Lesson No. 1
for rural
developers:

The small farmer is a professional

by Robert Chambers

Self-critical introspection is not a prominent activity in professions "concerned" with "rural development. It can be argued, though, that without introspection, views of small farmers and their environments are likely to be quite largely determined by our professional training, the forms of exposure we have to small farmers and our own environments. We are taught to see the world in certain ways, to look for certain things, to ask certain types of questions. This makes it difficult for us to see the world in other ways, to look for other things and to ask other types of questions. A medical doctor, an agronomist, an engineer, an economist and a sociologist, visiting the same village, will see and inquire about very different things. They will gain very different, and partial, views of a whole that is seen differently, and more holistically, by the villagers themselves. They will reach—different, and sometimes conflicting, opinions about what ought to be done in the name of development. A first step, then, in trying to understand small farmers and their environments is to become aware that we have professional blinkers; that there are things we do not see; that there are questions we do not ask, and relationships we do not identify. We also have to understand the biases built into the ways in which we are exposed to and carry out inquiries about small farmers and their environments. Rural development tourism (brief rural visits by urban-based professionals) is a very widespread activity. It has interlocking and mutually reinforcing tendencies that direct attention to those who are better off, to the exclusion of those who are worse off. Rural development—tourism has many biases:

- **urban**: toward those rural areas near towns. These are usually more prosperous
- **tarmac and roadside**: along tarmac roads where the better-off people live with the better services
- **regional**: to regions that are more developed rather than less
- **project**: to projects rather than other areas without projects
- **elite and large farmer**: toward meeting those who are better off and more powerful, toward the larger and more progressive farmers and toward farmers rather than the landless
- **male**: toward meeting men rather than women
- **user**: toward meeting users rather than non-users of services (the members of the cooperatives, not the non-members, etc.)
- **dry season**: toward travel in the dry season after harvest when people are healthier and better fed rather than during the rains before harvest when the reverse is true
- **irrigation**: toward areas with irrigation rather than those without, and so on.

Any one of these on its own would be serious. Combined they mean that there is a strong systematic bias toward perceiving rural people as being more prosperous and less deprived than they really are, and toward interacting with and learning from those who are better off—rather than those who are poorer.

Moreover, rewards, prestige and promotion in the professions face inward, as it were, toward urban and metropolitan centres.
One can ask: which is valued and rewarded more, professionally — research that benefits small and poor farmers more but generates fewer publications or research that generates more publications but benefits farmers less? Research on crops or animals for the market or for export (coffee, jute, tea or exotic cattle?) or on low-status, more subsistence crops or animals (millet, goats, hens, for example), which are important for the poorer people? Work that makes use of indigenous technical knowledge and is carried out in collaboration with farmers as equal colleagues or work that is based solely on modern scientific knowledge regardless of the on-farm situation and without farmers' participation? Trials (a low-status word?) on farmers' fields or research (a high-status word?) on agricultural research stations? If the implications of these rhetorical questions are correct, then there are forces restraining agricultural scientists from too close contact with farmers. Like small farmers, agricultural scientists are professionals and rational. They are likely to behave in ways that are rewarding, given their environment — ways that lead to promotion, higher incomes, opportunities for travel and residence in urban centres where there are various conveniences, including good schools for their children. They are then not merely restrained from contact with small and poor farmers; they are drawn away from it.

Many demoralizing years

Some of the effects of these and other forces that have kept professionals and small farmers apart have been astonishing. One is the long time it has taken in East Africa for the benefits of intercropping to be recognized. It took decades for it to be realized that farmers' "primitive" practices were efficient and to adapt agricultural research accordingly; and, in the meantime, there had been many demoralizing years of suboptimal research generating inappropriate advice.

