

# **EXPLORING THE POTENTIAL FOR CROP DEVELOPMENT AND BIODIVERSITY ENHANCEMENT: FOSTERING SYNERGY BETWEEN THE FORMAL AND THE FARMERS' SEED SYSTEMS IN CHINA**

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The paper is an introduction of an on-going research project in SW China, co-funded by Ford Foundation and IDRC. The project is a follow up research based on the main findings of an impact study of a CIMMYT's maize germplasm in SW China. The general objective of the project is to explore possible conditions for, the institutional and technological arrangements needed for collaboration between the formal and farmers' systems in crop improvement and genetic biodiversity enhancement.

Maize is the most important feed crop and the third most important food crop (after rice and wheat) in China. It is the main staple food crop for the rural poor in the remote uplands of the southwest, an agro-ecologically diverse area that constitutes the centre of maize genetic diversity in China. Over many generations, farmers have cultivated and improved maize for their survival. Most farmers still cultivate open pollinated varieties and landraces. The Chinese government has followed a modern technology-oriented approach to agricultural development, relying mainly on its formal seed system to ensure national food security. The core of this policy has been the development and distribution of hybrids, in cooperation with some of the Consultative Group on International Agricultural Research (CGIAR) centres. However, these hybrids are mainly used under uniform and high potential agricultural conditions: remote and marginal areas such as the uplands of the southwest have remained isolated from the technology development process. This project will address the problem by promoting better collaboration between the formal government seed system and local farmers' seed systems through a participatory plant breeding approach. Researchers will define the potential role of traditional knowledge systems in crop development and biodiversity enhancement, and recommend ways that the formal system can help farmers (particularly women farmers) improve local varieties, while maintaining their landraces and seed management practices. The overall aim is to improve crop development, enhance biodiversity and promote food security.