

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
TECHNICAL ADVISORY COMMITTEE AND CGIAR SECRETARIAT

Report of the
Fifth External Programme and Management Review
of the
International Institute of Tropical Agriculture
(IITA)

TAC SECRETARIAT
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

This report comprises:

- (a) Extract from *Summary of Proceedings and Decisions*, Annual General Meeting, 30 October-2 November 2001, Washington, DC, USA
- (b) Letter from TAC Chairman and CGIAR Executive Secretary, transmitting the Report of the Fifth External Programme and Management Review
- (c) TAC Commentary on the External Review of IITA
- (d) IITA's response to the Report of the Fifth External Programme and Management Review
- (e) Transmittal letter from Panel Chairman to TAC Chairman and Director CGIAR
- (f) Report of the Fifth External Programme and Management Review of the International Institute of Tropical Agriculture (IITA)

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December, 2001



Consultative Group on International Agricultural Research - CGIAR

From: The Secretariat

November 2001

CGIAR Annual General Meeting
October 30 - November 2, 2001
Washington, D.C.

Report of the Fifth External Program and Management Review of IITA¹

Panel Chair Ken Cassman, presenting the highlights of the IITA review, said that the institute had made a significant impact on poverty and natural resource management. He foresaw a strong program and role for IITA in the future. The key point for attention was strengthening leadership of the research program. Mr. Cassman's comments were followed by an exchange of views centered on the main recommendations of the EPMR.

The meeting:

- **commended** the panel for conducting a thorough review, and IITA for its collaboration with the panel and for its constructive responses;
- **endorsed** the EPMR recommendations and IITA's proposed follow-up;
- **recommended** that a IITA's board should submit a follow up report to the ExCo on the implementation of EPMR recommendations.

¹ Extract from *Summary of Proceedings and Decisions – External Program and Management Reviews*, CGIAR Annual General Meeting, Washington, D.C.

Consultative Group on International Agricultural Research (CGIAR)

TECHNICAL ADVISORY COMMITTEE

Emil Q. Javier, Chairman

8 October 2001

Dear Mr. Johnson,

We are pleased to submit to you the Report of the Fifth External Programme and Management Review of IITA, conducted recently by a Panel chaired by Dr. Ken Cassman of the University of Nebraska, USA. The Review Report and IITA's written response to the Report were discussed by TAC at its 81st Meeting at CIFOR in Bogor, Indonesia, in September 2001. The Panel Chair made his presentation via tele-conference and power point presentation. Dr. Enrico Porceddu, IITA Board Chair, and Dr. Lukas Brader, IITA Director General were present at the meeting.

The Report of the Panel is accompanied by two attachments. The first contains the TAC Commentary, which summarizes TAC's reaction to the Panel's Report and to the Response of IITA's Board and management. The second attachment is the Response of IITA to the Panel Report.

TAC believes the Panel has carried out a very thorough review of IITA's programmes and management. The report has identified the many strengths of the Centre, its achievements and successes, but also highlighted research and management areas that require strengthening. TAC is pleased to see that the Centre is in agreement with most of the Panel's 17 recommendations and in some cases has already taken concrete steps to address these concerns.

TAC endorses the overall conclusion of the Panel, that IITA's research programmes aimed at poverty reduction, enhancing food security and conserving the environment are making significant contributions to improving the quality of life in sub-Saharan Africa (SSA). TAC believes IITA must remain, now and in the future, a centre of excellence, committed to development-focused agricultural research and capacity strengthening in the service of Western and Central Africa and the rest of SSA.

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Mr. Ian Johnson
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Finally, TAC wishes to acknowledge the outstanding commitment and contribution of IITA's Director General, Dr. Lukas Brader. IITA and the CGIAR System at large have benefitted immensely from his fine leadership, insight, dedication and service--all qualities in ample evidence during the past 11 years. He leaves a remarkable legacy.

