Minister Lyle Vanclief Opens New Meats Laboratory Wing, 1998**



Left and above, Lyle Vanclief  
addressing the crowd; Right,  
Director, David Bailey and  
Lyle Vanclief



## Meats Research Section Heads



Archie Martin, 1977-1985



Steve Morgan Jones, 1985-1994



Gordon Greer, 1994-2002



Jennifer Aalhus, 2002-2004



## Meats Researchers and Support Staff

P.J. L'Hirondelle, Austin Murray (Biochemistry), Archie Martin (Section Head, Carcass and Meat Quality), Brenda Deardoff, Les Jeremiah (Meat Quality and Sensory Evaluation), 1980



Back row, left to right: Cody Meston, Dave Rolland, Mike Dugan, Dave Best, Bryan Dilts, Pierre Lepage, Bethany Uttaro, Jeff Colyn, Jon Meadus. Front row: Jennifer Aalhus, Gordon Greer, Denise Froehlich, Fran Costello, Sophie Zawadski, Lynda Baker, Lorna Gibson, Glynnis Croken, Alan Tong, south entrance to Meats Laboratory, 2004



Back row, left to right: Alan Tong, André Fortin, Jon Meadus, Tineke Jones, Ken Grimson, Austin Murray, Mike Dugan, Mucen Aslam, Frances Nattress, Chuck Pimm, Al Schaefer. Seated: Bethany Uttaro, Lorna Gibson, Wayne Robertson, Gordon Greer, Jennifer Aalhus, Bala Sampathkumar, 2006

## Meat Processing Supervisors



Ray Wilson, 1984-1988



Don Brereton, 1988-2004



Chuck Pimm, 2004-present

## Meat Processing Staff



Left to right: Dwight Baird, Jeremy Sealock, Darcy Schatschneider, Chuck Pimm, Darryl Pierce, meat processors, 2007

Left to right: Jeremy Sealock, Dale Langevin, Stan Landry, Sophie Zawadski, Bethany Uttaro, Dwight Baird, Chuck Pimm, Darryl Pierce, processing pork, 2007





## Current Support Staff and Activities



Meat Microbiology, front to back: Madhu Badoni, Debbie Olsen, Lynda Baker, Cara Service, Bryan Dilts

Left: Animal Physiology, Growth and Behaviour, left to right: Laverne Holt-Klimiec, Jeff Colyn, Sigrid Marchand, Pierre LePage, Denise Froehlich



Below left: Pascale Duff, Molecular Genetics;  
Middle: Dave Rolland, Meat Lipids;  
Below right: Mike Johns, Virology



*Meats*



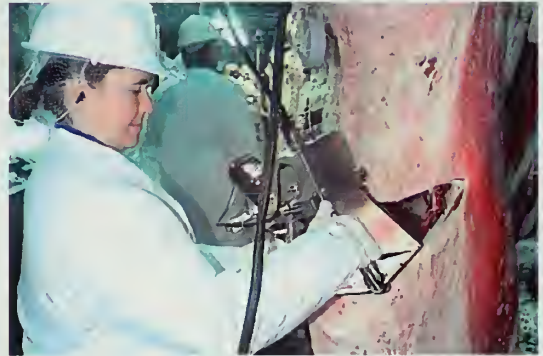
Sensory evaluation, Glynnis Croken and Christine Burbidge-Boyd



Professional taste panel



Beef and pork grading, Stan Landry



Computer Vision System grading, beef cold camera, Sophie Zawadski



Meat Quality, left to right: Ivy Larsen, Fran Costello, Rhona Thacker



## Diversification



Above: Feeding treated hay bales to Muskoxen; below: Al Schaefer, Stan Landry, Banks Island, 2002



Ostrich Grading,  
Waync Robertson, 1995



Bison Processing - left: Jeremy Sealock and Laverne Holt-Klimec; right: Darcy Schatschneider, 2003



Llama, Chuck Pimm,  
Cody Meston, 2001



Elk, left to right: Al Schaefer,  
Terry Church, Mike Vanson, 2001

## Expert Committee on Meat and Poultry Products



Present from the Lacombe Meats Research section were Gordon Greer, Archie Martin, Les Jeremiah, Austin Murray and Huib Doornenbal, 1983



Present from the Lacombe Meats Research Section were Gordon Greer and Frances Nattress, 2000





## **Affiliated Stations**



Livestock Pavilion, Alan Tong, 2003

### **Beaverlodge Experimental Farm**

In 1917, the Beaverlodge Sub-station was formally recognized, although informal work had begun in 1913 under stipend from Mr. J.H. Grisdale, Director of the Central Experimental Farm in Ottawa. The sub-station consisted of 40 acres (16 ha) of land leased from William Donald Albright in 1919, at which time he also became the official Superintendent. From the initial “all things to all people” approach, Beaverlodge quickly responded to the needs of the region, focusing on cereal and forage production, tillage, livestock and horticulture. With land clearing a major activity in the area, efforts were directed to the maintenance of soil productivity and quickly converting rough pasture to arable farmland.

In 1922, the first colony of bees arrived from the Lacombe Experimental Station, beginning a long history of apiculture in the north. Early nectar sources were clover, fire weed, and sunflowers, and early beekeepers included W.D. Albright, George Nelly and John Foster. In 1935 Dr. Al Carder was hired to examine the adaptability of forage varieties to the region. He worked with creeping red fescue as well as inoculating alfalfa to increase production. After WWII, Dr. Carder (retired 1969) turned his attention to weed control and crop response to climate.

During World War II, John Alexander Wallace came to Beaverlodge from Morden, Manitoba, to work in the horticultural program. He also started the Beaverlodge Nursery, which was famous for



the quality, hardiness and adaptability of its nursery stock. In 1952 the Saskatoon varieties *Smoky* and *Pembina* were released from Beaverlodge. Wallace retired in 1959 and was replaced by Dr. R. E. Harris (1956 to 1975).

In 1940, the government bought Albright's farm (318 ac or 129 ha) and upgraded the facility to a full station in 1941. In 1945, Superintendent Albright retired and was replaced by E.C. Stacey. During the post war period, the land base was again expanded and the focus of several programs was changed.

The 50s were an active time for soils research with Arnold Hennig (arrived 1954), Dr. Paul Hoyt (1953 to 1980), Jack Dobb (retired early 70s), and Dr. Marvin Nyborg (1958 to 1968). Research included studies of the processes of clearing and breaking bush land, erosion, fertilizer placement and crop response, and rotation with legumes. Beekeeping, which had been discontinued in 1939, started again in 1953, when Dr. Peter Pankiw was appointed to research European foul brood disease, pollination of alsike and red clover and to manage packaged bees. In 1954, the first Beekeeper's Field Day was held. These field days, which continue today, present an opportunity for producers and researchers to exchange ideas and information.

Under Station Director and barley breeder, Dr. Art Guitard (1962 to 1969), emphasis was placed on breeding cereal, forage and oilseed varieties suitable to the area. Highlights include *Anik* alfalfa, *Boreal* creeping red fescue, and *Aurora* and *Dawn* alsike clovers, all still widely grown. In 1965, all northern Agriculture Canada facilities were amalgamated under The Northern Research Group (NRG). Headed by Beaverlodge and including Fort Vermilion, Prince George, BC, Fort Simpson, NWT and Haines Junction, YK, NRG examined agriculture potential in the north, including the Slave River lowlands. The NRG identified vast areas of arable land, as well as the accompanying restrictions to development due to logistic and economic factors. NRG was disbanded in the 1970s.

Under Director Dr. Lloyd Spangelo (1969 to 1985), the 70s were a time of expansion in apiary research, with the appointments of Dr. Don Nelson (1971 to 2003), Dr. Tibor Szabo (1974 to 1997), and Dr. Harvey Lerer (1978 to 1980), joining Dr. Peter Pankiw (retired 1979). Studies from this time include leaf cutter bees and forage seed production, breeding and bee pathology. Dr. J.G.N. Davidson started the plant pathology program in 1973, with his work with snow moulds, canola blackleg and barley leaf stripe. His personal interest in horticulture resulted in the release of a number of varieties of Saskatoons, strawberries and apples. Weed scientist Dr. Lloyd Darwent (1971 to 1996), who specialized in integrated weed management, and soil microbiologist Dr. Wendell Rice (1970 to 1999), who commercialized rhizobia for alfalfa and field pea, added to the knowledge base.

By 1980, programs consisted of soil fertility and management, nitrogen fixation, apiculture management and breeding, forage breeding and seed production, plant pathology, cereal and canola breeding, weeds, and agrometeorology. Under Director Dr. Jim McElgunn (1985 to 1996), appointments in the 80s included barley breeder Dr. Bob Wolfe (1981, transferred to Lacombe 1992), apiarists Dr. Daphne Fairey (1981 to 1997) and Dr. Steve Liu (1981 to 1996), forage agronomist Dr. Nigel Fairey (1981 to 2007), soil scientist Dr. Yoong Soon (1983 to present), canola breeder Dr. Don Woods (1986 to 2000) and canola pathologist Dr. Henry Klein-Gebbiniek (1986 to present).

During the Federal budget cuts of 1995, a number of the programs at Beaverlodge were eliminated or reduced and all its activities were linked to Lacombe. Dr. Newton Lupwayi (1994 to present) started work with Dr. Rice and now works on soil microbial ecology. In 1996, agronomist Dr. George Clayton was briefly transferred to Beaverlodge from Fort Vermilion. When George was

transferred to Lacombe in 1998, he was replaced by Dr. John O'Donovan (transferred to Lacombe 2006). Agronomic work has focused on reducing inputs for crop sustainability. A new Insect Pest Management program began in 1999 with the hiring of Jennifer Otani with emphasis on biology and management of canola and forage seed insect pests. A new apiarist, Dr. Stephen Pernal (2001 to present) is focusing on ways to aid the beekeeping industry by reducing antibiotic residues and improving American foul brood resistance.

