

Underutilized and New Crops–Germplasm Introduction

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The region of South Asia is very diverse in its physiography, agro-ecology and climate, and possesses rich biodiversity in cultivated crops. Several under exploited and underutilized species occur which include native diversity and also, well acclimatized species introduced particularly in the past few decades.

In India, a total of 15,258 accessions of 60 underutilized and new crops have been introduced since independence. Out of these, 3361 accessions of 21 underutilized plants have been evaluated under the aegis of All India Coordinated Research Project on Underutilized Crops, which led to identification of 395 promising lines. Some of these materials, have been very useful as food and industrial crops and through germplasm evaluation several promising varieties have been released for cultivation at national level. To mention among are Suvarna in amaranth, Himpriya in buckwheat, BRS 1

in rice bean, VH 82-1 in faba bean, Arizona-2 in Guayule and EC 33198 in jojoba. These are now well adapted to diverse agro-ecosystems/agricultural systems. Further, about 70 species of underutilized crops have been identified to have promise in Asia pacific region and can play a pivotal role in diversification of the agriculture, management of wastelands and meeting the nutritional requirements of the people.

Similar diversity of known potential has been documented for other centres of diversity of crop plants, so as to introduce germplasm from the respective mega diversity regions and evaluate these for their adaptation and usefulness in South Asia region. In this paper, which is based on work carried out by NBPGR and other centres in India, an attempt has been made to assess the impact of such diversity and the opportunities envisaged through further exotic introductions.

Policy Issues in Germplasm Management

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Plant genetic resources have played significant role in the development of agriculture, providing food, feed and fodder and also numerous medicines and industrial products. In general, the genetic diversity in plant is mostly located in tropical and sub-tropical regions of the world and countries are inter-dependent on their germplasm needs. The first international and intergovernmental discussions on access to genetic resources related to food and agriculture were initiated in 1979 and a formal agreement, the International Undertaking on Plant Genetic Resources (IUPGR) was adopted in 1983. It established the principle of plant genetic resources as the “heritage of mankind” and consequently these resources were available to *bonafide* users without restriction. The scientific and technical

achievements in the field of plant genetic resources thus have earlier focused mainly on their conservation, use and management since access to genetic resources was not an issue. However, the international development related to the intellectual property rights and trade in the last two decade have witnessed access to genetic resources emerge as a central topic of debate at national-global forum. The Convention on Biological Diversity in 1992 recognized the sovereign right of nations to exploit their own resources pursuant to their own environmental policies. It also established a new participatory relationship between provider and user of genetic resources incorporating the instruments of ‘Mutually Agreed Terms’ and ‘Prior Informed Consent’ for access to genetic resources for fair and equitable