

Turning Challenges into Opportunities and Solutions

SUCCESS GENERATES new challenges. The wide recognition of WARDA's achievements and breakthroughs, in particular in the field of generation of new, adapted and powerful technology that helps fight poverty in Sub-Saharan Africa and helps increase food security—this same recognition bears with it the challenge of securing the achieved progress, to make it accessible to all those who are in need and to satisfy the expectations of those who share with us the enthusiasm about the stepping stones that WARDA has laid on the way to a brighter future for Africa's children.

During the year 2001, the most visible manifestation of the appreciation of our stakeholders for WARDA's work and the tangible results came during the celebration of WARDA's 30th anniversary and the awards bestowed by the President of Côte d'Ivoire on WARDA's Director General and four other staff members (Drs Monty P. Jones, Kouamé Miézan, Sitapha Diatta, and Mr Mark Etsiba); these four were honored with the title "*Officier dans l'ordre du mérite ivoirien*," or "Officer in the Ivorian Order of Merit." These awards were undoubtedly the most prestigious sign of appreciation of WARDA's efforts towards the improvement of the livelihoods of the region's poor.

Other signs are more subtle, but also highly appreciated by WARDA's staff; they contribute much to the strong motivation of all, scientists and support staff. For example, the increasing number of requests for NERICAs by farmers, farmers' organizations and NGOs; the demands for participation in workshops and other training activities organized by WARDA; the wish of many of our stakeholders to play an active role in WARDA's activities; and simple statements by farmers like the following: "the NERICAs must have water integrated in their tissues, how else could they survive and yield under drought conditions where all other varieties fail?" We see these signs and take them as encouragement to continue our scientific endeavors in the way that past research activities and planning exercises have outlined.

On the other hand, WARDA cannot ignore those voices that call for more involvement, for more and new products in order to solve problems that have not been tackled before or for which solutions are still pending. More farmers, more extension agents would like to reap the benefit that comes from cultivating NERICAs. Those who are not concerned by varieties specifically developed for the rainfed upland ecologies are waiting for varieties that will do for rainfed or irrigated lowland ecologies what NERICAs have done for the uplands. It becomes more and more obvious that genetic improvement alone cannot ensure top yields: the farmers must also understand and apply the cultivation techniques for which the new cultivar has been optimized. These cultivation practices must be integrated with the needs of other crops and of the environment. This requires training at the farmers' level. It is equally obvious that high yields do not guarantee high returns in monetary terms: too many obstacles exist that prevent access to the market or at least make such access difficult for many farmers in the region. In many cases, progress suffers from a general

environment that does not stimulate personal initiative and investment. And last, but under no circumstances least, there is the alarming health situation with the HIV/AIDS pandemic threatening to annihilate all other efforts geared towards the improvement of living conditions.

These challenges are not new and they are not unknown to WARDA. Many of them are being addressed by ongoing research activities; others are under consideration for new projects. Among the examples that are illustrated in some detail in this Annual Report is the African Rice Initiative that provides a powerful tool to make new varieties and rice-related technologies available to farmers throughout Sub-Saharan Africa. The Feature on irrigated-rice breeding illustrates the progress made with respect to the constraints of this particular production system. The chapters on the policy dialog, on HIV/AIDS and on iron toxicity—diverse as they are in their concerns—all illustrate the need for an integrated approach to solve the problems that limit productivity and progress in rice-based production systems in Sub-Saharan Africa. WARDA's research portfolio is obviously more widespread than these examples can illustrate, it addresses many issues that affect the different rice-based production systems at different levels, chosen for their strategic importance.