As Beaverlodge prepares to celebrate its 100<sup>th</sup> anniversary and the problems of climate change and loss of arable land in southern Canada become more pronounced, a station on the edge of 15 million ha of land is perfectly positioned to develop and conduct research to meet the many challenges that agricultural production will face in the future.

### **Fort Vermilion Experimental Farm**

In April of 1907, Fred Lawrence, a local farmer, established contact with personnel at the Central Experimental Farm in Ottawa and in late summer he returned with a mandate to establish a Sub-station at Fort Vermilion. He also returned with various seeds and tree stock which were planted on the selected site, the farm of Robert Jones at Stoney Point, on the lower south banks of the Peace River, west of the present day bridge. The Sub-Station was formally initiated by an agreement dated April 7, 1908 between Dr. William Saunders and Robert Jones, who was appointed the first Officer-in-Charge and continued in that role until 1933.

In the early years at Fort Vermilion there was a particular emphasis on horticulture, home gardening and evaluating crops. In those days, many people were moving into these regions lured by the promise of free land. With little or no knowledge of farming and with the pressures of land clearing and log home building, these settlers were often focused on survival rather than productive farming.

In April of 1934 the area and Sub-Station were flooded, and in 1935 a decision was made to move the Sub-station east to its current location on the top of the riverbank. Bert Lawrence was the Officer-in-Charge in 1933 until his death in 1944, when Vic Lowe was appointed (1944 to 1956). In 1955, the Sub-station was raised to the status of Experimental Farm. Hank Anderson took over the superintendent duties in 1956 until 1963. At this time there were approximately 14 full time staff at Fort Vermilion and roughly double that in the summer. In the 50s and 60s the work of John Aitcheson was instrumental in producing fruit crops that were suited to the region. Officer-in-Charge Anderson was in turn followed briefly by Tony Kush, E.C. Stacey, and Ben Siemens in 1963 (retired 1993).

In 1965, Fort Vermilion was amalgamated with Beaverlodge and a number of other off station sites to form the Northern Research Group (NRG). This group had a mandate to explore the agricultural potential in the entire northwestern region of Canada.

In 1980, *Peace* alfalfa, with excellent winter hardiness, was registered. In 1982, Dr. George Clayton, agronomist, was appointed and his work centered on reduced tillage, fertilizer placement and field pea. In 1993, George took over as the last Officer-in-Charge until he was relocated to Beaverlodge in 1996 and then Lacombe in 1998. Joe Unruh is presently in charge of operations at Fort Vermilion, and three staff assist him during the growing season. Field research at Fort Vermilion is under the direction of scientists located at western Canadian stations, including Lacombe, Beaverlodge, Lethbridge, Saskatoon and Winnipeg.



## **Vegreville Sub-Station**

The Vegreville Sub-Station was developed in 1957 to investigate crop production problems on Solonchic soils. These soils have a tough, hard pan 5-30 cm below the soil surface, which restricts the movement of water and root penetration. Research focused on depth of tillage (plowing), crop rotations and the use of commercial fertilizers. The first Officer-in-Charge, Ross Cairns (1957 to 1979), developed the Vegreville facility prior to expanding his research to the Solonchic soils throughout the eastern half of the province. Martin Carter, Soils and Officer-in-Charge and Richard Pearce, Crop Physiology, were added to the staff in 1981. Dave McAndrews (Officer-in-Charge 1984 to 1994) shepherded a major renovation of the facility and grounds that was completed in 1988, when a new laboratory office complex was constructed in partnership with the province of Alberta. In 1994, after the facility was closed, Dave McAndrews was transferred to Morden, MB and Richard Pearce was transferred to Lacombe. When the facility closed, long time employees included Irvin Cowan (1952), Nestor Zubreski (1955), Mike Sturmay (1956), Ernie Gizowski (1966), and Jean Erickson (1971).

## Early Years - Beaverlodge



George Heely, beekeeper, 1926



Taking notes and harvesting rod row plots of wheat,  
1927



Field Day, August 1936.



Beekeepers field day, 1935





Staff: R.F. Cook, E.C. Stacey (Assistant Superintendent), Jim Harcourt, B. Albright, John Foster, J.E. Crawford, John Cusack, R.E. Campbell (Foreman), Mrs. Wilder, I.C. Shank, Miss M. Roberts, L.M. Godfrey, Mrs. W.D. Albright, V. Thiel, J.R. Harcourt, C. Fawkes, J.H. Crossley and W.D. Albright, September, 1933



Most of the station staff and their families at the farewell picnic for Miss Roberts, Beaverlodge River, June 1, 1942

## Beaverlodge Buildings



Dominion Experimental Station,  
ca. 1920

Administration Building,  
1969



Crop Services and  
Greenhouses,  
2001



## Personnel - Beaverlodge



NRG Group Photo top to bottom, left to right: Bob Elliott, Lloyd Darwent, Lloyd Spangelo, Paul Hoyt, Steve Bonin, Ken Dawley, Don Faris, Arnold Hennig, Jim Reilly, Wendell Rice, Bill Pringle, Don Nelson, Ben Siemens, Peter Pankiw, 1972



Roy Hodges, Jim Brown, Bill Guise and Jim Elhorn, Administration



Shirley Neighbour, Maureen Sywolos, Mary Anne Kowalchuk, Joan White, Gordon McLean, and Steve Jones.



Alanna Olsen, Kelly Stillwell, Kelly Olsen, Cheryl Fletcher, Peter Karl, Dawn Cooper, Margaret Baird, and Cindy Biesel, Cereals



Owen Lee, Tom Cramer and John Lieverse, Forages



Jack Smith, Jim Drabble and Marie Hildebrand



Staff, 1985



Janet Kerr, Bonnie Elhorn and Kelly Wilson,  
Administration



Mandy Collins and Joan White,  
inoculant testing.



Don Nelson and George Henn





Bob Elliot, Forage Field Day, 1981



Bill Sterr and Arnold Hennig, fertilizer trials, 1981



Erosion plots, Fall 1983

## Fort Vermilion

July 1924



Facing northwest  
September 1938

Fort Vermilion Sub-Station  
staff: "Big Little" land clearer,  
Bobby Jones, Tiny the Teamster,  
Mr. Lavender, Mrs. and Mr.  
Lawrence, Sept 8, 1938







Helicopter View, 1952

George Clayton and  
Ben Siemens, ca. 1980s



Aerial view, 2005

## Vegreville



Aerial View, June 1978



Mike Sturmey, Nestor Zubreski, Ross Cairns,  
Ernie Gizowski, Irwin Cowan with  
Jean Erickson seated



Deep plowing Solonetzic soil, 1956



Examining a deep plowed trench, 1978



Dave McAndrew and Deputy Prime  
Minister Don Mazankowski at the  
official opening of the Agronomy  
Research and Administrative  
Offices Building, Vegreville  
October 29, 1988





## **Achievements and Awards**



Front of Administration Building Winter, Alan Tong, 2004

In the early years of the Centre's history, research was closely aligned with the farming community, particularly production practices suited to the region. Thus, an achievement would be recognized in the development of a better yielding cultivar, enhanced production efficiency or simply an evaluation of crop and animal performance. In more recent history, researchers have undertaken an increasing number of studies which contribute to a better understanding the basic science of food and agriculture. They also collaborate with the private sector in the design of practicable, innovative production and processing strategies to improve farming and food production systems. Often these innovations result in a technology, new cultivars or breeds, an apparatus or a more efficient method.

Examples of such research might include recommendations of processes to evaluate and improve the yield, quality and safety of meats including advice to the Canadian Food Inspection Agency on grading and hygienic processing; assessment and control of plant diseases, innovative tillage practices, integrated pest management, etc. Only rarely do the results of research generate patentable, commercializable technologies that are used by the industry. Such examples from Lacombe and affiliated sites include the Computer Vision System for beef grading and composition, the carcass pasteurizer, granular inoculant, the Lacombe hog, infrared technologies for non-invasive evaluation of animals, and widely utilized varieties of cereal grains and horticultural crops that have stood the test of time. The design and fabrication of unique equipment for working in plots,



managing livestock and processing meat animals also requires ingenuity and should be noted as an achievement.

Notable, single and lifetime achievements are occasionally recognized by an award which may be presented by scientific societies, academic institutions, industry organizations and government and include such prestigious awards such as the Order of Canada. Criteria used to award scientific achievements usually include the identification of a technology with a perceived impact and the potential for immediate transfer to the production and processing sectors. However, fundamental, scientific research is often cumulative and contributes incrementally to a body of knowledge of value to the scientific community. There is also considerable research that is “public good” and benefits society by improving the quality of life through the development of methods to improve the yield, quality and safety of food. Most research at the Lacombe Research Centre and affiliated sites would fall under these latter areas and the impact is not as easily measured and can be overlooked.

Thus, the objective of this section is not only to highlight some of the more notable awards and obvious achievements over the past hundred years but also to consider overall scientific achievements which may not have been as readily recognized. A more detailed list of awards, and cereal and horticultural varieties developed at Lacombe and affiliated research centres appears in Appendices 2 and 3.

Throughout the history of the Lacombe Research Centre, the animal and meat science programs have made significant contributions to basic science and the agri-food sector. Achievements are evident in livestock breeding and genetics, and in meat yield, quality and safety for a number of diverse species. Apart from the well-documented development of the Lacombe hog, researchers have also provided a wealth of valuable data to producers on beef cattle breeding, performance and carcass merit. They were world leaders in the design of performance programs and the first to provide data supporting the value of performance testing within a single species. Producers were also provided with performance and carcass merit information on crosses with several exotic breeds which enabled decisions on the value of these unique breeds in Canada.

