## The Capabilities and Barriers of Participatory Breeding: Breeders Viewpoint of Research Centers in the Tehran Province

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One of important mission of agricultural extension management is using approach for engage farmer's participation in extension programs of modern agricultural technologies and innovations diffusion. One of these approach is Participatory Technology Development (PTD). PTD has a special attention toward farmer's participation in process of innovation diffusion and technology transition. Participatory Plant Breeding (PPB) is a subsector of PTD which has established with cooperation of sustainable development and environment institution and International Center for Agricultural Research by rural research institution. Therefore the purpose of this study was to investigate the capabilities and barriers of participatory breeding. The design of the study was a survey research and utilized a descriptive-correlation method. The target population consisted of 95 research centers breeders in Tehran province (N=95), using the census study 76 questionnaires were eventually collected and analyzed. Descriptive findings indicated that breeders had an agreed viewpoint toward using of participatory breeding. Important participatory breeding capabilities from breeding viewpoint is capability of implementation in farmers land as on-farm. Also, research institute of seed and seedling record, Universities and extension agents had high participation in using of this approach. In addition, Role of National Bank of Plant Gene was low. According to results, two important barriers related to participatory breeding use were 1) lack of enough and suitable coordination among several sectors; and 2) lack of team and participatory working motivations among farmers and researchers. Linear regression findings showed that capabilities and barriers of using participatory breeding were determined 58% of the variations in the use of participatory breeding.

**Key Words**: Participatory Technology Development, Participatory breeding, Breeders.