

From the Oat Newsletter, volume 50, 2006:

Dr. Art McElroy  
Award for Distinguished Service to Oat Improvement



It is with great respect and honor that we award Dr. Art McElroy the 2006 Distinguished Service to Oat Improvement Award. Art has made a significant impact on numerous tasks and disciplines that he has managed over a relatively short but productive academic career.

Art was born and grew up in Lachute, Quebec. After completing a BSc.(Agr) at McGill University and M.Sc. at Université Laval he served as a regional crop specialist for south-western Québec. He joined the Research Branch of Agriculture Canada in 1978 when he was sent to the Brandon Research Centre to manage the corn and soybean physiology program while Bob Hamilton was seconded to the Dryland Project in India.

In 1979 he was transferred to the Ottawa Research Station to assume the forage grass breeding program with the retirement of Walter Childers. About this same time he initiated studies toward a Ph.D. degree at the University of Guelph; which he completed in 1983. His plant breeding accomplishments during this time resulted in the licensing of two orchardgrass varieties, one tall fescue variety plus two germplasm releases of Timothy that eventually became licensed as varieties. Another significant research activity during this interval was the design of a novel *in vitro* digestibility system for measuring the fibre digestibility, which is currently being marketed commercially by a US firm.

The forage quality work led to the routine evaluation of forage cultivars, and Ontario became the first province or state in North America to include quality parameters as

criteria for recommending forage varieties. Another project innovation was the development of a protocol for the production of hybrid alfalfa based on the application of somatic embryogenesis for generating sufficient numbers of parental clones for commercial production fields.

In 1996, Art was transferred to the oat breeding program that had been conducted by Vern Burrows. In the space of eight years, Art was involved in the release of ten oat cultivars. These varieties all had their own particular attributes. However the variety Goslin was especially noteworthy for its unique combination of groat and hull characteristics that contributed to an enhanced mill yield. This variety set the standards for milling yield for the Quaker list of preferred oat varieties for Eastern Canada.

In addition to the breeding activities, Art chaired the Quaker-ECORC oat research team for three years. In this capacity he was involved in the application of molecular markers to the breeding program; developed and implemented a strategy for deployment of crown rust resistance genes and initiated a universally available oat pedigree database. This system, which was re-designed and significantly enhanced by Dr. Nick Tinker, and now known as Pedigree of Oat Lines, has been especially useful to the oat genetics-breeding community.

The above were innovative technologies and have contributed to oat improvement efforts in significant ways, but Art's most significant contribution to oat breeding enabling technologies was the novel NIR approach for assessing oat quality. He developed sets of prediction equations for determining the oil content and groat percentages without the need for dehulling the samples.

From an extension perspective, he was a strong supporter and driving force behind the formation of the Oat and Barley Council of Ontario. In this context he spearheaded an initiative for exploiting the value-added components of oats and barley by organizing a very successful Oat and Barley Forum in October 2005.

In addition to all of the above activities, he initiated in 1996, as a sideline, a private R&D company, PhytoGene Resources Inc. One of the main initiatives was the development of industrial hemp varieties, the first of which, ESTA-1, was released in 2004.

Art resigned from the research branch in 2004 to devote full time to his private company. In addition to the industrial hemp initiative he launched a private oat breeding program and has developed several collaborations with seed companies.