

*The science of genomics has been put to work for human health and well-being, but who benefits from these breakthroughs?*

Partners from the public and private sector are marshaling resources to bring the genomics revolution to the world's poorest people.

Within five years, the 19 member organizations of the Challenge Program for Unlocking Crop Genetic Diversity hope that genomics will identify useful genetic variation among the staple crops of developing countries. Researchers will identify genes and pathways to use in improving those crops, identify marker systems to speed the selection of varieties with valuable traits, and develop integrated bioinformatics systems to organize and share the research data.

Within 10 years, in partnership with national research programs in developing countries, the Challenge Program aims to incorporate this valuable diversity into elite breeding materials and locally adapted landraces. The new lines will ultimately be passed to farmers for assessment.

Approved in July 2003, the new Challenge Program has already started its work. At the Technical Planning Workshop in Wageningen, the Netherlands, in August, there was a palpable sense of promise and excitement about focusing international expertise in genomics on crop production in areas left behind by other technological revolutions. The Challenge Program will focus on four crop groups—cereals, roots and tubers, legumes, and bananas and the forages—to ensure that all 22 CGIAR mandate crops benefit from the public development of genomic tools for crop improvement. The tools and products that the Challenge Program develops will be generic—that is, they will be applicable to any crop, any gene, and any trait. Capacity building is an integral part of the Program.

Partners include the national agricultural research systems of China (Chinese Academy of Agricultural Sciences) and Brazil (Brazilian Agricultural Research Corporation); several CGIAR Centers (CIAT, CIMMYT, CIP, ICARDA, ICRISAT, IITA, IPGRI, and IRRI), six advanced research institutes (Agropolis, John Innes Centre, Cornell University, the Comparative Cereal Genomics Initiative at Kansas State University, National Institute of Agrobiological Sciences–Japan, and Wageningen University), the Global Forum on Agricultural Research (representing CSOs and developing country farmer groups), and three private companies (Mahyco Research Centre, Bayer CropScience, and Pioneer Hi-Bred International).

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The Challenge Program for Unlocking Crop Genetic Diversity, an initiative of the CGIAR, is a global alliance to make genomics technology and genetic resources widely and publicly available to improve food crops in developing countries. It is coordinated by CIMMYT, IPGRI, and IRRI.



For more information, see <http://www.cgiar.org/pdf/cpunlocking.pdf>.

