

Agricultural Systems

Applying a transdisciplinary process to define a research agenda in a smallholder irrigated farming system in South Africa

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ABSTRACT

Defining an agenda is critical to a research process, and a transdisciplinary approach is expected to improve relevance of an agenda and resultant research outputs. Given the complexity of farming systems, farmer differences and the involvement of different stakeholders, as well as the expectations of research funders, what contributions can be made by different interest groups to the construction of an actionable research agenda that produces locally relevant yet original, empirical and transferable findings? In a case study of smallholder irrigation in South Africa, we analyze how, using a transdisciplinary approach, a balance can be struck between the priorities of different stakeholders in defining a research agenda. A transdisciplinary approach was interpreted to entail full participation of diverse stakeholders and integration of different issues as key features. Stakeholder participation was mediated through formal platforms: the Learning and Practice Alliance (LPA) and the Community of Practice (CoP). Farmers and local extension workers participated through the CoP, while other stakeholders, including the public and private sector participated through the LPA. A five step participatory process aimed at allowing stakeholders to fully understand issues, contribute to and validate the research agenda was followed, utilizing a combination of methods, including field observation, photography and discussion. We observed that farmer and researcher participation occurred along two main continua, which we define as a 'participation matrix' – one continuum relating to the contribution of knowledge and information, and the other to decision making. The participation matrix can be used as a reference framework for guiding the transdisciplinary definition of research agendas, to aid in balancing knowledge and priorities including local relevance, ownership, originality, and transferability of findings. We argue that the transdisciplinary process, mediated through structured stakeholder participation, open dialogue and continual validation by all stakeholders was time and resource intensive, but enabled each stakeholder group to contribute to the process distinctly, resulting in a research agenda that integrated different needs and expectations.