

Germplasm Management of Thailand

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ABSTRACT:

The importance of germplasm for the world is no doubt for food sustainability of the world. In particular, germplasm is realized as the heart or treasure for plant geneticists and breeders. Similar to other Plant Genetic Resources Conservation Unit, general missions of gene banks in Thailand are collections, evaluations, conservation and distributions to users. Apart from those missions, some gene bank units are conducting some part of increasing the segregation of their materials, based on their main missions and objectives. The main germplasm unit in Thailand is Department of Agriculture (DOA) gene bank, which is capable as medium and long-term (~ 20-50 years) unit. This gene bank unit is located in Bangkok and its current collection is about 32,717 accessions (acc.). There are a few small short term (~ 2-5 years) units which are located in some universities like Kasetsart University, KamphaengSaen Campus (~11,832 acc.), Rajamangala University of Technology Lanna at Lampang campus (~684 acc.) and KhonKaen University (KKU) at KhonKaen Province (~4,678 acc.). Another short-term collection unit related to both *In-situ* and *Ex-situ* collection is Plant Genetic Conservation Project under the Royal Initiation of Her Royal Highness Princess MahaChakriSirindhorn (RSPG), which covers areas of many provinces throughout of the country and involves by many government sections. However, the objective of the later gene bank units is to focus on sustainable conservation and utilization mainly for Thai people. Nevertheless, the regulation of all of the above mentioned gene bank units in Thailand are on-going development. They still require expert technicians, instruments and especially good management entirely of the system. Somehow, the gene bank at KKU distributed the elite lines and segregating populations to the users, like seed companies, food and pharmaceutical companies through their breeding program and germplasm management which is granted mainly by National Science and Technology Development, Department of Science and Technology.