'Strategy' (and the related strategic planning) is one key word that takes its full importance at WARDA's headquarters. Strategic planning needs its tools. Among these, information that allows us to appreciate the state of the changing environment is of eminent importance, and so is information on the real (past) and potential (future) impact that WARDA's results and achievements will have on the real-life conditions of farming in Sub-Saharan Africa. Economic studies and impact assessment contribute to the understanding of WARDA's environment that is necessary for efficient planning and setting of priorities, in addition to the value they have for WARDA's partners. Much work has been invested over the years in establishing a solid basis for the strategic planning exercise for WARDA, and we are confident that the coming year will start with a formal plan that spells out the priorities and options chosen for the coming decade.

Preparation for the future has to start in people's minds, and it is an ongoing process that needs constant attention by those who are in charge of assuring that WARDA lives up to its mission in the most efficient way possible. Preparation for the future also requires physical installations that enable us to realize the ambitious tasks defined by WARDA's mission and stakeholders. WARDA has completed the construction of a containment facility that will allow the evaluation of transgenic rice plants produced in collaboration with our partners in Europe, once the legal framework is in place in Côte d'Ivoire that is required for the permission to conduct such experiments. WARDA is among the institutions that provide technical assistance and backstopping to the process leading to legislation on this subject: the existence of a clear, transparent and practical procedure for the work with this potent technology is of prime importance, not only for WARDA but also for all its stakeholders that must be able to exploit scientific advances to their entire potential and, at the same time, with full respect of all possible safety considerations. The containment facility at WARDA has been constructed in anticipation of the coming legislation, satisfying the stringent legal requirements in force in Europe, North America and elsewhere.

Future achievements are constructed on today's knowledge and on the accomplishments of the past. WARDA recognizes the importance of the existing genetic variety in rice and related species for its valuable contribution to rice breeding programs, be it by conventional means or with the help of one or the other discipline chosen from the biotechnology 'basket.' Long-standing efforts of collection and safeguarding of genetic resources will soon be crowned by the construction of a medium-term storage unit that will assure the conservation of unique samples of all available

rice accessions at WARDA, under conditions that satisfy the international standards for gene-bank facilities. WARDA has entered the planning and construction phase of this storage unit.

As the challenges of the future cannot be tackled by WARDA alone, we cherish close collaboration with our partners in Africa and all over the world that helps to transform the opportunities into realities that will benefit the farmers and, ultimately, the people in WARDA's mandate region and beyond. The African Rice Initiative (ARI) described in this issue is a new and particularly exciting example of the collaborative networks and consortia that are hosted by WARDA. ARI is expected to lead to a measurable and sustained impact on food security in the region through widespread adoption of NERICA and other high-performance rice varieties. It will help guide related research and diffusion, improve information exchange among stakeholders, raise public awareness, and provide an effective monitoring and evaluation mechanism. Other networks that are well established at WARDA and have proven their efficiency through concrete results include the Inland Valley Consortium (IVC; *see also* the feature on The Netherlands, page 53), ROCARIZ (*Réseau ouest et centre africain du riz*, the WARDA/CORAF Rice Research and Development Network for West and Central Africa) and INGER-Africa (International Network for the Genetic Evaluation of Rice in Africa). These networks provide efficient vehicles to coordinate the efforts of most scientists concerned with rice in the region and beyond, and thus contribute in an essential way to the optimization of resource use for identifying and solving the most urgent problems. Our collaboration with colleagues from advanced research institutions and from international agricultural research centers are equally valuable, and together we feel well armed to tackle the challenges of the future. We would like to express our appreciation to all colleagues for their collaboration and contributions on the way to accomplishing WARDA's mission.

In the present Annual Report, the reader will be able to enjoy some fine examples that illustrate the achievements that contribute, collectively, to WARDA's success. Individually and collectively, they call for continued attention and research in the areas that are illustrated, and it is obvious that the challenges go beyond the scope of the examples provided. However, they demonstrate how challenges can be transformed into opportunities and solutions through research and development, thanks to the dedication of the people involved—scientists, administrators, support staff, extension agents and, in some noteworthy cases, the farmers themselves. We are confident that the present report will prompt continued support from those who know and appreciate WARDA already, and will win new friends among those who discover WARDA through these pages.