Yours sincerely,

(Signed)

Francisco J. B. Reifschneider
Director, CGIAR

(Signed)

Emil Q. Javier
TAC Chair

TAC Commentary on the Fifth External Programme and Management Review of IITA

TAC is pleased to accept the report of the Fifth External Programme and Management Review (EPMR) of IITA which was discussed at TAC 81 in the presence of IITA's Board Chair, Dr. Enrico Porceddu and the Director General, Dr. Lukas Brader. The EPMR Panel Chair, Dr. Ken Cassman was unable to attend the meeting in person but addressed the group via a tele-conference call using a power point slide presentation. TAC wishes to thank Ken Cassman and the members of the EPMR Panel for delivering a rigorous and in-depth review and for providing a thorough treatment of the terms of reference.

The report underscores many of the successes and outstanding science accomplishments of many of IITA's programmes. The Panel commends the center for maintaining world-class core competency in plant pest biological control, and exercising strong and effective leadership in germplasm improvement and conservation of the major food crops in SSA. The centre has strong linkages and collaboration with many NARS and sub-regional organizations, and has established effective networks to support breeding efforts and technology transfer of improved crop varieties. There is much to commend.

TAC also appreciates the overall positive response of IITA to the Panel's seventeen recommendations, and is pleased with plans to implement many of them. TAC wishes to comment on several of the recommendations. It appreciates the forward-looking nature of the report, and directs its own comments to that future need.

Priority Setting

TAC commends the extensive effort that IITA makes in its stakeholder consultation process for priority setting. It is a bottom-up process. In such a complex environment with many NARS and other stakeholders, and a very fluid economic and political situation in general, a strictly quantitative, ex-ante impact assessment priority setting process may not be appropriate. Nevertheless, TAC believes that IITA should, in addition to clearly stating its priorities, also provide the reasoning behind them, and develop a quantitative database for each in support of its status. TAC, therefore, endorses the Panel's recommendation on the need for a more transparent and more structured process for setting priorities (Recommendation 1). This is relevant for decision making and resource allocation at the institute level, i.e., for investments across agro-ecological zones and across projects, and down to the project level where decisions about relative emphases across crops, breeding objectives and targeted environments apply. TAC concurs with the Panel's view on the need for achieving a better understanding of the factors leading to changes in use of technology at the farm, regional, and ecoregional level in SSA, as an input into the priority setting process (Recommendation 8). This, combined with knowledge of partners' needs and their strategies, will place IITA in an advantageous position for assessing its own comparative advantage in the global and SSA agricultural research system.

Research Leadership

TAC fully supports the need to recruit a DDG for Research (Recommendation 2). It is suggested, however, that this occur as soon as possible after the arrival of the new DG to

allow the his participation in the position description and candidate selection. With all of the demands on a new DG, support of a senior research manager is essential.

Research Programmes

TAC is pleased with the successes and quality of science in crop improvement and plant genetics. The need to clearly articulate priorities and to shift improvement efforts toward IITA's evolving agro-ecological zone focus is encouraged (Recommendations 5 and 7).

TAC shares the Panel's concern with certain issues related to the Resource and Crop Management Division (RCMD). IITA is one of the CGIAR Centres that applies the Benchmark Area Approach (BAA) in determining the technological component inputs in a given agro-ecological zone. The Panel noted the significant investment in manpower yet observed a lack of integration of disciplines in field activities at the benchmark sites. They rightly cautioned against further additional investments until the approach had been validated and methods and concepts clarified (Recommendation 7). TAC suggests that an ecosystem framework must be quickly developed for each site, with priority target problems for research and impact. Site "characterization" should be of limited duration, and the research priorities and strategies analysis based on characterization needs further elaboration and clarification. A plan for extrapolation and scaling up should also be immediately put into place. GIS technologies are essential for that process. TAC sees greater emphasis on geo-spatial analysis to be critical (Recommendation 10). IITA must acquire adequate capacity to support the RCMD program.