Introspection also leads one to ask how objectives are chosen. Do we have a tendency to fix on one straightforward objective or criterion as a way of simplifying work and thought, and of eliminating awkward "political" or "social" aspects of development? Agricultural literature is replete with books and papers that treat production as though it were the sole and adequate objective of interventions. Such a view has been widely challenged. Again and again, those who have benefited from agricultural change have been the strong, the powerful, those who were already better off. The poor and the weak have sometimes gained a little, sometimes gained not at all and sometimes lost. Whatever the myths, agricultural research is highly political in its implications since it affects who gets what in society. Unless approaches to research deliberately incorporate equity considerations, then the familiar pattern will be repeated. But agricultural scientists may protest that this is none of their business. In the words of the Tom Lehrer song "... when the rockets go up, who cares where they come down — that's not my department...". And yet, to pursue the metaphor, the choices about what sorts of rockets to build (what sorts of research to carry out) do determine where they are likely to come down — who will gain and who may lose. Research on poor people's food crops will benefit different groups of farmers more than research on a cash crop grown only by the larger farmers, or only by those with irrigation.

An infatuation with computers

All this is well known. Part of its relevance to understanding small farmers is the question: understanding which small farmers? Professional training, the biases of rural development tourism and incentive and rewards systems point professionals towards the better-off farmers and away from the poorer and smaller ones.

If agricultural research is to achieve optimal trade-offs between equity and production objectives, then these reversals appear necessary.

Valuing indigenous technical knowledge. Modern scientific knowledge and the indigenous technical knowledge of rural people are grotesquely unequal in leverage. The former is centralized, and associated with the power and machinery of the state; and those who are its bearers believe in its superiority. The latter, in contrast, is scattered, and associated with low-prestige rural life; those who are its bearers may believe it to be inferior. It is difficult for some professionals to accept that they have anything to learn from rural people, or to recognize that there is a parallel system of knowledge...
to their own which is complementary, usually valid and in some respects superior. The ability of the Hanunoo people in the Philippines on average to name 1,600 plant varieties, 400 more than in a botanical survey, illustrates the point. Rural people often have their own categories and fine discriminations; they often have much detailed knowledge of soils, of plant indicators of fertility, of weather patterns, of pests and weeds, and the like. Unfortunately, many of those who are bearers of modern scientific knowledge have been trained away from being able to learn these different ways of seeing the environment, or to understand the problems and rationality of small farmers. They do not realize that as John Hatch has written, "... small farmers too are professionals." The challenge is to be able to learn from them, as colleagues.

Quick-and-clean versus long-and-dirty. Rural appraisal has tended to have two polar forms — the casual empiricism of rural development tourism, and the long-drawn-out and extensive rural survey. The former has been described as quick-and-dirty; and the latter might be described as often "long-and-dirty." The need is to develop methods that are quick-and-clean, where clean means cost-effective, in terms of trade-offs between quantity, accuracy, relevance, actual use of information and the costs of obtaining it. The reversal required here involves seeing that cost-effectiveness may often (though not always) be best achieved by the quick-and-clean, even though it is not an entirely respectable sort of activity. The dominance of mathematics in education and the reverence for precision in scientific research have generated a whole industry of analysis and publication around the subjects of surveys, sampling and statistical analysis, now reinforced by infatuation with computers, which draws us away from farmers and seems to justify analysing figures in offices rather than observing crops in fields. We undervalue "judgement" and "experience." It is often possible to know something on the basis of judgement and experience that it would take many months, perhaps years, to "prove." The challenge is to develop methods for rapid rural appraisal that combine judgement, experience, indigenous technical knowledge and a new set of methods.

Reversing research station bias. Do precise measurement, controlled conditions, convenience, the location of staff housing, and cost-effectiveness in terms of personal goals (publication, prestige, being noticed by senior colleagues, promotion) have a magnetic effect in holding agricultural scientists on research stations? For some forms of agricultural R & D, there is a valid case for conducting work under controlled conditions. But these controlled conditions are artificial. They leave out farmers' needs, resources, and problems. Controlled conditions are in this sense peculiar and incomplete. Leaving out farmers is a heroic simplification of the environment. Given the many attractions of working on research stations rather than with farmers, one may ask whether there may not be a tendency to rationalize the desirability of on-station work. If the criterion of good research is beneficial impact — benefits to farmers and others in terms of production and equity — might it not be cost-effective for much more work to be conducted with farmers in farmers' conditions?

These three reversals — learning from farmers, using rapid and approximate methods and offsetting research station bias — are reflected in recent work by Michael Collinson with CIMMYT in East Africa and Peter Hildebrand with ICTA in Guatemala. Collinson has been shortening the period of survey required to identify research priorities. Hildebrand has developed an ingenious method for rapid appraisal combining agricultural and social scientists in investigating farming situations leading straight into innovations that are then tested with farmers on their fields.

