



Inducted: 2010

Dr. Charles A. Zavitz was a member of the first class to graduate from the Ontario Agricultural College with the degree of Bachelor of Science in Agriculture (1888). During the next 41 years, while serving on the staff of the Field Husbandry Department of his Alma Mater, he displayed remarkable qualities of leadership in the fields of research, teaching and extension. Although primarily recognized for his work with cereals, Professor Zavitz made valuable contributions to the improvement of other field crops, notably alfalfa, potatoes and soybeans. He was one of the founders of the Canadian Seed Growers Association and a strong supporter of the Ontario Agricultural and Experimental Union through which he was able to rapidly distribute his latest experimental varieties province-wide.

DR. CHARLES AMBROSE ZAVITZ
1863-1942

Daniel Zavitz moved from Niagara to Colstream in 1843 to be near his sister and her husband who were part of a small group of Quakers residing in that area. In 1847 Daniel married Susan Vail who had resided just outside of Buffalo New York. Over the next sixteen years they raised a family consisting of one daughter, Caroline and three sons, Samuel, Edgar and Charles.

Daniel and Susan seemed to have a keen understanding of the need for education as they saw to it that their sons went on to a much greater level of education than was general for the times. Both older boys attended high school in Strathroy. Samuel then spent a year at a "Friends" school near Buffalo followed by a year at a London commercial college while Edgar attended Swarthmore College in Pennsylvania, graduating in 1882 with a Bachelor of Arts degree.

Charles like his brothers attended the local primary school followed by high school in Strathroy and like them he boarded in town during the week. returning home for the weekend to help with chores as the eight to ten miles distance from school was too much to walk every day.

When in 1884, Charles arrived at the then ten-year old Ontario Agricultural College in Guelph he was one of only 86 students enrolled in both years of the only course offered, a two year diploma program. Once admitted to OAC, a student faced a highly regimented schedule. First rising bell sounded at 5:30a.m., followed by prayers at 6:00 and breakfast at 6:30. The farm bell rang to begin the work day at 7:00, it rang again to signal the end of the work morning at noon and again to signal lunch at 12:30p.m. At 1:30, it rang to send everyone back to work for the afternoon. At 2:45, the bell meant lectures would begin in 15 minutes.

Lectures ran from 3:00 to 5:10, at which time the bell was rung for tea. The bell sounded again at 7:30 to indicate study time and at 9:00 for evening prayers. Finally the bell rang at 9:30 to indicate lights out. At his graduation in 1886, only 13 actually graduated; many did not as final exams took place when many of the young men were needed back on the farm.

After graduating, Charles was offered a position as an assistant in the Agricultural Department under Prof. William Brown. Because so few qualified people were available he also helped out in the Chemistry Department. His job requirements involved covering such details as fieldwork with students, livestock feeding experiments, and work in the farm dairy as well as in the Chemistry Building. The first recorded yield tests to be found in the Crop Science Department are from 1887 and are in Charles's handwriting.

At that time the staff of the college numbered seven and the student body totaled 105. In 1887, a third academic year of course work was introduced to give those qualified students advanced practical instruction in chemistry and some other branches of science. Five students, including Charles, enrolled in that first class. In 1888 OAC was affiliated with the University of Toronto. That fall those students who had taken the extra year became the first to graduate from the Ontario Agricultural College with the degree, Bachelor of Science in agriculture granted by the University of Toronto.

Once again back on staff after graduating in 1888, Charles was appointed assistant experimentalist in charge of field plots. In this position, he began his impressive work with research through experimentation. By 1893, Charles had been appointed experimentalist in complete charge of all experimental work with field crops at OAC.

One of his earliest tasks as an experimentalist was to pursue the introduction of crop species for evaluation as potential varieties or crops for Ontario. To obtain seed and to forge relationships with other research facilities, he made contact with a variety of institutions around the world. Where possible, he personally traveled to these institutions, so that by 1904 when he was made head of the Department of Field Husbandry, he had visited more than one hundred agricultural colleges and experimental stations in Europe, United States and Canada. Using the seed he had collected from around the world, Zavitz implemented innovative selective breeding techniques, small experimental plots and meticulous measurement and testing.

