

The framework of the community landscape as the context for plant improvement theory and practice helps move beyond the flawed understanding of the process of knowledge creation that underlies and confines both conventional and participatory approaches to plant breeding. While in both approaches farmers participate at various levels and at particular times, it is taken for granted that professionally trained scientists are the main researchers. Scientists determine the research need and protocol and ultimately take credit for improving a crop or breeding a new variety. Farmers are not recognized as authentic producers of knowledge and technology. Rather, the involvement of farmers is treated mainly as a means to ensure the quality of the research product, particularly when testing and selecting varieties. Farmers' involvement is considered necessary for the promotion or marketing of the new variety.

Recognition of the broader context in which crop improvement takes place allows for a more balanced and realistic understanding of the contribution of farmers to knowledge production. Farming communities are engaged in a wide range of actions such as seed conservation, seed management and seed exchange that contribute to crop improvement. They are also engaged in particular farming practices such as mixed cropping that contribute to crop improvement by increasing inter-species diversity in farmers' fields and creating environments where intraspecies traits such as pest resistance are expressed and valued. Through these actions, communities regenerate the conditions of the agroecosystem, including their agricultural knowledge and other social and cultural dimensions.

Recognition of the context for crop improvement, and of the validity of the farmer's contribution of knowledge within this context, opens the mind to the constructive discussion of the primary roles of farmers and scientists and the nature of collaboration among them. Discussions of this nature are urgently needed, so that the current vulnerabilities of communities can be identified and communities can gain from collaboration with scientists.

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# The Broader Institutional Context of Participatory Plant Breeding in the Changing Agricultural and Natural Resources R&D System in Nepal

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## Abstract

In the past, many of the debates concerning participatory plant breeding (PPB) have concentrated on the differences between PPB and conventional plant breeding (CPB). In this paper, it is argued that the emphasis on the differences between PPB and CPB has led to (1) a perception of differences where in fact they do not exist, (2) a lack of acknowledgement of the complementary nature of different activities in participative technology development, (3) a lack of acknowledgement of other participatory-research and technology-diffusion activities taking place in the same locations, (4) a lack of emphasis on looking at legitimate concerns of science and technology policy. This preoccupation with simple notions of differences in the debates has resulted in a lack of knowledge sharing, a lack of available scarce resources, and an inadequate analysis of the institutionalization of PPB processes. This paper concludes that some of the PPB debates are about smaller issues and that major issues of science and technology policy need to come onto the agenda in the future.

In order to go forward, the authors suggest placing the debates in a broader institutional context where actors are seen to be playing many roles when participating in arguments about the pros and cons of PPB and CPB. It is proposed that those who are knowledgeable in this area look beyond their own organizational, funding, or other interests and help promote the development of broad-based institutional structures in research and development that mobilize and effectively use the wide range of research resources in Nepal and allow access to funds and scientific resources outside of the country. The paper illustrates the argument by using case-study materials from recent experiences in Nepal.

## Introduction

We write this paper from the perspective of two people who are actively involved in promoting participatory approaches to technology generation and development. We are both socioeconomists and have experience of being part of plant breeding programs. However, neither of us is currently involved in day-to-day activities concerned with plant breeding. This paper attempts to reflect our views on some of the participatory plant breeding (PPB) activities and debates going on around us at the present time in Nepal. While we run the risk of being uninformed on some of the current literature, or not aware of some the points of the debate, we feel that our perceptions could be useful to those who are more closely engaged in these debates. By taking this broader institutional view of the role of different actors, we hope to show how the way issues, problems, constraints, etc., are described and presented by different actors not only reflects the way those people see things from their perspective, but also how the language used in the debates and the way the discourse is conducted opens up or narrows down the room for maneuver for exploring possible options for moving forward in policy and practice.<sup>1</sup> We argue that some of the preoccupation in the debate with defining simple dichotomous differences has resulted in a lack of adequate analysis of the complexity of the

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1. For a fuller description of this type of analysis in agricultural and rural-development planning practice, see Clay and Schaffer (1984) and Apthorpe and Gasper (1996). Recent analysis on mainstreaming gender analysis into agricultural research practice has focused on similar issues (Locke and Okali 1999).