



FARMER'S EYE AND BREEDER'S EYE

fields of knowledge exchange as a condition of a participatory cereal breeding approach

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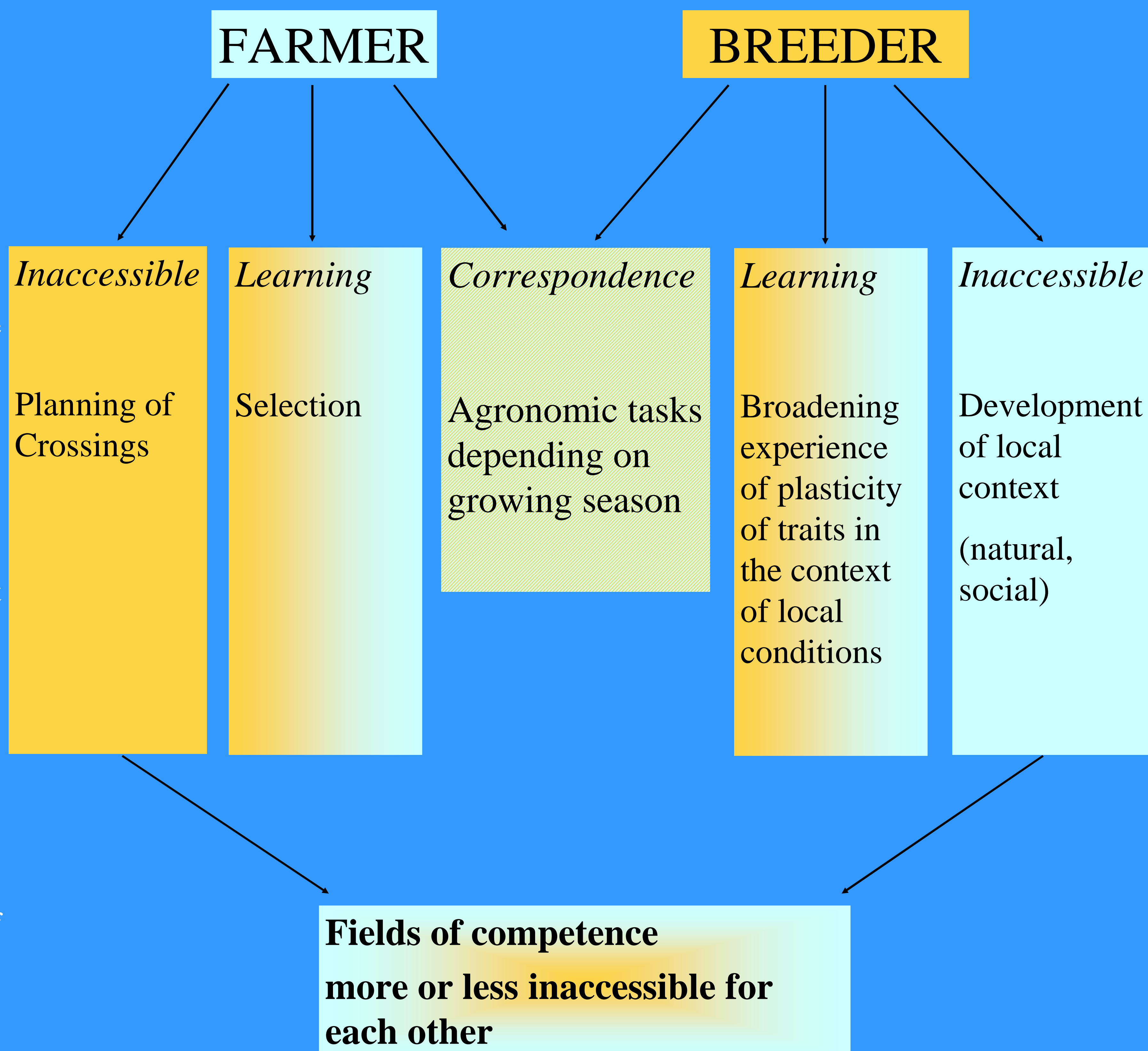
INTRODUCTION

With the change to organic agriculture, the diversity of local conditions becomes more important. Local adapted varieties are necessary. But breeding for this demand is not profitable for a conventional breeding strategy. An alternative can be a participatory breeding approach (PPB). Evolved in the context of international development cooperation, this approach is increasingly discussed in the European context. Communication between farmers and breeders is a key issue in participatory breeding. Farmer's and breeder's eye have different perspectives on the plants and different knowledge gained through experience. Those perspectives and experiences need to be exchanged. As an outcome of the investigation of "The breeder's eye" on the example of the crossbreeding of self-fertilizing cereals from a knowledge sociology perspective three levels of consciousness could be described: vegetational consciousness, generational consciousness and consciousness in hereditary flow (Timmermann, 2006). The framework of these three levels allows to understand the various levels of breeding behaviour and how the breeders learn and develop their breeding practices. Based on this results, fields of knowledge exchange between farmer and breeder, their limits and possibilities for further development can be worked out.

RESULTS

There are three kinds of exchange fields of knowledge in the context of PPB: a field of correspondence and agreement, a field of learning and a sphere of competence, which is more or less inaccessible for each other.

a) A correspondence of knowledge between farmer and breeder can be found for agronomic tasks. About these topics and how to realize it technologically farmer and breeder can communicate and cooperate very well. Both, farmer and breeder are familiar in thinking about sowing, cultivation and harvesting in the context of growing seasons.



b) Fields of learning: In the process of selection, the farmer has to learn in which breeding generation and context useful decisions can be made, finding a step into the consciousness of the different breeding generations, while the breeder is broadening his knowledge about the possible reactions of breeding lines to a new environment.

c) There are spheres of competence for the farmer concerning his intimate knowledge about his localities, its development over years and about the special demands of the markets where he sells. On the part of the breeder there is a deep knowledge about the breeding material, about the relevance of the different traits, about their realization in the breeding material and about the practical breeding know how. In planning of crossings lies a field of knowledge and competence, that only can be achieved by proceeding professionally.

DISCUSSION

The design of a PPB program should consider these aspects. Farmers and breeders are experts in their fields of knowledge. With a clever integration, both parts can profit from each other and increase the entire knowledge. From this perspective, a participatory approach is not a one way matter. Knowledge will be gained through experience by farmers and breeders, but on different levels. To consider this levels of knowledge exchange and above all of knowledge gained through experience is a measure to increase the success of participatory breeding programs.