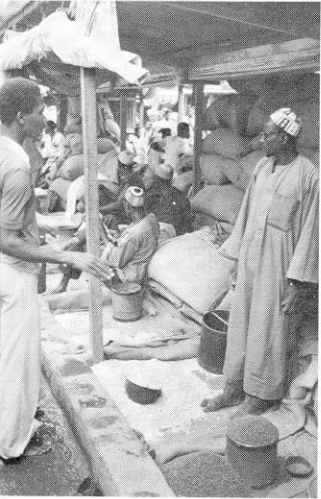


## Steering a wise course for agricultural research

Omond Solandt



*Dr Omond M. Solandt is widely recognized as an outstanding scientist and manager. He has held a number of senior positions in Canada, including Chancellor of the University of Toronto and Chairman of the Science Council of Canada.*

*He has been actively involved in a number of international research organizations, including two agricultural research centres supported by the Consultative Group for International Agricultural Research (CGIAR). One of these centres is the International Centre for Agricultural Research in Dry Areas (ICARDA), which has its headquarters in Beirut and serves primarily the Near East and North Africa. Another CGIAR-supported centre is the International Maize and Wheat Improvement Centre (CIMMYT) with its headquarters in Mexico. Dr Solandt is Vice-Chairman of the ICARDA Board of Trustees and a Member of the Executive Committee of the CIMMYT Board.*

*The CGIAR was founded in 1971 under the cosponsorship of the FAO, UNDP, and World Bank to increase food production in the developing world through research programs and through the training of research scientists and production specialists in developing countries. The CGIAR is assisted by a Technical Advisory Committee (TAC) which consists of 13 eminent scientists.*

*Thirty-five countries, international agencies and foundations now support the work of 12 international research centres and programs through the CGIAR. The financial requirements of these centres have grown rapidly and the US\$15 million provided for five centres in 1972 has increased to an estimated \$111 million for the 12 activities supported by the group in 1979. These centres and programs now employ more than 300 principal scientists and more than 4000 persons in total.*

*The growth of the individual centres, with the largest centre having a budget of \$16.5 million in 1979, and the total financial requirements of these activities has led to some concern about the ability or willingness of donor agencies to finance further growth, and about the ability of the centres themselves to efficiently manage expanding research and training programs.*

*Dr Solandt, writing in his personal capacity, provides a cogent and forceful response to these concerns in the following article.*



**T**houghtful people who are concerned with the problems of giving aid to the less developed countries (LDCs) are not sure that they know enough about the development process to plan with confidence the most efficient and effective means of attacking even limited aspects of development, much less the entire complex process as it affects a nation. Even within the limited field of agriculture, or the even more restricted task of improving the crops of the poorest farmers, the problems are so complex that they have so far defied complete analysis.

Donors, whether nations or institutions, who seek to

help the LCDs are caught between the Scylla of extended analysis with no action on one side, and a Charybdis of precipitate and ill-considered action on the other side. On the one hand are agencies where the bureaucracy concerned with surveys, analysis, seminars and memoranda far outnumbers the workers in the field. When such a bureaucracy does take action it is often too little and too late, and may already have been overtaken by events. It is a process that should be called "paralysis by analysis". At the other extreme are a few relatively small agencies where decisions are made quickly and effectively by a small group of highly experienced people.

To agencies beset with the task of steering a safe course between Scylla and Charybdis, the advent of the Consultative Group on International Agricultural Research (CGIAR), and the expansion of the International Agricultural Research Centres (IARCs) must have provided a very welcome outlet for a very small part of their funds that are allocated to the support of agricultural research. Here at last is a group of international centres guided by a tiny, very expert and experienced team in the form of the Technical Advisory Committee (TAC) and the CGIAR Secretariat. Each of the centres has a distinguished international board of trustees to guarantee the integrity of the operation, and each is managed by an internationally known scientist and staffed by reputable experts. No one seems excessively concerned to ensure that each centre is doing only the very best possible work in its field. Everyone is concerned only to ensure that the money received is wisely spent on research that will have a relatively quick payoff in improving the lot of the poor farmer somewhere. The entire system is action-oriented, motivated by an almost missionary zeal, and it is truly international in both conception and execution. To the beleaguered bureaucrat trying to do a good job of investing money in aid to developing countries, the CGIAR system must appear as a safe and sensible place.