Being an avid researcher, he attempted to develop many new varieties of field crops but steadfastly refused to release any until proven by careful testing to be suitable to Canadian conditions. Replicating these results on small test plots at Guelph was one thing but Charles wanted results proven across the province on a variety of soils. In order to accomplish this he needed a means by which he could disseminate his research to farmers. In October of 1889 he was involved with the founding of the OAC Review, a newsletter type publication sent out to all OAC students and graduates. The purpose of the Review was to keep them abreast of events and issues relevant to the institution. It proved to be a low cost way to disseminate the latest information on agricultural work throughout the province. The Ontario Agricultural and Experimental Union, with Zavitz as its secretary, (a position he held for 40 years) encouraged farmers to experiment on their own farms with seed, fertilizer and advice supplied by its members and the college. In return he asked for detailed results of their plantings. In 1888, twelve farmers participated – by 1905 the Union was able to offer to every township in Ontario material for experiments with fodder crops, roots, grains, grasses, clovers and fertilizers – by 1924 more than 100,000 farmers were conducting various experiments on their farms. Ontario's crop yields

were increased exponentially by using the Union to distribute his experimental materials throughout the province. Farmer's Institutes which were originally set up by the Province also became his responsibility. Once again they proved to be a tremendous means of extension education.

All of these methods of dissemination are nothing without product. Charles's research was extensive and almost unimaginable without the aid of computers. He looked at all aspects of growing crops, from seeding and fertilizing to harvest and storing. He is known, perhaps best, for development of the variety OAC 21 barley. Registered in 1910 it is estimated it constituted 90% of all barley grown in Canada for many years and the majority until 1948. For more than fifty years it was the "malting standard" against which all other barleys were compared by the brewing industry. His pioneering Canadian research beginning in the 1890's on sugar beets, soybeans and alfalfa, led to their inclusion as part of the crop rotation of many Ontario farms. With potatoes Charles was able to demonstrate a threefold increase in yield by simply using immature rather than mature seed stock.

Professor Zavitz remained head of the Department of Field Husbandry until his retirement in 1927 due to ill health. Over a period of forty one years he had played a major role in establishing the fledgling OAC as a world renowned centre of research and agricultural extension. During this time he not only trained the staff at Guelph but also taught men who were to become the presidents of the Manitoba Agricultural College and the University of British Columbia, and the deans of agriculture at the universities of Saskatchewan, Alberta and McGill University. Add to that another 30 faculty on staff in agricultural colleges in the United States. Charles and his wife Rebecca, whom he had married in 1890, had one son. After his retirement, he and Rebecca moved back to Poplar Hill within a mile of his original home. There he continued his research on a smaller scale until his death in 1942.

In recognition of his many accomplishments Professor Zavitz received many awards and honours. The University of Toronto awarded him an honorary Doctor of Science degree in 1916 to honour him as a scientist, teacher and a man of peace. In 1935, the University of Western Ontario awarded a Doctor of Laws degree. He has been inducted into both the Ontario and Canadian Agricultural Hall's of Fame and in 1999 received a Doctor of Science degree from the University of Guelph to commemorate the 125th anniversary of the Ontario Agricultural College.

Charles Zavitz's contributions to agriculture were momentous and lasting. He lived by his belief in developing and using solid scientific principles that would allow for repeatable and verifiable results. Using this approach, he developed new varieties of barley, soybeans, potatoes, and alfalfa, sugar beets, peas, grain and field beans. By teaching his students to follow similar principles, he influenced leaders in academia, politics and management. He brought improvements in practical agriculture to farmers in Ontario. By means of co-operative experimentation through the Experimental Union and his work with the Canadian Seed Growers Association and the American Society of Agronomy, to name just a few, his methods and his resulting research has been shared throughout Canada, United States and around the world.