

The lifeblood of agricultural change

Farmers in Mali rely on informal communication channels for agricultural innovation. Producers with similar production objectives and opportunities are linked with locally tested and verified information.

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Farmers in a small, wind-blown village in Mali are experimenting and adopting a new method of zig-zag seeding in their peanut fields, alternating sides of the ridge with each seed pocket. This new practice minimises moisture competition between plants, while allowing farmers to increase their overall seeding rate. The idea had come from a farmer's friend in the neighbouring village, while the seeds were obtained from a merchant returning from Senegal.

Hundreds of kilometres to the south, neat green rows of upland rice line a small homegarden plot. For the first time a mechanical seeder is used. The farmer got the idea from a friend in a village some 30 kilometres distant. The seeds came from another acquaintance in a nearby village and were also planted for the first time, just to "see how they produce". This management practice and variety had spread quickly through the informal lines of local communication since the last growing season. For the majority of farmers in these unpredictable, often harsh environments, such informal flows of information and exchange of genetic material represent the real lifeblood of technological change.

Formal innovations?

During the course of group and individual interviews with over 300 Malian farmers

(Bingen et al 1994), a number of distinct pathways of communication and exchange were identified. These pathways were found to function most often along lines of social differentiation, such as gender, kinship, age, religion and others. The farmers interviewed were located in communities with established Training-&-Visit-style extension groups, and were among those receiving the highest level of input from the Farming Systems Research Unit's on-farm trials, as well as other international, governmental and non-governmental agencies. Nevertheless, even in these communities, farmers reported that they were over five times as likely to get information on agricultural innovations through "informal" channels than from those of the "formal" research and extension systems. Of those responding, women were more than twice as likely as men to receive their information from such informal sources. For men, kinship sources were closely followed in importance by friends, neighbours and persons in the marketplace. Women, with less free time for socialising, receive most of their information through kinship ties and further from members of their various work groups.

Under the shade tree

Men most often exchange information while socialising at public places, such as the centrally located shade trees and raised platforms. The marketplace and communal fields are the next most popular locations for exchange. Women exchange information "everywhere" they carry out their daily chores (at the well, en route to field, while pounding grain). In addition, as one farmer responded, "anyone who travels" becomes an important source of new information and experience.

In examining the source of recently

adopted "improved" and local crop varieties, women and men reported over twice as many varieties originating from informal sources than from the research and extension services. More significantly, farmers in general considered the informal sources to be over six times as important as the formal sources for new genetic material. For several crop species (fonio, millet, rice and peanuts), virtually all of the newly adopted varieties were obtained through informal channels.

Building confidence

In general, of all the components of local production systems, seeds are the most frequently exchanged element. This reflects their relative independence from the individual management systems in which they are found, as the same varieties may be used in a number of different ways. It also reflects the important role seeds play as part of a "culture of exchange", the traditional sharing of varieties between farmers, and within household economies where occasional cash sales are relied upon. In contrast, the other elements of local production systems are often highly specific to the particular management conditions under which they have developed and thus are not as easily transferred. Practices that can easily be seen, such as the use of environmental niches or intercropping arrangements, are more liable to be rapidly diffused within local communities than are other less visible, highly personalised adjustments in management practices.

Farmers participating in organised efforts to promote farmer-to-farmer exchanges reported immediate benefits in terms of increased knowledge of new varieties and, more importantly, observed a rise in self-confidence and curiosity. Demonstrations and trials established by research and extension services are much less effective in this regard. They lack the confidence-building aspect, and often fail to fulfil even the simple role of disseminating new materials. Researchers are often neither prepared, nor willing to release new varieties to farmers until the current trials are finished.

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