The Lacombe Meats Research Section is internationally recognized for research achievements in the areas of meat yield, quality, safety and preservation. Researchers continue to provide important information to the production and processing sector on systems for producing meat of predictable and consistent quality and safety. Notable achievements include the development of methods to detect and treat antemortem stress, development and revision of national grading standards for beef and pork, including the design and testing of novel instrumental grading technologies, ante- and postmortem methods to evaluate and improve meat yield, colour, tenderness and eating quality and hygienic processing procedures and preservative strategies by which the industry can improve the safety and storage life of meats.

In the latest reorganization of AAFC, programs officially became national rather than local. In reality, local programs have worked in concert since the beginning. Often, advances have been incremental and not necessarily awarded, but research has moved steadily forward, increasing the knowledge base and ultimately the profitability of the agricultural industry.

Although ‘integrated crop management’ is the latest buzz term, in reality crops researchers have always been working towards optimal performance. Breeders initially screened known cultivars for local climatic conditions and then have thoughtfully crossed them to produce new ones specific to the area. Some of these cultivars have been registered under stringent guidelines and many are still in

use across the Prairies. But they have not acted alone. Plant pathologists have added disease screening techniques, agronomists information on how and when to seed and harvest, and herbicide specialists weed control strategies. Machinery has been fabricated from the ground up for the specific requirements of small plot research. Fertilizer requirements have been investigated and often machinery has been modified to allow specific placement of nutrients. In the northern regions where forage seed production is so important, cold tolerant strains of rhizobium species for inoculation of alfalfa and field pea have been identified, increasing production and returning nitrogen to the soil. As well, information of how leaf-cutter bees pollinate crop flowers has led to the development of new alfalfa varieties. Researchers at Lacombe had experimented with direct seeding in the 1950s, but the logistics of weed control and straw management made this technology unfeasible until the 1990s when these problems were solved with herbicide usage and equipment modifications. Currently in Alberta about 30% of crops are seeded with zero tillage, and another 30% with minimum tillage. Many of these achievements have been un-awarded incremental steps, but they have added up to the present picture of crops research.

## Selected Individual Awards

**Tibor Szabo**



An early start to the season,  
setting out hives

On December 21, 1987, Dr. Tibor Szabo became a Member of the Order of Canada to honour the international recognition he has received for his research into honeybees. Fascinated by bees even as a boy in Hungary, Tibor began research on queen rearing, breeding and overwintering in 1974 at Beaverlodge. He is best known for his development of the Alberta Bee, a superior strain of honeybee with high honey production and the ability to survive Prairie winters which is proving to be of immense value to Western honey producers. Tibor still continues to produce queens and is actively involved in breeding for Varroa mite resistance at Puslinch, Ontario.



**Howard Fredeen and  
John G. Stothart  
with Lacombe hog**



The Lacombe hog resulted from 10 years of breeding research by Howard Fredeen and the late Jack Stothart. When it was registered in 1957, it became the first livestock breed developed in Canada. This improved hybrid was selected on the basis of increased growth efficiency, an increased rate of lean production and carcass merit. Initially, the breed was restricted in numbers and it was necessary to distribute the animals to producers by chance draw. Subsequently, registered Lacombe hogs were exported internationally. One of the first producers in Canada to receive Lacombe hogs was Alberta's Preugsehas family and Peak Swine Genetics continue to produce the animal. The Lacombe hog was part of an extensive animal breeding and genetics program at Lacombe which was recognized by various awards. The more notable awards include the Fellow of the Agricultural Institute of Canada and the Award of Excellence of the Genetics Society of Canada awarded to Howard Fredeen in 1967 and 1978, respectively, and Jack Stothart's induction into the Alberta Hall of Fame in 1983. They were both awarded Fellowships of the Canadian Society of Animal Science.

**Meat  
Processors**



Minister Ralph Goodale, Don Brereton, Mike Vanson, Darcy Shatsehneider,  
Dale Langevin, Chuck Pimm, 1994

When researchers diversified their programs to include studies on the yield and quality of alternative livestock species, it was often a challenge to slaughter and process such diverse species as ostrich, emu, deer, elk, bison and llama. In many instances, there were no existing methods and creative processing strategies had to be developed. One such challenge was the rapid removal of the hide from ostrich carcasses without damaging the underlying meat or the pelt. The meat processors addressed this challenge by developing a hide removal system that involved the injection of air to separate the hide from the carcass surface and facilitate the mechanical removal of the skin. Not only was this technology of value to researchers at Lacombe, but it provided a growing industry with a means of removing ostrich hides. This method was recognized in an Agcellence Award in 1994.

**Alan Tong**



**Gordon Dorrell and Alan Tong**

In 1995 Alan Tong embarked on an innovative, computer vision program which would revolutionize the manner in which the value of beef carcasses would be assessed. In collaboration with the Canadian industry and the Canadian Food Inspection Agency, Alan designed and evaluated an imaging system which involved the collection of images at the grading site and of the warm carcass. Computer software was then developed to interpret those images and the result was a rapid, objective means for grading beef carcasses and assessing cutability. The Computer Vision System was patented and underwent certification trials by the Canadian Food Inspection Agency. It is used in commercial abattoirs as a rapid and accurate predictor of carcass composition. Until his retirement in 2006, Alan continued to conduct innovative research on objective grading systems which included ultrasound and electrical impedance. He received many awards for his research, the most notable of which were the Federal Partners in Technology Transfer Award (2000) and the Commemorative Medal for the Golden Jubilee of her Majesty Queen Elizabeth II in 2002.

### **Support Staff, Forage Beef**



In November 2004, the 57-member [www.foragebeef.ca](http://www.foragebeef.ca) Team received the Gold Harvest Award for developing an easily accessible web site that highlights and summarizes all the relative Canadian and northern US research that is applicable to cow calf and forage production in Canada. Alberta, Manitoba and Saskatchewan Agriculture, Alberta Beef Development Fund, and Canada Alberta Beef Development Fund jointly funded the site. AAFC members of the group included Duane McCartney, Kathy Moore, Marilyn Crawford, Val Erhart, Roberta Galenzoski, Loree Verquin, Shaunna Kossatz, Jeff Bryant, Rick Lawrence, and Faye Swanson.



## William D. Albright



In 1946, William D. Albright was publicly recognized for his significant contributions to western agriculture when the University of Alberta awarded him a Doctor of Laws, *honoris causa*. From his migration to the Peace River country in 1914, and through his tenure as Superintendent of the Beaverlodge Experimental Farm from 1919 to 1945, he worked tirelessly to encourage settlers to establish homes complete with windbreaks, ornamentals, fruits and vegetables. One of the first to plant an organized windbreak, he imported trees and shrubs, and by 1930, pointed with pride to some 287 species, varieties and selections thriving without artificial protection. He popularized the domestic use of the Saskatoon and demonstrated its utility as an ornamental and hedge species. He made an extensive collection of types and selections, and started the selection programmes, which resulted in the introduction of the variety *Smoky*.

## Colin Gill



Colin Gill with Steve Morgan Jones

Carcass pasteurizer

Colin Gill has worked closely with the meat processing sector and the Canadian Food Inspection Agency in the evaluation of the impact of commercial practices on the microbiological condition of carcasses. The ultimate objective of his research is to develop practicable procedures by which the industry can improve the safety and storage life of meats through the identification and control of microbial contamination at specific points during the primary processing of meat animals. One result was a hot water carcass pasteurizer which could facilitate a 100-fold reduction in bacterial numbers, including *E. coli*. The hog carcass pasteurizer is a patented apparatus which has become an integral component of swine processing in commercial environments. Colin's cumulative contributions to meat hygiene and preservation have been recognized by numerous awards including the Commemorative Medal for the 125<sup>th</sup> Anniversary of Canadian Federation in 1992 and the Canadian Meat Council's, Science and Technology Award in 1998.

**John A. Wallace**



John Wallace was inducted into the Alberta Agriculture Hall of Fame in 1989. Through his lifelong dedication to finding, testing and breeding better plants for northern latitudes, he significantly improved the lives of northern Albertans. A tireless promoter of better varieties and horticultural techniques, John introduced hundreds of plant varieties to northern Alberta, both through his work as chief horticulturist at Beaverlodge Station and his own nursery. He was involved in the introduction of the Saskatoon varieties, *Pembina* and *Smoky*, the latter of which occupies about 95 per cent of the commercial acreage of saskatoons in Canada. He selected, developed and named the *Protem* strawberry, the only recommended hardy variety for the northern half of Alberta. He was also responsible for breeding and developing the tomato variety, *Early Yellow*, which was the breakthrough leading to the world famous Beaverlodge sub-arctic tomatoes.

**Martin Kaufmann**



Al Potuer and Bob Doyle harvesting breeder barley plots, 1985

Martin Kaufmann has earned the respect of the agricultural community through his achievements in plant breeding. From 1972 to 1984 he provided scientific and administrative leadership to the cereal breeding, pathology and forage section of the Lacombe Research Station. He was instrumental in developing new varieties of wheat, oats and barley suited to Alberta and eastern Saskatchewan. He served as chairman of the stock seed distribution committee of the Alberta Seed Growers Association for 13 years and is an honorary life member of the Canadian Seed Growers Association. In 1986, Dr. Kaufmann was the recipient of the distinguished agrologist award given annually by the Alberta Institute of Agrologists and in 1987 was inducted into the Alberta Agriculture Hall of Fame.



