



the **Oat** Newsletter.

## **Chinese New Year at ECORC, AAFC: Celebrating the Benefits of Scientific and Cultural Exchange**

The Eastern Cereal and Oilseed Research Centre of Agriculture and Agri-Food Canada in Ottawa is fortunate to have a very diverse community, which includes a large number of people born in China or of Chinese descent. In recent years, this population has grown substantially, largely as the result of a bilateral agreement between the governments of Canada and China.

Shan He, former oat worker in the lab of Dr. Nick Tinker, who now works with the International Engagement, Bilateral Relations, group in Science and Technology Branch, explains that,

“Development of modern agriculture through science is a top priority for China and Canada. In 2007, the two countries signed the framework Agreement for Cooperation on Science, Technology and Innovation. In 2014, Agriculture and Agri-Food Canada and China’s Ministry of Education (MOE) renewed the Memorandum of Understanding on Scientific and Technical Cooperation and Personnel Training, which has been in place since 2005. Under the cooperation framework, over 200 talented Chinese graduate students and 100 plus scientists with Chinese government scholarships have come to AAFC research centres to conduct research since 2006. AAFC provides research guidance, scientific training, research space, and materials. AAFC and Chinese researchers have co-authored over 1,000 peer-reviewed scientific publications since 2006, benefiting the agriculture sectors in Canada, China, and on the international stage.”

Dr. Changzhong Ren, who conducted oat breeding research at ECORC with Dr. Vern Burrows in the early 2000s, and who is now the President of Baicheng Academy of Agricultural Sciences (BAAS) of Jilin Province and the Chief Scientist for the National Oat Industrial Technology System of the Ministry of Agriculture (MOA) of China, summarizes oat research in China thusly:

“Naked oats originated in China. According to historical documents, it has been 2100 years since the Chinese began to plant oats. Since 1998, Chinese scientists have released 46 new oat varieties, using traditional breeding methods coupled with biotechnology. These new cultivars have satisfied diverse agronomic and food industry needs for differing maturities, eco-zone requirements, and processing techniques.

Oat workers have developed an oat production system to combat drought, lodging, and adverse growing conditions, which has led an increase in oat yield of 30%. A multi-crop oat production system has been developed to allow the growing of two oat crops in regions north of 45 degrees N, greatly increasing the profitability. Organic oat growing models have been developed to produce high quality oats, which are in high demand by consumers. Oat production models to combat wind-erosion and soil salinity have been developed to address conflicting demands relating to production and ecology. All these have improved the health of the ecosystem and, at the same time, improved the income of farmers. As a result, oat production in China has expanded to 17 provinces.

The underdevelopment of oat food processing technology and poor oat product quality preservation had been problems in China. To improve this, the oat research system has developed products such as “oat rice”, overcome the bottleneck of achieving enzyme inactivation, and developed 22 national and regional standards to solve the problems of unregulated processing, short shelf life, and unlabeled products. The scale of the oat food industry has increased 12-fold since 1998.”

As part of the Chinese-Canadian MOU, Dr. Weikai Yan, AAFC oat breeder for eastern Canada, is currently hosting Chinese PhD student Jianhui Bai from Inner Mongolia Agricultural University. She is studying salt-tolerance mechanisms in oat. Dr. Nick Tinker, whose group studies oat genomics, is hosting PhD student Honghai Yan from Sichuan Agricultural University. His research focuses on studying the genomes of wild oat species. His supervisor in China is Dr. Yuanying Peng, who also conducted research at ECORC.

This week, on February 20th, the Chinese community at ECORC will be hosting a potluck lunch to celebrate Chinese New Year, which begins on February 19th. This event, too, has grown over the years, and includes not only delicious food, but also performances of Chinese music, songs, dances, martial arts, calligraphy, etc., by the students and staff.

We at ECORC wish you a very happy Year of the Sheep! 新年快乐!

-Charlene Wight, 17 Feb 2015.

Here are some photos from last year's Chinese New Year party at ECORC:





Chinese New Year, ECORC, 2014

Charlene Wight and Weikai Yan



Chinese New Year, ECORC, 2014