Chapter 3

A National Plant Germplasm System

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The USA, which stands unchallenged as the greatest producer of food that the world has ever known and which exports the production from 1 acre in 3, is dependent upon the rest of the world for its genetic resources (germplasm) of practically all of its crop plants. That is why plant introduction activities started long before the first European colonists arrived. Archeological plant materials from Bat Cave, NM (Smith, 1950), document a cultural series from about 2500 B.C. to about A.D. 1000. Plant remains included corn (Zea mays L.), pumpkin (Curcurbita pepo L.), and beans (Phaseolus spp.). None showed the range of diversity over time that has been found in caves in Mexico and elsewhere further South. Plant introduction by American Indians or Amerinds had been going on for more than 3000 years prior to the arrival of the pilgrims.

Plant introduction was formalized by the Federal Government as early as 1827, when American consuls abroad were directed by President John Quincy Adams to acquire crop seeds and dispatch them to the USA (Hodge and Erlanson, 1955). Plant introduction and distribution formed the central core of the U.S. Department of Agriculture (USDA) when the latter was founded in 1862. The new Department was to "acquire and diffuse...useful information on subjects connected with agriculture in the most general and comprehensive sense of that word, and to procure, propagate, and distribute among the people new and valuable seeds and plants" (Ross, 1946).

Following creation of the USDA, plant exploration activities increased. Collectors were sent to Europe and China in 1864, to the latter for Chinese sorghums (Sorghum bicolor L. Moench). Efforts up to 1898

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