Unfortunately, there is a tendency for those who engage in and develop these new approaches not to write them up in full detail. It is only in the past few years (as far as I am aware) that describing exploratory or reconnaissance surveys, and quick-and-dirty or quick-and-clean methods, has become a half-respectable activity. It is now, or should be, more than respectable: for these activities are at the frontier of important developments leading to greater cost-effectiveness in agricultural research.

Away from small farmers

Much of the argument concerns changes in professional values and behaviour. But we are faced with a complex system with many interlocking parts — the dominant influence of the agricultural professions in industrialized countries, the policies of editors of journals, urban and research station bias, the curricula of university courses, ideas about respectable and rigorous research methods, disciplinary blinkers, belief in the universal
superiority of modern scientific knowledge over indigenous technical knowledge, and so on. Combined, these various forces direct attention and effort away from small farmers, away from learning from them and with them, toward the citadels of professional advancement and toward inappropriate research.

The presentation of the self

In seeking to change this, some of the obstacles are cognitive. The problem is often the way in which people have been conditioned to perceive and interpret experience. It is difficult enough for a sociologist, for example, to learn to think like an agronomist, let alone for either of them to learn to think like a small farmer. And yet seeing the world in the other person’s way — whether the view of another discipline or the multidisciplinary view of small farmers — requires a difficult combination of openness, imagination and humility. Our status and self-esteem are often built on the premise that we have superior knowledge. It becomes then important in public situations for us to display that knowledge, and for the knowledge to be indeed superior. A recent report listed among the competencies required in young professionals for agricultural research and development, “Ability to handle farming skills confidently in front of farmers” (my emphasis). This conjures up precisely the problem of the presentation of the self in such situations. It may be more important to have the greater confidence required to admit ignorance. But even that does not go far enough, for it treats ignorance as something shameful. Rather, ignorance should be accepted positively as an opportunity to learn, whether from another discipline or from small farmers.

The practical problem is how to achieve such an attitude, and the cognitive changes that result. For social and agricultural scientists concerned with small farmers, four suggestions can be made.

1. Joint field work with professionals in other disciplines. This is a key part of the Hildebrand and CIMMYT approaches. It is fascinating and illuminating to work in field situations with people from other disciplines. One is continuously surprised and intrigued by the things they see, the questions they ask and the inferences they draw. There are few better learning experiences. Numbers should, however, be kept small. For short periods, two people, as in part of the Hildebrand approach, may be ideal. Such work might be a required part of university education and of subsequent specialized training. It should certainly be a crucial part of agricultural research for defined area projects, not just as a learning experience but also in its own right as a means to effective work.

2. Required learning from small farmers. Professional-and career development in all fields typically involves periods of further training. In India, for example, this has been organized for senior agricultural experts and administrators. One activity might be investigation of the knowledge of small farmers. For example, glossaries of local terms can be compiled. Among some pastoralists, a listing of words for colours would show a series of very fine discriminations, especially in the browns, which are not captured in other languages. More directly relevant are investigations of names for plants, soils and plant indicators of fertility and microclimates. Farmers’ categories, related to their experience and needs, differ from those of scientists, and not only in the Third World: recent work at Cornell has shown that farmers in up-state New York do not find the USDA soil classification helpful, and use their own names for soil types. Another example is the calendar system of Bihari farmers, which has been found to be more appropriate for describing changes in climate and the sequences of cultivation than the months of the more usual calendar.

One promising approach to learning how small farmers (and professionals) construe their environment is the triads test. This has been used independently by Paul Richards in Sierra Leone with weeds, and by Stuart Hawkins in Australia with dairy sheds. Richards used it to elicit the way in which university botany and geography students, farmers and trainee extension workers saw weeds. In the test or game, four weeds were taken, and respondents presented with groups of three, asked to identify which two were most similar and then asked to explain the “construct” underlying their choice. This was repeated for different combinations of threes until the latter were exhausted. The university students’ constructs were taxonomic and morphological. There was no overlap with the farmers’ constructs, which were utilitarian. But the most startling finding was that the extension trainees’ constructs were close to those of the students and also did not overlap with those of the farmers. This test was enjoyed by the participants, and led to: “a spontaneous ‘seminar’ by the trainees on how they would communicate with farmers if their ‘scientific’ approach to farming made them think in text-book botanical terms rather than in terms of farming utilities. Tentative action proposals for syllabus development and for studying alongside the farmers were beginning to emerge at the end of the period.”