**Duane McCartney**



Duane McCartney is a 2007 Canadian recipient of the Outstanding Achievement Award for Research/Academia from the Society for Range Management. He received this award for his substantial contributions to range management, particularly in planted pastures, which are key in grazing systems in the Aspen Parkland region of Alberta and Saskatchewan. His work has allowed operators to extend the grazing season through swath grazing. In areas of native rangeland, grazing can be delayed and shortened, which directly benefits the rangeland resource. Duane was also instrumental in developing a Canadian forage/beef cattle informational website.

## Livestock and Meats Achievements



### Livestock Breeding and Genetics

Left: Prime Minister Pierre Trudeau, Jack Stothart and Jack Newman discuss beef breeding, 1969

Above: Infra-red thermography showing animal stress



### Carcass composition and Grade

Left: Leon Jarmoluk, X-ray imaging, 1959

Middle: Wayne Robertson, pork grading probes, ca. 2000

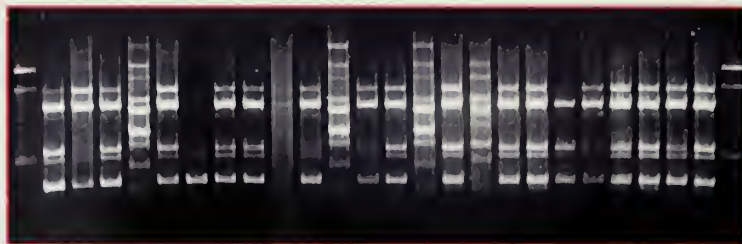
Right: Swine carcass Computer Vision System, 2005



### Meat Quality

Left: P.J. L'Hirondelle samples meat, ca. 1975; Middle: Beef electrical stimulation; Right: Fran Costello takes carcass pH, ca. 2005





### Meat Safety and Preservation

Left: Cara Service swabs swine carcass, 2005; Right: DNA fingerprint of *E. coli*, 2007

## Crops Achievements



Gary Duff on high clearance  
Lacombe built sprayer, 2000



Nitrogen test, 1939



Lacombe built Gravelly seeder,  
1975



Don Dew recording time to  
growth stage in wheat, 1970



Solomon Kibite with  
Murphy oats, 2002



Liz Hartman, Neil Harker, Trina  
Dubitz and Bob Poeck,  
recording canopy cover, 2002



Henry Friesen in wheat with and  
without wild oat control, 1973



Pathologist Kelly Turkington  
examining peas, 1999



Weed control by Brome grass  
vs. crested wheat grass, 1950

## On the Lighter Side



Foggy Livestock Pavilion, Alan Tong, 2005

There is no doubt that discoveries and achievements made at Lacombe Research Centre over the past century have helped to shape Canada's agricultural industry, but it would be a mistake to define the Centre by these achievements alone. People make the place.

Over the past century, hundreds of interesting men and women have been employed at the Centre in various capacities. Each person brought their own life experiences, their own talents, and in some cases their own wacky sense of humour to the workplace. This combination of fascinating personalities has made the Research Centre a dynamic and enjoyable place to work for more than a century.

History will remember Lacombe Research Centre for landmark discoveries, but those who have worked here will treasure relationships and other less historically relevant aspects of their jobs.

Here's a look at the lighter side of the institution.



## Bet You Didn't Know...



Harvesting wheat, 1910

In 1909 and 1910, each draft horse at the Experimental Station worked 3200 to 3300 hours per year at a feed cost of 90 cents per month. If they were unionized employees, the horses would have logged more than 1000 hours of overtime.

In 1917, the Experimental Station acquired a travelling display truck for educational purposes. The first motorized passenger vehicle also came to the Experimental Station in 1917 when Superintendent Hutton purchased a four cylinder Dodge car. At that time no license was required and no speed limits were in place. J.E. Meagher, a pig herdsman who only rode with Mr. Hutton once reportedly said: "Four days later most of my hair was again lying flat on my head."



Travelling display truck, 1917



Refreshment tent for field days, 1917

Field Days have been an ongoing educational event from the very inception of the Experimental Station. They provide an opportunity to apprise agricultural producers of the latest research advances.



Dairy Building, 1919

In 1913, the Lacombe Experimental Station manufactured cream cheese, butter, and Coulommier cheese that was sold in Calgary and Edmonton so successfully that two large dairies in those cities began to manufacture the products. The Experimental Station then began to produce cheddar cheese. Through those years, the Experimental Station opened its doors one day each summer to allow people to purchase dairy products. The annual event brought as many as 1000 people to the Station in a single day. By the early 1920s the Lacombe dairy operation was the largest in the experimental farms system, but dairy operations were discontinued in 1924.

In the early days, the Experimental Station had a boarding house, a cook, and a dairy herd to supply milk, cheese, and butter for staff use.



Dairy herd for staff use, 1920



Marden Jupiter's Proud Son, 1925

From 1923 to 1925, Lacombe Experimental Station's prized breeding Shire stallion, Marden Jupiter, serviced more than 200 mares brought to the farm for breeding purposes. He died with a smile on his muzzle in 1925.

The first recorded taste tests at Lacombe were performed in the 1920s when an unauthorized honey fermentation experiment resulted in a product of outstanding "medicinal" value. It is said that employees involved in early taste analysis of the product applauded the beekeeper's efforts and encouraged continued experimentation.



Apiary, 1930





Windmill, 1930

Cars being pulled by livestock were a common sight during the Great Depression. They were commonly dubbed “Bennett Buggies” after Richard Bennett, who had the misfortune of being elected Prime Minister of Canada during one of the country’s most difficult economic times. As tactful federal employees, ours was dubbed the Auto-moo-bile.



Auto-moo-bile, 1930



Hauling ice, 1930

In the days before refrigeration, ice was cut from frozen rivers and lakes and hauled by horses to the ice house that was located in the dairy manufacturing complex on the Experimental Station.



Horses during Field Day Parade, 1935



Plowing in high heels, 1935

You've come a long way baby! In the 1930s, there was women's work and there was men's work. Plowing was definitely not women's work!

In 1940, the British Commonwealth Air Training Program (BCTAP) was searching for suitable sites to establish runways for flight training of air force pilots for WWII. The Experimental Farms Service was engaged to locate sites and supervise development and maintenance of airline training runways. George DeLong, assistant to the superintendent, was assigned this task for central and northern Alberta. By the fall of 1941 there were 21 airfields under his supervision. The last Alberta RCAF school closed its doors on September 28, 1945.



Tiger Moths parked on the tarmac of #5 EFTS, High River, 1942. Photo courtesy of Nanton Lancaster Air Museum



Haymaster demonstration at Chauvin Illustration Station, 1947

Illustration Stations were set up around Alberta as early as 1914. Their purpose was to provide visual demonstration of the benefits of good seed and good husbandry techniques. Field days provided opportunities for homesteaders to learn new techniques as well as to socialize.





Director's Residence, 1935



Director's Residence, 1956

The director's residence was built in 1907 and renovated in 1947 to give it a more "modern" look, apparently to appease a director's wife who was unhappy with her move to the bald prairies.



Administration Building, 1960

The cream coloured stone on the front of the present administration building, which was constructed in 1958, is known as Tyndall Stone. If you look closely you can see numerous fossils caused by the burrowing of small creatures when the limestone was deposited. The stone is a type of dolomitic limestone quarried in Manitoba and links the Lacombe Research Centre with federal buildings across Canada because it is found in the Canadian Parliament buildings in Ottawa, the Canadian Museum of Civilization in Quebec, and many federal post offices.



Jack Stothart being interviewed on television, 1960

There have been many important research discoveries over the past century and media have always been interested in the work performed at Lacombe.



Howard Fredeen addressing visiting MPs, 1969

Over the years many government officials have visited Lacombe.



Pierre Trudeau's helicopter  
landing on front lawn, 1969

Prime Minister Trudeau was the only Canadian Prime Minister to ever visit the Lacombe Research Centre.

Superintendent Stothart, Governor General Roland Michener, Mrs. Michener, 1971  
His Excellency and Mrs. Michener enjoyed a tour of the hog farrowing barn during their visit.



Ev Gilmar in the Mouse Lab, 1973

Lacombe had a mouse lab from about 1960 until 1980. Since mice multiply rapidly, they were used for early experiments with animal breeding and genetics.

Japanese pork processors, 1975

In 1975, Canada was a net importer of pork and was trying to establish contracts with the Japanese. A visit to Lacombe helped assist in the process. Today Canada is one of the world's top exporters of pork. We export more pork than we consume. Japan is a major export market for Canadian pork.







Dave Friesen on Lacombe-built  
plot sprayer, 1981  
Many specialized pieces of equipment were  
designed and fabricated at the Lacombe  
Research Station, but few were ever patented.

Parade Float, 1986  
100<sup>th</sup> anniversary of Agriculture Canada



Calgary Stampede, 1998  
As early as 1909, staff at the  
Experimental Station were used as  
judges at fairs and agricultural exhibits.  
Lacombe has been a facet at the  
Calgary Exhibition & Stampede since  
its inception in 1923.

## Unusual Discoveries



Bev Harrington, 1959  
An early attempt at inter-species breeding?



Gene Chalmers with a 1351 kg (2972 lb)  
Steer, 1985

It was discovered that U of A can grow them and Lacombe can stow them. This 13.5 year-old steer was processed at Lacombe. Researchers were looking at growth in the long bones of this animal.



People examining weed garden, 1980  
In the late 1970s it was discovered that staff had a special talent for growing weeds. Even more surprising is the fact that people travel from across Alberta to see our weeds.



Lorna Skyrme (Gibson) and Penny  
Nemeth (Johnson), 1986  
Two staff members discovered that  
sometimes two heads are better than one.

