

Introduction to the Workshop

Mark P. Widrlechner¹

U.S. Department of Agriculture, Agricultural Research Service, North Central Regional Plant Introduction Station, Iowa State University, Departments of Agronomy and Horticulture, Ames, IA 50011-1170

On 13 Aug. 2002, the ASHS Genetics and Germplasm Working Group asked me to develop a proposal for a workshop to be held at the 2003 ASHS Centennial Conference in Providence, R.I. The workshop was to include a review of the current climate for plant exploration and exchange along with individual presentations that could provide special insights into the diverse benefits derived from plant exploration and the introduction of new germplasm into the United States. To that end, four speakers were asked to participate, each with very different personal and professional perspectives on plant exploration and their benefits. The proposal was approved and the workshop Germplasm Acquisition from Conception to Products was held as part of the ASHS Centennial Conference on 3 Oct. 2003.

The following four papers (Dosmann and Del Tredici, 2005; Iezzoni, 2005; Simon, 2005; Williams, 2005) summarize well the workshop presentations, though, sadly, the ensuing discussions with a highly engaged workshop audience were not captured for these proceedings.

The introductory paper (Williams, 2005) presents an insider's perspective on the U.S. National Plant Germplasm System's efforts to support plant exchange and exploration, in a world that is rapidly changing through the implementation of the Convention on Biological Diversity and other international agreements, and shift in philosophy away from a view that germplasm is the common heritage of humanity towards one that nations possess sovereign rights over plant germplasm within their borders. These changes have created a more challenging environment, but have also

increased benefit-sharing activities and support for local conservation activities.

The next paper (Dosmann and Del Tredici, 2005) examines the results of the first cooperative plant exploration between Chinese and American scientists conducted in China after the re-establishment of diplomatic relations between the two countries in the 1970s. It evaluates success in propagating, conserving, and disseminating new collections, as well as pointing out cases where introductions from that trip had special botanical or horticultural importance. This paper, taken together with a more detailed, earlier publication upon which much of the workshop presentation was based (Dosmann and Del Tredici, 2003), are among the most insightful examples of analysis of the contributions of a single plant exploration effort since Hymowitz's (1984) retrospective analysis of the 1929–31 Dorsett-Morse Expedition for soybean germplasm.

The final two papers (Iezzoni, 2005; Simon, 2005) focus on the connections between the exploration process and the products of those efforts, from the personal perspectives of two experienced plant explorers. Reports of this type, while of great value, are scarce in the scientific literature and, outside of the compendia edited by Shands and Wiesner (1991, 1992), are difficult to locate.

Iezzoni's (2005) report describes a career-long quest to introduce a diverse array of sour cherry germplasm from researchers throughout central and eastern Europe to the U.S. and then proceeds to document many of the valuable results, ranging from direct introduction of new cultivar types to the potential for improved rootstocks for sweet cherries. Simon's (2005) report centers on a single exploration for *Allium* from central Asia in 1989 and the exciting prospects of transforming garlic from an exclusively vegetative species to one where sexual hybridization may become routine.

It is clear from these reports that the benefits of plant exploration to American agriculture are substantial and wide-ranging. The current

environment surrounding the international exchange of plant genetic resources seems unsettled, presenting many challenges, but the recent conclusion of the International Treaty on Plant Genetic Resources for Food and Agriculture (Commission on Genetic Resources for Food and Agriculture, 2004) is a positive development towards clearer paths for exchange, at least for major food and feed crops. I am optimistic that informed, motivated researchers with assistance from the National Plant Germplasm System's Plant Exchange Office will be up to these challenges and will continue to conceive, execute, and derive value from plant explorations.

Literature Cited

- Commission on Genetic Resources for Food and Agriculture. 2004. The International Treaty on Plant Genetic Resources for Food and Agriculture. 19 Apr. 2004. <http://www.fao.org/ag/cgrfa/itpgr.htm>.
- Dosmann, M. and P. Del Tredici. 2003. Plant introduction, distribution, and survival: A case study of the 1980 Sino-American Botanical Expedition. *BioScience* 53:588–597.
- Dosmann, M.S. and P. Del Tredici. 2005. The Sino-American Botanical Expedition of 1980: A retrospective analysis of success. *HortScience* 40(2):302–303.
- Hymowitz, T. 1984. Dorsett-Morse soybean collection trip to East Asia: 50 year retrospective. *Econ. Bot.* 38:378–388.
- Iezzoni, A.F. 2005. Acquiring cherry germplasm from central and eastern Europe. *HortScience* 40(2):304–308.
- Shands, H.L. and L.E. Wiesner. 1991. Use of plant introductions in cultivar development. Part 1. *Crop Sci. Soc. Spec. Publ.* 17.
- Shands, H.L. and L.E. Wiesner. 1992. Use of plant introductions in cultivar development. Part 2. *Crop Sci. Soc. Spec. Publ.* 20.
- Simon, P.W. 2005. Realizing value from Central Asian *Allium* germplasm collections. *HortScience* 40(2):309–310.
- Williams, K.A. 2005. An overview of the U.S. National Plant Germplasm System's exploration program. *HortScience* 40(2):297–301.

Received for publication on 20 May 2004. Accepted for publication on 27 June 2004. This journal paper of the Iowa Agriculture and Home Economics Experiment Station, Ames, Iowa, was supported by Hatch Act and State of Iowa funds.

¹To whom reprint requests should be addressed; e-mail isumw@iastate.edu.