An affront to dignity

Perhaps learning from farmers, using the triads test, might be tried out to see whether it could be a suitable part of future professional training. To require professional staff to learn from farmers in these ways should not be considered demeaning or threatening. On the contrary, it is inherently fascinating to try to understand how other people construe the world. Moreover, where “games” are involved — as with the triads test — the activity is enjoyable as well as intellectually exciting.

3. Learning through games. A further approach is to play specially devised games. Some “green revolution games” have been developed. In these, each player starts with similar resources (finance, family labour, land, water) and makes farming decisions, season by season, in the face of uncer-
tainty about weather, input supply, pests, diseases and the like. A simple computer programme, with coefficients derived from actual small-farmer situations and incorporating random contingencies, then presents the outcomes of the decisions. Over a period, players become differentiated: some become wealthy, others landless. But in the process, they are forced to think like small farmers, and to understand their rationality, for example in risk aversion. Such games could become a required part of every course for those of whatever discipline, who are concerned with agriculture and rural development.

4. **Learning by doing.** The suggestion likely to be least acceptable to established professionals is that we should go and work at farm tasks with farmers in their fields. To some, this would be totally unacceptable, an affront to dignity. To others, it may appear quite a good idea, but not implementable. To a few, it may commend itself as something to be quietly tried out. And there are some who have done it already. The value of this activity is not to discover the extent to which one's muscles have atrophied, but rather to provide an opportunity for insights and learning. John Hatch's remarkable work in Peru is an eloquent testimony to this. He worked for farmers without pay on condition that they would teach him the task they wanted done.

"The scheme worked beautifully" he reported. "Most small farmers took to their role as teacher very conscientiously. Rather than waiting to respond to my questions, they often volunteered task information I would never have known enough to inquire about. In fact, most of the information I gathered was gained in this way. Hired labourers often proved excellent instructors as well."

**Learning from other disciplines**

It may be objected that for professionals to work with farmers in their fields would be a waste of time. That is a matter for judgement. Given, however, that Hatch came to the remarkable conclusion that total labour use might be 50 percent higher than that estimated by outsiders, one may ask whether some professionals can afford not to use this approach some of the time. At least there is a case for gaining more experience with it, its costs and benefits, and especially the insights to which it leads.

The thrust of this article is toward changes in values and behaviour: to value learning from and with other disciplines, and especially from and with small farmers; to value equity as a matter for judgement. Given, however, that Hatch came to the remarkable conclusion that total labour use might be 50 percent higher than that estimated by outsiders, one may ask whether some professionals can afford not to use this approach some of the time. At least there is a case for gaining more experience with it, its costs and benefits, and especially the insights to which it leads.

"The scheme worked beautifully" he reported. "Most small farmers took to their role as teacher very conscientiously. Rather than waiting to respond to my questions, they often volunteered task information I would never have known enough to inquire about. In fact, most of the information I gathered was gained in this way. Hired labourers often proved excellent instructors as well."

**Learning from other disciplines**

It may be objected that for professionals to work with farmers in their fields would be a waste of time. That is a matter for judgement. Given, however, that Hatch came to the remarkable conclusion that total labour use might be 50 percent higher than that estimated by outsiders, one may ask whether some professionals can afford not to use this approach some of the time. At least there is a case for gaining more experience with it, its costs and benefits, and especially the insights to which it leads.

The thrust of this article is toward changes in values and behaviour: to value learning from and with other disciplines, and especially from and with small farmers; to value equity as a matter for judgement. Given, however, that Hatch came to the remarkable conclusion that total labour use might be 50 percent higher than that estimated by outsiders, one may ask whether some professionals can afford not to use this approach some of the time. At least there is a case for gaining more experience with it, its costs and benefits, and especially the insights to which it leads.