

Improving network performance

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Agricultural innovation emerges from the social interaction between many different stakeholders such as farmers, researchers, traders, extensionists, bankers and policy makers and their respective organisations, institutions or agencies. They all try to improve what they are doing continuously.

Of course, each of them looks at agricultural development from a very different angle and as a consequence, has very different purposes in mind. Yet their social interaction determines to a large extent what type of technological development will eventually be achieved. To develop sustainable forms of agriculture, therefore, technology development is not enough. We have to address the interaction between relevant stakeholders as well.

Evidence shows that farmers are not only active experimenters, they are active networkers as well (e.g. Alders et al., 1993). But also NGOs, researchers, agro-industries, policy makers and traders actively seek relationships with others to exchange knowledge, information and experiences and to build alliances to develop and implement new ways of doing things. We call such efforts networking. Networks are more or less formal, more or less durable relational patterns that emerge as a result. They form part of what we might call the social organisation of innovation.

Traditionally, extension is concerned with interaction between researchers and farmers mostly. Traditional extension sees itself as an intermediary between the two. From a networking perspective, quite a different understanding of extension emerges. Research-extension-farmer links become just one subset of linkages relevant to agricultural innovation and, under many circumstances, not even the most important one.

Linkages between farmers themselves, between farmers and traders or between farmers and local authorities might turn out to be much more relevant to fostering sustainable development. Particularly when, as is increasingly the case, government research has very little to offer to support, for example, small producers. In such cases, extension should focus its efforts on fostering those linkages instead of sticking to its traditional role.

Facilitating interaction

Moreover, when we talk about sustainable agricultural development, no clear universal solutions exist. Solutions are to be developed locally, building on mutually agreed principles rather than recipes. An extension service can therefore no longer be seen as a "channel" that transfers technical solutions from those who know to those who do not. Instead of being preoccupied with particular solutions, extension should focus on facilitating interaction. In other words, it should occupy itself with the process rather

than the product of agricultural innovation.

RAAKS

Rapid (or Relaxed) Appraisal of Agricultural Knowledge Systems (RAAKS) is a participatory action–research methodology to improve networking among people and organisations relevant to agricultural innovation. It helps stakeholders in agricultural development to ask and discuss among themselves questions related to the effectiveness of their networking efforts.

In order to obtain new ideas and insights, do we relate to the right people? Do we make use of the sources of knowledge and information in our own community well enough? Do we ever speak to people who look at agricultural production from a really different angle? What could be done to communicate with researchers more effectively? In fact, all of us network, but when do we really assess how well we are doing, what barriers block progress and what can be done about them?

RAAKS has been designed and developed at the Communication and Innovation Studies Department of the Agricultural University of Wageningen, the Netherlands, as part of its Agricultural Knowledge and Information Systems Research Programme (Engel, 1995). It helps stakeholders to formulate what type of innovation they want, to look critically at the way they are organised to achieve it and it helps them to formulate specific measures to overcome constraints or grasp opportunities.

RAAKS offers a combination of different analytical perspectives to stimulate reflection and debate and a procedure for organising team work and stakeholder participation. A joint reflection on current networking behaviour and a debate of possible measures to improve it are central ingredients.

RAAKS is *not* an extension approach, although it may help extension agencies to develop more effective strategies and extensionists to become more effective network facilitators.

Put to practice

The EEC–sponsored PRIAG Basic Grains programme of six Central American countries aims at improving the relevance and impact of research and extension for small grain producers. RAAKS was used as an instrument to generate recommendations for action. Teams were selected and trained to perform RAAKS exercises in selected grain growing regions (Engel, 1995). One of the issues brought up by the analysis was the importance of understanding diversity in the social organisation for innovation: different categories of producers are served by different networks.

Of course, industrial farmers obtain their knowledge and know–how in a different way than subsistence farmers do. However, as the Central American cases indicate, the same holds true when comparing 100% subsistence farmers (let's call these A–type farmers) with subsistence producers who also sell part of their produce on the market (B–type farmers). As a result, the problems faced by these two subcategories of producers vary widely and the approaches towards supporting them should as well.

Mapping information channels

In fact, A–type farmers had generally not been considered as beneficiaries of research and extension programmes at all. Technical packages had never been developed to fit their needs and information reaches them mostly indirectly, through contacts with B–type farmers or sometimes local traders. These in turn receive most of their information through representatives of private multinational companies who sell inputs and/or services. Public institutions often play a secondary role in providing grain farmers with technical recommendations.

Therefore, particularly among A-type farmers, knowledge on basic issues like e.g. improved varieties and their adaptation, integrated pest management, cultivation methods is relatively poor. And so is the familiarity of researchers and extensionists with their practices and particular circumstances. However, also among B-type farmers adoption of improved technologies is often partial due to lack of credit, difficult access to marketing channels, etc.

The team further concluded that, as technology for subsistence farmers had never been an important concern of government research, extension had little to offer. It would be better for these farmers to rely on other sources of knowledge, information and experiences, like, for example, farmers from nearby regions, non-governmental organisations or professionals working with local authorities. Moreover, the teams underlined the lack of coordination or even disarticulation between public, private and non-governmental institutions with respect to supporting small grain producers.

Capacity building

As a result of this exercise, recommendations were formulated by the teams in close collaboration with the stakeholders in the respective regions. These recommendations provided answers to the question: What can be done to support small grain producers more effectively? Of course, for each region the recommendations were completely different. They ranged from re-orientating research and extension policies, to establishing documentation and information centres, to (re)activating a number of inter-institutional coordinating mechanisms, to stimulating farmer study clubs.

The authorities were asked to invest in capacity building rather than direct technical support to farmers. A general tendency in the recommendations was to recognise on the one hand the withdrawal of government services and, on the other, the need for farmers to rely upon themselves and local support structures to achieve innovation in their agricultural practices. Extension agencies, both government and non-government, were seen as able to play an important role in promoting local networking efforts and linking these to relevant (inter)national ones.

Reaching out

Networking requires courage, knowledge, skills and appropriate instruments. It requires "daring to share" (cf. Alders et al., 1993). To invest in relationships with others means reaching out, actively searching for different views, unknown practices, taking serious even what cannot (yet) be unexplained. This takes courage. It also takes knowledge and skills to know where to look, whom to contact, how to communicate and how to learn from it.

Networking does not provide us with ready-made solutions, it requires stakeholders to transcend the boundaries of their own (professional) practices, to draw out their own lessons and to develop their own practical applications of what they learned. This process can be helped when adequate conditions are created. In my view, the task of governmental or non-governmental agencies which support sustainable agricultural development is to help create such conditions.

RAAKS offers stakeholders an instrument to evaluate their joint performance in this respect. It helps them to reflect critically upon the way they are interacting and to improve their networking if necessary. Moreover, RAAKS fieldwork and training has proved successful in helping professionals to develop a more systematic understanding of networking for innovation, of its relevance to achieving meaningful change, and it has permitted a sharpening of their analytical skills with respect to the social organisation of innovation in practical situations (Engel, 1995).

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