Learning the Ropes, 1995  
Al Schaefer, Pierre Lepage, Jacque  
Morgan Jones, Laverne Holt-Klimec, Nigel  
Cook

Darrel Neal discovered that contrary to popular belief, technicians and scientists can be taught to make macramé planters.







Swans on Flooded Field, 2001

It was discovered that a water line break can create a wetlands for migratory birds.



Santa Baird and Marika Meadus, 2006  
Santa Baird discovered that some jobs are not as easy as they look.



Beaverlodge Beekeeper

It was discovered that if you stuff Kleenex up your nose, bees will not go inside your nostrils



Coveralls Can be Sexy, 2005  
Jennifer Zuidhof, Patty Reid, Liz Hartman, and Pam Zuidhof stopping traffic at the entrance.

## Social Events

From the very beginning, employees of the Lacombe Research Centre have enjoyed socializing together. In the early years, staff came together to form softball and curling teams that competed in the community against other groups such as the teachers or firefighters. Special occasions such as weddings and births also provided opportunities to socialize and celebrate.

The social committee was organized in July 1946 to plan fun social events, introduce new members to staff, and recognize special occasions in the lives of individuals who worked at the station. The first event organized was a picnic lunch to honour the retirement of Superintendent Reed. An annual corn roast, spring mixer, and staff Christmas party soon followed. Staff leagues for badminton, bowling, curling, and softball were also organized.

The Anstey Curling Bonspiel was organized in 1976 and became the first inter-station annual social event. Representatives from Lacombe have curled against rinks from research centres across Canada including Brandon, Regina, Indian Head, Swift Current, Melfort, Scott, Lethbridge, Beaverlodge, and Agassiz. It remains an annual event to this day. A baseball tournament and a golf tournament later rounded out the inter-station social events.



Boarding House Christmas Dinner, 1954  
Clockwise from the left: Mr. DeLong, Bill Greenlaw, Dick Gillespie, Dick Clemens, Griff Hughes, Percy Cowan, Jake Schulte, Donna Warren, Ken Warren, Mrs. Warren, J.J. McNeil, Irvin Cowan, Gwylm Lloyd, Bev Harrington, and George Sykes



Cheerful staff at Research Station  
Spring Mixer, 1954



Leona Soley and Gordon Bowman performing a skit for George DeLong's retirement party, 1955





Wedding of Dick and Sylvia Gillespie,  
1960

Jitney car decoration and an archway of wild oat sheaves compliments of Research Station staff. Lacombe may not be the Love Boat, but over the years many couples have met and married while they were both employed here.



Bill Sage and Archie Martin at Staff  
Function, 1973



Staff Lunch, 1982

Huib Doornenbal, Carolyn Caverhill,  
Mrs. Forsberg, Lance Forsberg, Len  
Folkins,



Staff Social, 1976

Dave Friesen, Veronica Danchuk, Irvin  
Cowan, and Nester Zubreski



Dick Gillespie at Huib Doornenbal's retirement party, 1987



Lunch during Dr. Art Olson's Visit, 1990  
Pictured: Les Jeremiah, Dale Jones, Neil Harker, Art Olson, Solomon Kibite, Doug McGinnis, Steve Morgan Jones



John O'Donovan, 1993  
John is pictured here singing Fred's song at Fred Brook's retirement.



Staff Picnic at Gull Lake, 1996  
Tineke Jones, Dale Langevin, Paul Martin, Becky Cunningham



Lobsterfest, 1998  
David Bailey, Duane McCartney  
In the early days, Lacombe traded meat for corn with the southern Alberta research centres to hold an annual corn bust. In 1998, David Bailey taught us to think bigger with the organization of the first Lobsterfest.



Getting Down at the Steak Fry, 1999  
Dale Windsor (left) and Darrel Neal dancing at the steak fry.



Children's Christmas party, 1999





Family Halloween Party, 1999  
Patty Reid, Leah Reid, and Kallyn Michielsen



Staff picnic lunch, 2000  
Front Row: Robin MacInnis, Nigel Cook, Sigrd Marchand, Laverne Holt-Klimec



Staff hayride with Dave Bailey's horses,  
2002



Lobsterfest 2002  
Kelly Turkington, Rick Lawrence and others.



Staff Christmas Lunch, 2003  
Front table: Kelly Turkington, Scott Wright, Rick Lawrence, Loreen Roberts, Cathy Bryant



Staff Formal Christmas Party, 2004  
Front table: Bala Sampathkumar, Prema Sampathkumar, Denise Orr, Val Erhart

## Let's Get Physical



The Batman and Lacombe baseball stylings,  
1998



Grand Opening Lacombe Staff Gym, 1999



Staff Outdoor Volleyball, 2004



Moonshiners Team Anstey Spiel, 2005  
Jennifer Zuidhof, Liz Hartman, Patty Reid and  
Larry Michielsen



Street Hockey, 2004  
Darren Reid, Larry Michielsen, Chuck Pimm,  
Darcy Schatschneider



Staff Golf Tourney, 2005  
John Robinson, Austin Murray



## All Dressed Up...



Steven Morgan Jones, Colin Gill,  
Gordon Greer



Fred Brook and Madame Rose  
(Vern Baron), 1993



Marilyn Crawford, Faye Swanson, Kathy  
Bryant, Jennifer Wattenberger, 2006



Roberta Galenzoski, 2006



Kelly Turkington, 2006



Frances Nattress and Denise Orr

## Appendices



Looking Outside My Office Windows, Alan Tong, 2001



## **Appendix 1: Staff**

### **Lacombe Research Centre Staff - March 2007**

Jennifer L. Aalhus	Laverne Holt-Klimee
Mueen Aslam	Michelle Hambly
Madhu Badoni	Kerry Jay
Dwight Baird	Martin Jensen
Lynda Baker	Michael Johns
Gordon Balaski	Tineke Jones
Vern Baron	Stan Landry
Don Beauchesne	Dale Langevin
Dave Best	Ivy Larsen
Deng-Jin Bing	Rick Lawrence
Michael Bock (Edmonton)	Pierre Lepage
Tony Brierley (Edmonton)	Tong Liu
Jeff Bryant	Lorna Lundberg
Christine Burbidge-Boyd	Sigrid Marchand
Jackie Busaan	Paul K. Martin
William Caine	Duane McCartney
Dave Cahill	Jon Meadus
Dallas Campbell	Chris Meyers
Brady Chabot	Larry Michielsen
Changxi Li (located at U.of A)	Kathy Moore
Deb Clark	Frances Nattress
Jeff Colyn	Sheri Nelson
Fran Costello	Sandy Noble
Marilyn Crawford	John O'Donovan
Glynnis Croken	Colette Oehlerking
Leith Damiani	Adele Ohama
Ann de St. Remy	Debbie Olsen
Bryan Dilts	Darryl Pierce
Michelle Disberry	Chuck Pimm
Gary Duff	Brian Quick
Iris Duff	Noryne Rauhala
Paseale Duff	Patty Reid
Mike Dugan	Wayne Robertson
Wes Dyck	Dave Rolland
Val Erhart	Jim Rudy
Aaron Fedusenko	Bala Sampathkumar
André Fortin	Al Schaefer
Lorna Gibson	Darcy Schatschneider
Colin Gill	Jeremy Scalock
Danielle Girard	Cletus Schn
Ken Grimson	Cara Service
Neil Harker	Shane Sroka
Elizabeth Hartman	Faye Swanson

*Appendices*

Rhona Thacker  
Kelly Turkington  
Chris Ullman  
Bethany Uttaro  
Linda Vandermaar  
Loree Verquin

Nicole Welygan  
Jennifer Wattenbarger  
Dave Young  
Sophie Zawadski  
Jennifer Zuidhof





Lacombe Research Centre Staff, 2006

## Appendix 2: Selected Individual Awards

### **Harvey Allen**

- 1978 Centennial Gold Medal for his leadership and contributions to western horticulture

### **David Bailey**

- 1992 Canadian Society of Animal Science Young Scientist Award
- 2000 Federal Partners in Technology Transfer in collaboration with the Canadian Cattlemen's Association, The Canadian Meat Council and Research Management Systems Inc. for the development and commercialization of the Computer Vision System for augmenting the grading of beef carcasses

### **Vern Baron**

- 1999 Alberta Group Achievement Award (Western Forage/Beef Group)
- 2000 Agcellence Award, presented by AAFC as a member of the Western Forage/Beef team in recognition of client services to all Canadians.
- 2005 Fellow Canadian Society of Agronomy
- 2006 Gold Recipient, The Alberta Agriculture Performance Excellence (AAPEX) Award for outstanding team work honours AAF teams that demonstrate performance excellence, respect for their peers, strong contributions to the Department and good project management practices

### **Mike Brereton**

- 2000 Agcellence Award presented by AAFC as a member of the Western/Forage Beef team in recognition of client services to all Canadians

### **George Clayton**

- 1999 Western Forage/Beef Group Achievement Award in recognition of service excellence through teamwork
- 2000 Agcellence Award, presented by AAFC as a member of the Western Forage/Beef team in recognition of client services to all Canadians

- 2000 Silver Recipient, Premier's Award of Excellence awarded to the Western Forage/Beef Group (AAFRD/AAFC) for demonstrating superior customer service and business practices and building a supportive work environment to meet the needs of Albertans
- 2001 InfoSynergy Team selected for the AAFRD 2001 Group Achievement Award. The award recognizes "teamwork and team accomplishments" and "partnering and the effective use of resources to promote the leading-edge research
- 2003 5NR Science Award to lead in Sustainable Development for sustainable crop production
- 2003 5NR Science Award to lead in Sustainable Development for development of direct seeding
- 2005 Fellow, Canadian Society of Agronomy
- 2006 FarmTech Industry Award for achievements of excellence in science serving the industry community and grassroot level of rural Canada
- 2006 Alberta Science and Technology Leadership Foundation (ASTech) Award

