

Strengthening the NPGS & Its Pullman-Based Genebank Plant Genetic Resources

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Crops must continually be improved for optimal production considering new disease and insect threats, dwindling natural resources, changing climate, and changing demand in nutritional needs. To create these new varieties, plant breeders use the library of genetic information stored in the seeds and plant materials (plant genetic resources; PGR) in, for example, the genebanks of the USDA ARS National Plant Germplasm System (NPGS). The entire NPGS maintains, characterizes, evaluates, documents, enhances, and distributes 620,000+ accessions (different genetic types) of 17,000+ species (taxa, including crop wild relatives) at 22 genebanks around the US. Currently, 87% of the 620,000+ NPGS PGR accessions are available for distribution. In an average year, ca. 200,000 samples of those accessions are sent to requestors for research, education, and breeding purposes. The NPGS Plant Germplasm Introduction and Testing Research Unit (PGITRU) in Pullman and Prosser, WA, holds the collections of cool season food legumes, oilseeds, and vegetables. In addition, the PGITRU also holds the temperate forage legume and grass collections. PGITRU staff ensure these PGRs, their associated information, and useful genes, will be safeguarded and made available to stakeholders worldwide. A Congressionally mandated national strategic plan was developed to improve the support, capacities, and performance of the entire NPGS's management programs and to identify operational backlogs and quality deficiencies, to ensure we comprehensively meet the needs of customers and stakeholders. Priorities have also been identified for conserving the crop wild relatives (CWR) native to the U.S., and the integration and expansion of genotypic characterization, phenotypic evaluation, and genetic enhancement operations of the entire NPGS collection.