If this interpretation of the system is even partially correct, then the problem of the growth of the IARCs should not be viewed primarily in financial terms. If the IARCs can continue to expand while delivering first class, cost-effective, research results that can — through national agricultural systems — produce quick returns, then they should go on expanding. The TAC should not make the growth of expenditure its first concern, but rather the maintenance of quality and effectiveness. It appears that the TAC has two crucial roles to play in the system: the first is to consider new initiatives for the IARCs in both scientific and geopolitical terms in order to ensure that they meet the high standards of the system; the second is to continually monitor the performance of the centres as it is now doing.

If the TAC is successful in performing these very difficult functions quickly and effectively, and if the boards of trustees of the individual centres do their job equally well, then the growth of the centres will be limited not by the availability of money, but by the availability of projects and people that meet the high standards of the group. If the system is continually effective in rejecting marginal or doubtful projects then its reputation with donors will be maintained and the money that is required will be forthcoming. I believe that the most serious potential threat to this system is not that it should run out of money because of over expansion, but rather that overexpansion should lead to a decline in the quality of both programs and people.

An example of the threat that hangs over the system is the possibility of overexpansion of the regional programs. It is obvious to everyone that the centres must not substitute themselves for national programs of agricultural extension and training. They must ensure that the inputs of knowledge to these programs are good, relevant, and up-to-date, but they must not begin to do the national job themselves. If they do, donors will cease to increase support because the centres will have moved into an area

in which their superiority is not obvious, and both scientific and political criticism is more likely to be heard.

If the TAC, the CGIAR Secretariat, the Boards of Trustees, the Directors-General and the international scientists in the system all keep before them a vision of a small, high quality, nonbureaucratic, action-oriented system that focuses its attention on areas in which science is likely to improve the lot of the poor farmers of the world, then the activities of the group will not be limited by the availability of funds: they will be limited by the scarcity of good people, and in many directions by lack of new and promising ideas.

Based on a limited knowledge of a small sample of the IARCs — including CIMMYT, one of the oldest and largest — I do not believe that any of the centres are approaching the upper limit of a manageable size. If they are viewed as conventional research organizations, then most of them are more likely to suffer from being so small that they do not contain the critical mass of expert knowledge required for good interdisciplinary research. The phenomenon that is causing some people to feel that the individual centres are approaching the "upper limit" is one that is often seen more clearly in business. A man starts a small business and it grows successfully. Suddenly he begins to experience a wide variety of problems in every branch of the business. He either has to avoid further expansion or deliberately expand so that he can afford to have good people under him to run the larger venture as a team. I sense that some of the IARCs are at this upper limit of size for monolithic management. More effort must be made to find, and to retain in the system, financial and personnel managers who are in their own fields the equal of the best international scientists. When this is done there is every reason to expect that even the largest of the present centres could double in size without any serious problems in management and control.

Having suggested that there are probably no financial or management reasons to restrict the growth of the IARCs in the foreseeable future, I want to emphasize that I do not favour rapid or hastily planned expansion. Great care must be taken by the Boards of Trustees to discourage empire building and growth for growth's sake. Staff and facilities must be added only to undertake well thought-out programs that fall within the area of specialization of the particular centre and can obviously be better done by that centre than any other. There is much to be said for keeping individual research teams as small as possible. A few first rate scientists with adequate technical help can do wonders.

The possibility of operating the CGIAR system successfully in this way depends primarily on each centre having a strong and effective Board of Trustees that accepts full responsibility for helping the Director-General to select a good program and manage it effectively. Donor confidence and support can only be maintained and expanded if the donors have confidence in the ability of the Boards to select and support good Director-Generals who, in turn, will select and support first class research and management teams.

The quality of the work in the individual centres attracts donor interest, but it is the skilled guidance of the CGIAR Secretariat and the TAC that keeps the team of widely different centres pulling together effectively.

And finally there is the TAC, which I see as the scientific watchdog and conscience of the system. As long as the quality of the Boards, the Centre Directors and the international staff remain adequately high, the TAC does not need any authority to control the programs of the centres: it can continue to act, as it has in the past, through its influence both on centres and on donors. A centre has now and should continue to have the right to determine its own program. There will obviously be very few cases in which a donor would be willing to ignore the advice of the TAC and fund a program which the TAC had refused to support, however. The wisdom and experience of the members of the TAC is the final guarantee of the scientific integrity of the system as a whole. □