### **Adele Depalme**

- 1999 Agcellence Award presented by AAFC as a member of the Western/Forage Beef team in recognition of client services to all Canadians

### **Ann de St. Remy**

- 1999 Agcellence Award presented by AAFC as a member of the Western Forage/Beef team in recognition of client services to all Canadians
- 2000 Premier's Award of Excellence as a member of the Western Forage/Beef Group
- 2001 American Society of Agronomy Certificate of Excellence, in recognition of the development of outstanding educational materials in the category of newsletters



**Michelle Disberry**

2000 FIS Recognition Award

**Mike Dugan**

1999 Canadian Society of Animal Science  
Young Scientist Award

**Val Erhart**

2000 FIS Recognition Award

**André Fortin**

1983 Canadian Society of Animal Science  
Young Science Award

**Howard Fredeen**

1969 Public Service Merit Award  
1976 Certificate of Merit, Canadian Society of  
Animal Science  
1984 Honourary Life Member, Canadian  
Society of Animal Science

**Henry Friesen**

1974 Outstanding Extension Worker's Award  
in recognition of his scientific leadership  
and his high competence in  
disseminating his results to producers  
1976 Fellow of the Weed Science Society of  
America

**Colin O. Gill**

1995 Agcellence Innovation Award  
1996 Agcellence Award for innovative work  
in the design and testing of a prototype  
carcass pasteurizer to decontaminate hog  
carcasses  
1998 Gordon Royal Maybee Award Canadian  
Institute of Food Science and  
Technology  
1999 Canadian Meat Council Science and  
Technology Award

**Dick Gillespie**

1997 Atmospheric Environment Award

**Ken Grimson**

2000 Agcellence Award presented by AAFC  
as a member of the Western/Forage Beef  
team in recognition of client services to  
all Canadians  
2006 Gold Recipient of The Alberta  
Agriculture Performance Excellence  
(AAPEX) Award for outstanding team  
work which honours teams that  
demonstrate performance excellence,  
respect for their peers, strong

contributions to the Department and  
good project management practices

**Neil Harker**

1999 Premier's Award of Excellence -  
Canada-Alberta Environmentally  
Sustainable Agriculture Agreement -  
Agriculture Impact on Water Quality  
1999 Silver Recipient - Canada-Alberta  
Environmentally Sustainable  
Agriculture Agreement - Agriculture  
impact on Water Quality  
2000 Excellence in Weed Science Award for  
outstanding contributions to Weed  
Science in Canada  
2001 InfoSynergy Team selected for the  
AAFRD 2001 Group Achievement  
Award in recognition of teamwork, team  
accomplishments, partnering and the  
effective use of resources to promote  
agricultural industry  
2002 Bronze Recipient - Premier's  
Award of Excellence for the Alberta  
ethylene crops research project  
2007 Fellow of the Weed Science Society of  
America

**Bev Harrington**

1969 Honourary Life Member of the  
Canadian Lacombe Breeders'  
Association

**Kerry Jay**

2000 Agcellence Award presented by AAFC  
as a member of the Western/Forage Beef  
team in recognition of client services to  
all Canadians

**Jennifer Johanson**

2000 FIS Recognition Award

**Rick Lawrence**

2000 Federal Partners in Technology Transfer  
in collaboration with the Canadian  
Cattlemen's Association, The Canadian  
Meat Council and Research  
Management Systems Inc. for the  
development and commercialization of  
the Computer Vision System for  
augmenting the grading of beef  
carcasses

**Duane McCartney**

1996 Canadian Animal Industries  
Award in Extension and Public Services,

sponsored by the Canadian Society of Animal Science

1997 Agcellence Innovation Award (AC Grazeland Alfalfa team)

1999 Alberta Group Achievement Award (Western Forage/Beef Group)

2000 Agcellence Award presented by AAFC as a member of the Western/Forage Beef team in recognition of client services to all Canadians

2000 Premier's Award of Excellence

**Don McFadden**

1964 Honourary Life Membership in the Canadian Seed Growers' Association

**Steve Morgan Jones**

1984 Canadian Society of Animal Science Young Scientist Award

1989 Canada Packers Medal (Nutrition/Meat Science)

1993 Canadian Meat Council's Meat Science and Technology Award

1996 Canadian Society of Animal Science Award of Merit

**Austin Murray**

1992 Pork Industry Leadership Award

2006 B.W. Kenny Memorial Award

**Darrel Neal**

2000 Agcellence Award presented by AAFC as a member of the Western/Forage Beef team in recognition of client services to all Canadians

**Sandy Noble**

2000 FIS Recognition Award

**John O'Donovan**

2002 Alberta Premier's Award of Excellence

2003 Alberta Science and Technology Leadership Foundation (ASTech) Award

2004 Outstanding Research Award of the Weed Science Society of American (WSSA)

**George Ramsay**

1969 Honourary Life Membership in the Alberta Horticultural Society

**Al Schaefer**

1988 Canadian Society of Animal Science, Young Scientist Award

1997 Agcellence Innovation Award Certificate of Achievement

1998 Canadian Society of Animal Science, Award for Excellence in Nutrition and Meat Science

1999 Award for Excellence in Nutrition and Meat Science

**Bill Starr**

2000 Agcellence Award presented by AAFC as a member of the Western/Forage Beef team in recognition of client services to all Canadians

**Jack Stothart**

1977 Honourary Life Member, Canadian Society of Animal Science

**Alan Tong**

1994 Agcellence Award

2001 Shur Gain Award for Excellence in Nutrition and Meat Science

**David Young**

2001 Agcellence Award presented by AAFC as a member of the Western/Forage Beef team in recognition of client services to all Canadians

**Don Waldern**

1990 Honourary Life Member, Canadian Society of Animal Science

**H.E. (Happy) Wilson**

1977 Honourary Life Member, Canadian Society of Animal Science



## Appendix 3: Selected Cultivars and Varieties from our Breeders

<i>Crop</i>	<i>Name</i>	<i>Released</i>	<i>Station</i>
<i>Cereals</i>			
Barley	Sanalta	1940	Lacombe
	Wolfe	1954	Lacombe
	Diamond	1982	Lacombe
	Jackson	1985	Beaverlodge
	AC Stacey	1989	Beaverlodge
	AC Lacombe	1991	Lacombe
	Otal	1991	Beaverlodge
	AC Albright	1993	Beaverlodge
Oat	Larain	1945	Lacombe
	Random	1971	Lacombe
	Carvell	1975	Lacombe
	Athabasca	1978	Lacombe
	Caseade	1979	Lacombe
	Jasper	1985	Lacombe
	Waldern	1990	Lacombe
	AC Mustang	1994	Lacombe
	AC Juniper	1996	Lacombe
	Murphy	1999	Lacombe
	Morgan	2000	Lacombe
	Boudrias	2001	Lacombe
	Kaufmann	2001	Lacombe
	Lee Williams	2004	Lacombe
	Lu	2004	Lacombe
Spring Wheat	Park	1963	Lacombe
	Bluesky	1987	Beaverlodge
	Wildeat	1987	Beaverlodge
	AC Michael	1994	Lacombe
<i>Field Crops</i>			
Canola	AC Sungold	2000	Beaverlodge
Fababean	Orion	1987	Lacombe
Flax	Noralta	1965	Fort Vermilion

Yellow Field Pea	Reward	2005	Lacombe
	Canstar	2005	Lacombe
	Agassiz	2006	Lacombe
	Thunderbird	2006	Lacombe
<b><i>Forages and Grasses</i></b>			
Alfalfa	Anik	1975	Beaverlodge
	Peace	1980	Beaverlodge/Ft. Vermilion
Alsike Clover	Aurora	1961	Beaverlodge/Lacombe
	Dawn	1974	Beaverlodge
Red Clover	Norlac	1973	Lacombe
Red Fescue	Boreal	1966	Beaverlodge/Lacombe
<b><i>Horticultural Crops</i></b>			
Apple	Norcue	1958	Beaverlodge
	Norson	1958	Beaverlodge
	NorCen	1960	Beaverlodge
	Norda	1960	Beaverlodge
	Noret	1960	Beaverlodge
	Norhey	1960	Beaverlodge
	Norkent	1960	Beaverlodge
	Norlove	1960	Beaverlodge
	Noran	1966	Beaverlodge
	Macfree	1974	Beaverlodge
Applecrab	Parkland	1979	Lacombe
	Trailman	1974	Beaverlodge
Crabapple	Arctic Red		Beaverlodge
Crabapple - Ornamental	Albright		Beaverlodge
	Arctic Dawn		Beaverlodge
	Snowcap		Beaverlodge
Raspberries	RUB 227 <i>R. ideaus</i>		Beaverlodge
	RUB 228 <i>R. ideaus</i>		Beaverlodge
	RUB 231 <i>R. strigosus</i>		Beaverlodge
	RUB 233 <i>R. strigosus</i>		Beaverlodge
	RUB 234 <i>R. strigosus</i>		Beaverlodge
	RUB 235 <i>R. ideaus</i>		Beaverlodge
Roses	Kakwa	1970	Beaverlodge
	Double White Altai	1973	Beaverlodge
	Mauve Altai	1973	Beaverlodge



