**Agriculture and Food Innovation Joint Research Centre**

**(NWAFU and U of A)**

**Workshop at NWAFU in 2015**

**Background**: The Northwest A&F University (NWAFU) and the University of Alberta (U of A), represented by the Faculty of Agricultural, Life and Environmental Sciences (ALES) have agreed to explore the possibility of establishing the “Agriculture and Food Innovation Joint Research Centre”. This joint research centre (JRC) will focus on the development of innovative agricultural solutions to solve complex agricultural issues relating to crops. The initial focus of this JRC will be on improving the climate resilience of agricultural commodities so as to ensure our ability to address food security challenges, which will result from climate change. The approach will be both at the molecular level, using state-of-the-art “omics” technologies to improve abiotic/biotic stress tolerance through biotechnology, and at the agronomic (or production) level by developing and incorporating technological solutions (e.g. precision agriculture) to improve crop yield. We will limit ourselves to water-deficit stress (e.g. drought and salinity) and diseases of relevance to crops chosen on both the molecular and agronomic sides; we wish to be broader so as to develop technologies applicable to a wide range of commodities.

**The proposed workshop:** We began this collaborative effort by having initial discussions, which have now progressed to the development of an MOU to establish this JRC. This workshop involving U of A (ALES) and NWAFU researchers will be conducted at NWAFU campus in Yangling, China from June 28-30, 2015. At the end of the workshop, we will deliver the framework for research strategy for the research centre which will include, among other things, a student/staff mobility plan, joint supervision of graduate students, development of joint academic programs inclusive of blended learning approaches, identification of funding strategies.

**TENTATIVE AGENDA**

**Sunday, June 28, 2015, morning (Meeting Room 1, 1st floor, Foreign Guest House)**

* 8:30-9:30 Introductions and purpose of the workshop
  + 8:30-8:45—Welcomeremarks from senior NWAFU official (e.g. Dean / VP)
  + 8:45-9:00— Overview of the University of Alberta and the Faculty of ALES (Nat Kav)
  + 9:00 – 9:30—Break and group photograph
* 9:30-12:00 Research presentations by ALES and NWAFU researchers
  + 9:30-10:00—Dean Spaner, ALES, “Wheat breeding, genetics and graduate students at the University of Alberta”.
  + 10:00-10:30—Wanquan Ji, NWAFU, “Wheat improvement in NWAFU”
  + 10:30-11:00—Zhensheng Kang, NWAFU, “Wheat disease resistance research in NWAFU
  + 11:00-11:20—Zhonghua Wang, NWAFU, “Wax and drought resistance in Wheat
  + 11:20-11:40—Yin-Gang Hu, NWAFU, “Improving drought tolerance in wheat”
  + 11:40-12:00—Hua Chen, ALES, “Genetics of earliness, disease resistance and agronomic traits, mapping QTL and spring wheat breeding in western Canada, perspectives of a U of A graduate student”.
  + Discussions
* 12:30-14:00—LUNCH
* 14:00-18:00 , Research presentations by ALES and NWAFU researchers (contd.) **(Meeting Room 1, 1st floor, Foreign Guest House)**
  + 14:00-14:30—Sheau-Fang Hwang, ALES, “Integrated management of canola diseases in Alberta”.
  + 14:30-15:00—Shengwu Hu, NWAFU, “Oilseed production and Genetic improvement in NWAFU”.
  + 15:00 – 15: 30—Kan-Fa Chang, ALES, “Pulse crop disease issues in Alberta”
  + 15:30-16:00—Baili Feng, NWAFU, Pulse Crop production and improvement in China,
  + Discussions
  + 16:00-16:30, BREAK
  + 16:30-17:00—Nat Kav, ALES, “Role of non-coding RNAs in plant responses to stress”
  + 17:00-17:30—Yuanqing Jiang, NWAFU, Identification and functional analysis of plant-specific NAC transcription factor genes in Brassica napus
  + 17:30 – 18:00—Meng Zhang, NWAFU, Metabolism and regulation of triacylglycerol in oil crops
  + Discussions
* NETWORKING DINNER 19:00

**Monday, June 29, 2015 (Meeting Room 1, 1st floor, Foreign Guest House)**

* 8:30-12:00: Research presentations by ALES and NWAFU researchers (contd.)
  + 08:30 -9:00—Miles Dyck, ALES, “Long-term agricultural soil experiments provide decision supports for modern agricultural systems”.
  + 9:00- 9:30—Ellen Goddard, ALES, “How agriculture and food policy can support innovation when public is concerned about new technology”.
  + 9:30-10:00—Linquan Wang, NWAFU, The NH3 volatilization in winter wheat field with furrow-ridge and plastic film mulching etc conservation tillage practices
  + 10:00-10:30—BREAK
  + 10:30-11:00— Zhaohui Wang, NWAFU, Water and Nutrient Management for higher Crop Yield, Efficiency and Quality
  + 11:00 – 11:30—Hailong He, NWAFU, “Influences of freeze-thaw processes on the soil water balance and green house gas emissions in agricultural systems”
  + 11:30 – 12:00—Discussions
* 12:30 -14:00—LUNCH
* 14:00-18:00—visits to laboratories as organized by NWAFU
  + State Key Lab of Crop Stress Biology for Arid Areas
  + The institute of Water-saving Agriculture in Arid Regions of China
* 19:00 DINNER

**Tuesday, June 30, 2015 (Meeting Room 2213, Research Building, NWAFU)**

* Morning 08:30 -12:00
  + Towards a Joint Research Centre
    - Potential for collaboration and identification of areas of mutual interest / complementary expertise
    - Funding strategies
    - Student / staff mobility
    - Next steps
  + 11:30-11:45—Address by Dean Stanford Blade: “Building successful partnerships: lessons we can learn from crop science”.
  + 11:45-12:00—Concluding remarks from NWAFU
* 12:35-14:00 LUNCH
* 14:00 ALES delegation departure from Yangling to Xi’an.