A Research Manager's Concluding Remarks

Gabriel Montes Llamas, Director General of the Instituto Colombiano Agropecuario, Colombia, was invited to give his reaction to the ideas presented during the workshop.

THE GOAL OF EVERY RESEARCH and extension institution in the world is to produce relevant technology, transfer it to farmers in an efficient manner, and thus have a sizable impact on agricultural production and farmers' welfare. To reach this goal obviously requires links — between the institution and the outside world (national and international agencies and policy-makers); within the institution, among researchers and between researchers and technology transfer workers; and between the institution and its clients, the farmers. But these links do not develop spontaneously. They are costly to operate and take time and creativity to manage.

Relevance

According to some analyses, the easiest way to solve the problem of relevance is to increase farmers' participation in the process of research and technology transfer. However, one has to be careful that the cost of ensuring relevance is not too high. There are alternative methodologies that will achieve the same goal, and these can be combined with some kind of efficient farm participation. In the first place, you have to define your diagnostic tools on the basis of detailed knowledge of the agroecological and socioeconomic conditions in which different types of farmers live, as well as the importance of these farmers now and in the future. Then you should set your priorities in terms of regions and products and clearly identify target groups according to national development policies. After this, you can design ways in which your findings for a particular region and type of farmer could be extended to other regions and farmers.

Another important issue is to establish in what way, at what level, and at what stage farmer participation would be most effective. Clearly, some degree of farmer participation is necessary and we must devise ways of promoting it. You can have it at the farm level, with farmers working alongside researchers and technology transfer workers; or you can promote it at higher levels, with farmer representation on research station advisory councils or on regional or national boards; or you can have a combination of these. So, as in other fields, you have here an optimal path and an optimal point. It would be unreasonable to expect to be able to completely solve the problem of the relevance of technology if you are dealing with a heterogeneous environment and a complex research and technology transfer system.

Context

With reference to relationships with the outside world, it is clear that the work of research and extension institutions must be responsive to political realities. This can be perceived as an

'external pressure', but the recognition of these realities should be reflected in the institutional frameworks if institutions want to attract public support. They also have to take account of their socioeconomic context if they want technology to respond effectively to society's real problems; they have to establish channels through which technology users' demands can be expressed and recognized.

It is also important to approach the linkage issue from a dynamic point of view. Changes in the socioeconomic context require changes in the organization of institutions and in the relationship between research and extension. At the same time, organizational changes must fit the specific context if they are to be successful; they should be backed up by resources and training, as well as by the recognition that it will take time for them to begin operating effectively, as the Costa Rican case showed.

It is interesting and useful to look at the issue of external pressure. Do institutions perform effectively only when they are subjected to external pressure, when farmers are organized and can articulate demands, or when there is a donor involved, asking questions and monitoring and evaluating progress? I think that this is rather a simplistic view of the dynamic and complex relationship between institutions and their environment. In fact, sometimes institutions deliberately seek external pressures from governments, donors, or farmers. These pressures are usually accompanied by resources and other kinds of support. On the other hand, the presence of a donor sometimes weakens links, particularly when some people try to identify themselves with a specific program that has attracted considerable funding. This was the case in Colombia, where people called themselves ICA-DIA, ICA-USDA, or ICA-Holland, instead of simply ICA.

Among the other interesting issues analyzed in the workshop was the finding that different technologies require different kinds of links. This merits some thought because of the modifications in terms of management and resources that it implies. Technologies differ in applicability, complexity of the types of users, and so on, and institutions should have enough flexibility to manage this in an effective and economic way.

Institutional organization

A key issue raised at the workshop concerned the location of research and extension. Is it better to have them in the same institution or in different institutions? The conclusion — correct in my view — is that merging does not necessarily lead to success or failure. There are a lot of additional factors that come into the picture: the context in which institutions work, the amount of resources they have, and the capacity of managers to carry out and support the necessary activities. In my own experience in Colombia, we decided not to divide research and extension but, rather, to rationalize the system. Initially, we delegated to municipality extension workers the task of providing direct technical assistance to farmers; we also decentralized much of our adaptive research so that it would be carried out in specific regions in collaboration with extension workers, using farmers' plots.

I also find interesting the analogy between extension and marketing. It is obvious that research results are not a homogeneous commodity, but when we use this analogy, much of the linkage problem becomes very clear to me. For example, in the case of a company producing cars, its

marketing personnel would not advertise bicycles; similarly, although companies sometimes hire advertising agencies or decentralize publicity to dealers, they do not place the whole marketing effort in a different company.

Small systems, such as Guatemala, which are involved mainly in adaptive research, devote most of their resources to on-farm research, which minimizes communication problems between researchers, extension workers, and farmers. However, although this has been successful in the short term, it could lead to stagnation in the long term. In my opinion, the workshop did not analyze sufficiently the alternatives open to small country systems.

Research and technology transfer links

As important as these structural matters are, and given that an institution has clear goals that are compatible with national policies and defined channels through which users can make their demands known, it is still important to recognize that the tasks of producing and transferring relevant technology are carried out by two groups of people — researchers and technology transfer workers — and that these groups differ in attitudes, interests, and training.

There are a series of tools and mechanisms which management can use to promote links among researchers and between researchers and technology transfer workers. Among these we have committees, coordinating units, and direct supervision. In my view, committees, liaison persons, and coordinating units often have a difficult time creating effective links, unless they have power and authority or control a budget. Researchers and extension workers are difficult to manage through voluntary mechanisms; in general, formal mechanisms such as incentives and rules tend to work better. It is not surprising that the studies show that mechanisms such as joint review meetings, joint diagnosis, and joint programming and priority-setting are among the most effective in promoting links. To be even more effective, these joint planning and review mechanisms should lead in the medium term to an integrated project that would include research and extension components. However, this could be too costly to implement and supervise, and we should stick to what is feasible.

It should be recognized that these concrete mechanisms will work only if the general philosophy and working environment of the institution foster collaborative work. That is why we must be very careful in designing research and extension systems, and we must reorganize the systems only when things are not working properly. In the end, links are between people and nothing can replace a good environment in which researchers and extension workers can communicate freely, constructively, and informally.

Conclusion

It is clear from the analyses carried out and the cases presented at the workshop that links are important for performance. It is also clear that the context and nature of institutions is so different that we cannot have general recipes to establish links. In addition, we should bear in mind that links are costly in terms of resources which have to be diverted from research and extension. We have to be very precise about what kind of links are needed, at what level they should be

established, and what goals we hope to achieve. When we need so many linkage mechanisms that an organization becomes excessively complex, we have to start thinking about reorganization rather than creating more positions or units in the organization.

Finally, the goal of developing links to build bridges between researchers and extension workers should not make us forget that specialization and division of labor have contributed to growth throughout history. Sometimes a bit of competition between different actors will lead to improved performance by each of them, as long as the social and institutional goals are clear for everyone.