Saskatoons	Smoky	1918/1952	Beaverlodge
	Altaglow	1946	Beaverlodge
	Pembina	1952	Beaverlodge
	Northline	1958	Beaverlodge
	Forestburg	1963	Beaverlodge
	Bluff	1990	Beaverlodge
	Buffalo	1990	Beaverlodge
Strawberries	Lacombe	1926	Lacombe
	Beaver Belle		Beaverlodge
	Beaver Early		Beaverlodge
	Beaver Ruby		Beaverlodge
	Beaver Sweet		Beaverlodge
	Protem		Beaverlodge
Tomato	Rocket	1966	Lacombe
	Booster	1971	Lacombe
	Early Sub-Aretic	1972	Beaverlodge
	Sub-Aretic Midi	1972	Beaverlodge
	Sub-Arctic Plenty	1972	Beaverlodge
	Sub-Arctic Maxi	1974	Beaverlodge
	Sub-Aretic Cherry	1975	Beaverlodge



Clockwise from above: Don McFadden and Jack van der Wal examining cereals in the greenhouse, 1955; Saskatoon berries; Solomon Kibite in an oat field, ea. 2000



## Appendix 4: Research Agreements

### Alberta/Canada Barley Development Agreement



Patty Reid in barley

In 1993, the provincial and federal governments entered into the first of several joint agreements. The Alberta/Canada Barley Development Agreement joins researchers from the Field Crop Development Centre, Alberta Agriculture, Food and Rural Development (AAFRD), with researchers from the Lacombe Research Centre. The objective of this agreement is to facilitate the development of high yielding barley cultivars adapted to the production environments of Alberta and the Peace area of B.C. Development of these cultivars includes research on breeding, physiology, production systems and pest management. Initial funding came from the Alberta Barley Commission (ABC) and AAFC's Matching Investment Initiative (MII). When the second five-year phase of the Agreement came into effect in 1998, ABC became a full partner with AAFRD and AAFC. Although the current agreement (2003 to 2008) coordinates barley research in Alberta with all research participants in barley genetics, breeding, agronomic research, production, processing and marketing, cooperative projects are also developed to access outside funds to expand the research program. The main areas of current research include cultivar development, crop physiology, crop production systems, plant pathology and biotechnology.

### Forage/Beef Agreement



The second agreement between AAFRD and AAFC called the Forage/Beef Agreement was initiated in 1994, which resulted in the Western Forage/Beef Group. This agreement amalgamated a multi-disciplinary core of scientists and extension specialists at the Lacombe Research Centre, to improve the profitability and sustainability of the forage-based beef industry through development, integration and transfer of knowledge and technology. The Western Forage Beef Group has had a significant impact on reducing winter feeding costs through the development of swath grazing systems for wintering pregnant beef cows. In addition, summer grazing systems have been developed for improving the economics of grazing yearling cattle before they are finished in the feedlot.



### **Canola Agreement**



In 1998, the Alberta Canola Producers Commission (ACPC) signed a five-year research agreement with AAFC to support agronomic and plant pathology research on canola at Lacombe and Beaverlodge. These ACPC funds were matched by AAFC's Matching Investment Initiative (MII). A unique joint committee of researchers, specialists, and producer representatives on the ACPC research committee directs the program. The current canola agreement (2003 to 2008) was expanded to include 3 other AAFC locations in western Canada. This networked, multidisciplinary approach to sustainable canola production systems has helped growers reduce their risks and improve profit margins during a period when financial pressures, due to low commodity prices, have been severe. Research has shown that simple and relatively inexpensive management practices can improve yields.

### **Alberta/Canada Pea Agreement**

Currently active, but not yet signed, AAFC and AAFRD have brought together scientists to develop pea varieties that are adapted to the Prairies. Deng-Jin Bing, the AAFC pulse breeder, arrived from Morden in 2003 to start up this program. With pathology input from AAFRD, Deng-Jin is selecting varieties that will suit different growing areas across the Prairies.

### **Alberta Value-Added Meat Program**



The Lacombe Meat Research team is an important part of the Institute for Food and Agricultural Sciences, Alberta, Value-Added Meat Program. This is a collaboration of AAFC, AAFRD, Olds College and the University of Alberta, with funding from the Alberta Livestock Industry Development Fund and the Alberta Agricultural Research Institute and under the guidance of an Industry Advisory Board. This Value-Added Meat Program, led by Lacombe, is striving to coordinate and expand research, development and commercialization activities within the province of Alberta. Through this program, Alberta will be positioned for innovation in value-added meats for global markets and the Alberta meat industry will be globally competitive, sustainable, profitable and growing.

## **Appendix 5: Aerial Photographs**



Above: looking west, 1950  
Below: looking south, 1960

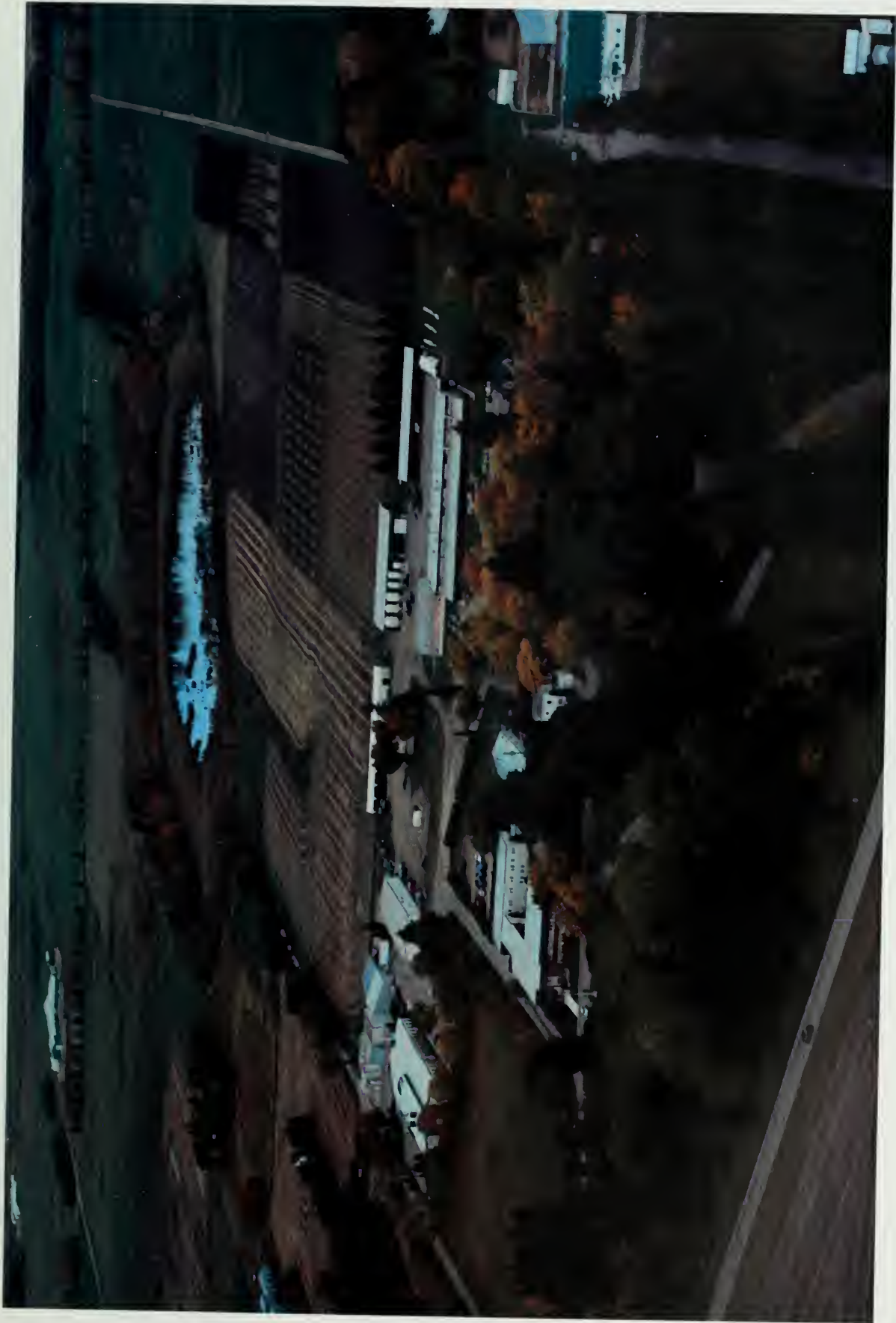






Left: looking  
southwest, 1975  
Below: same view,  
1985





Looking west, Fall 2006



## Appendix 6: 100 Years of Weather at Lacombe

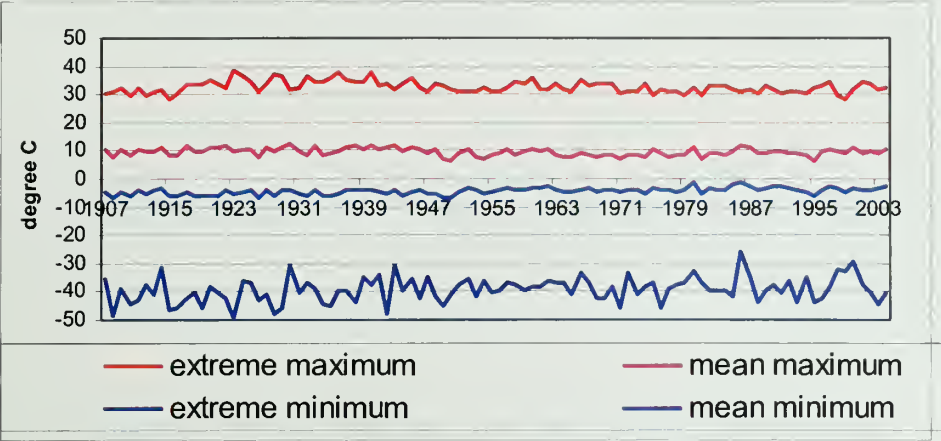
	Temperature	Wind Speed	Light Intensity	Rainfall	Snowfall
Sensors Past and Present					
					



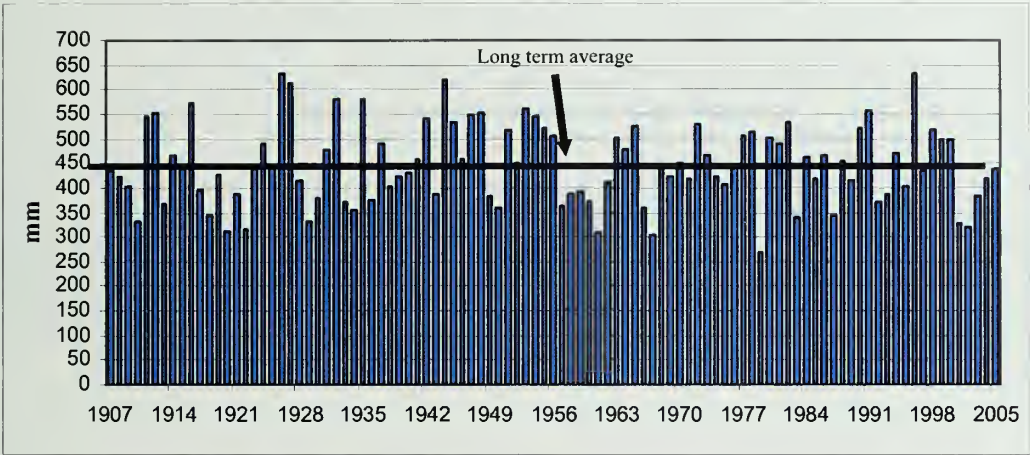
Left: Stevenson screen at weather station, 1933

Below: Meteorological Site, 2007

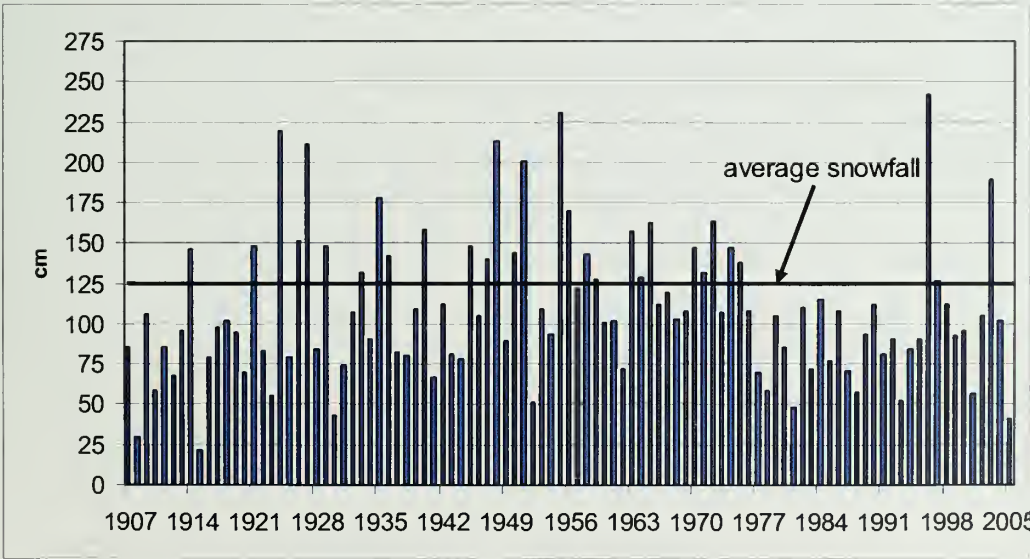




Extreme and average maximum and minimum temperature  
1907 - 2007

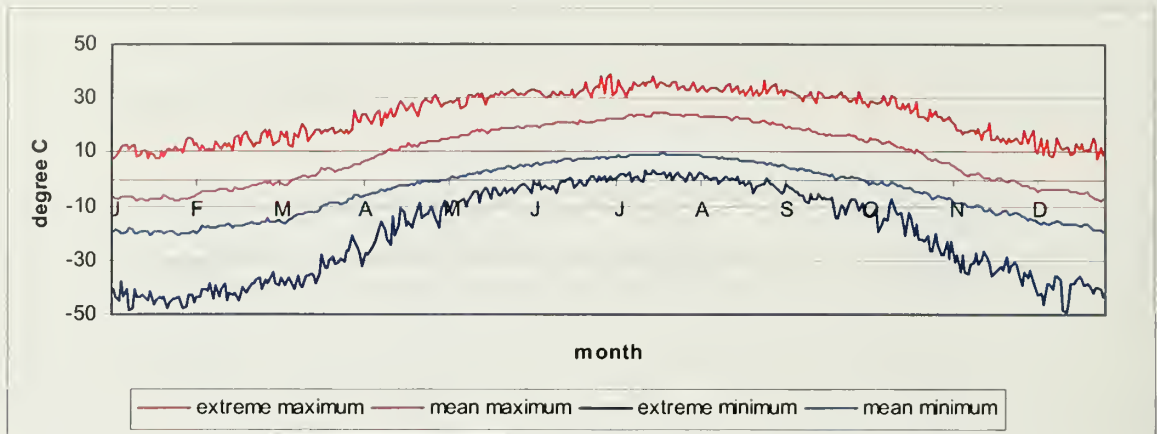


Total Yearly Precipitation 1907 - 2006

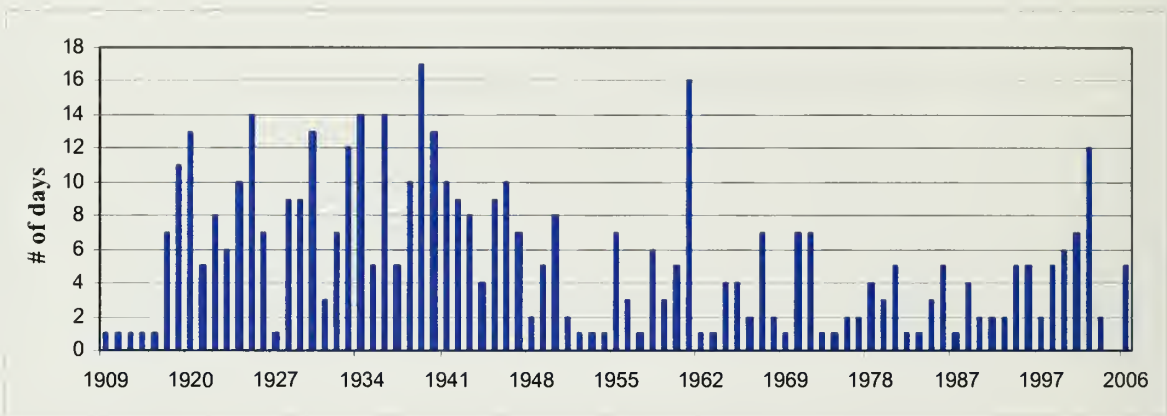


Total Snowfall 1907 - 2006

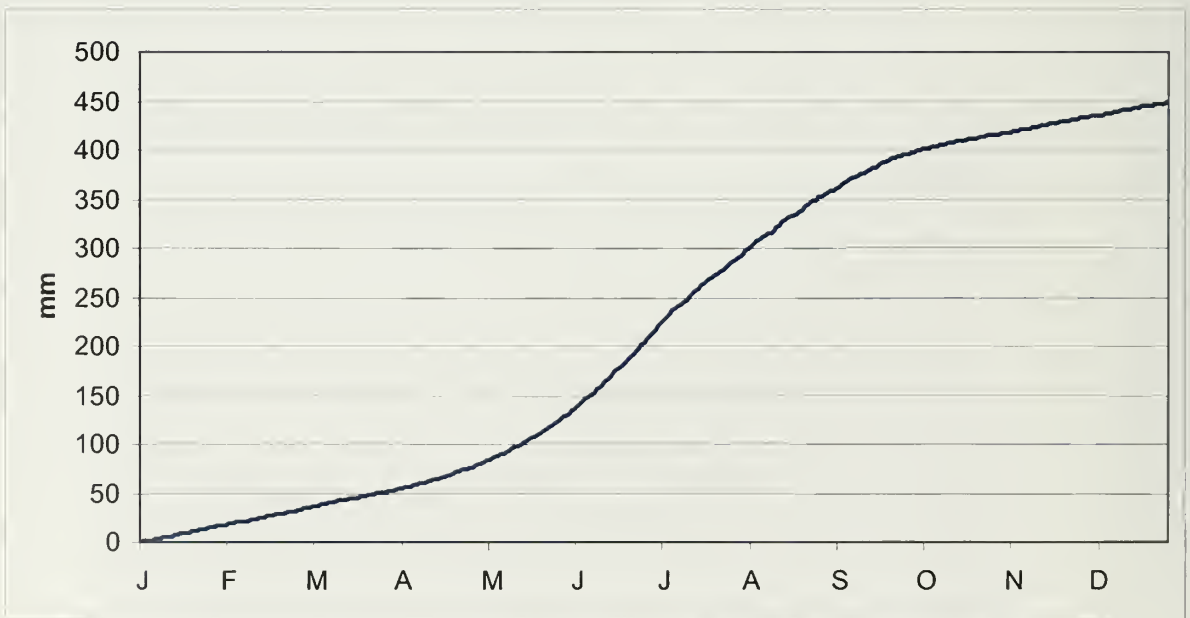




Average Temperature at Lacombe 1907 - 2006



Number of days over 30° C



Average Accumulated Precipitation  
1907 - 2006

<b>Weather Extremes</b>		
Maximum recorded temp	38.3 C	July 2, 1924
Minimum recorded temp	-48.9 C	January 7, 1909 and December 16, 1924
Greatest annual precipitation	631 mm	1926 & 1996
Greatest annual snowfall	242 cm	1996



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