TAC discussed in some detail the condition of social science research and concurs with the Panel's finding about a lack of coherence in the work undertaken in this domain and agrees with the need for senior leadership for better guidance and integration of social science research into the Centre's overall programme (Recommendation 9). TAC also notes that most studies have focused on technology adoption and ex-post impact analyses and general site characterization work. TAC encourages the social scientists to increase their efforts on a range of other topics, including ex-ante impact assessments (to feed into priority setting), farmer-type typology development, and characterizing household and farm organization and their behavior, among others. This will help in ex-ante tailoring and focusing IITA's crop, biological, and natural resources research towards the priority constraints and potential of small farmers. TAC agrees with the recommendation on the need for recruiting a lead social scientist. As it seeks to fill this much-needed slot for leadership and a stimulus to various efforts in social science and economics, IITA may want to consider various innovative appointment options for filling this critical position.

Impact

TAC appreciates that the Centre took steps to address acknowledged deficiencies in the area of impact assessment (IA), initiating a series of IA studies and hiring an impact generation and assessment specialist. However, many of the impact studies were limited in depth, of variable quality and did not provide a clear picture of the overall extent of IITA's influence. TAC believes the Centre should strive to carry out more quantitative impact studies that thoroughly document economic and social impacts with explicit linkages to its mission. The Panel identified one study, soybean in Nigeria's southern Guinea savannah, as a useful model for structuring future ex-post IA studies.

Quality of Science

TAC appreciates the efforts of the Panel to evaluate science quality, and shares the Panel's concern with the lack of top-level science publications from some programmes. A range of indicators is needed for assessment of both quality and relevance. The Panel used several. TAC must very quickly assemble and circulate for comment a set of guidelines for assessing quality of science for both individuals and programmes.

Board of Trustees

The report highlights the need for carrying out a programme of Board reform for the Board to exercise its good governance functions (Recommendation 14). TAC supports this recommendation. TAC agrees that the Board should document its responsibilities and accountability more clearly, and strive for shorter, more efficient meetings, conducted in business-like fashion. Given the need for Board reform, it would be advisable for the Board to commission an external review a year or so into the implementation of reform actions.

Management

The Panel commends Centre Management for keeping IITA functioning on a sound financial and operational footing, especially in such a difficult working environment. TAC concurs.

TAC believes that the success of IITA owes much to the leadership and dedication of its outgoing Director General, Lukas Brader. TAC wishes to put on record its appreciation of Dr. Brader for his fine service to IITA and to the CGIAR during the past 11 years.

Conclusion

TAC applauds the work and many accomplishments of the Centre during the past five years and commends the Panel for providing solid evidence in support of this overall very positive assessment. Like the Panel, TAC believes IITA has a major and critical role to play in the future in contributing to improvements in food security and poverty reduction in SSA.





Headquarters

International Institute of Tropical Agriculture

(Consultative Group on International Agricultural Research)

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10 May 2001

Dr. Emil Javier
Chair
Technical Advisory Committee
Consultative Group on International Agricultural Research
Food & Agriculture Organization
00100 Rome, Italy

Dr. Francisco Reifschneider
Director
Consultative Group on International Agricultural Research
World Bank
1818 H Street, N.W.
Washington, D.C. 20433, USA

Dear Emil and Francisco:

It is our pleasure to send you the response to the fifth External Programme and Management Review of the International Institute of Tropical Agriculture. We welcome the constructive comments of the Panel on IITA's present and future capacity to address its mandate, as well as the endorsement of its new Strategic Plan 2001-2010.

The review required hard work and dedication and we would like to express our sincere thanks to all concerned. The review identified certain areas where changes in the Institute's program and strengthening of its capacity would allow it to more effectively address its complex task.

The Institute will carefully analyze the various recommendations and suggestions and will ensure that the best use is made of them. Initial comments and responses to the recommendations are given in the text attached. These have been jointly prepared by the Board of Trustees and IITA Management. The Board will monitor progress on implementation of the recommendations in its future meetings.

IITA looks forward to the future with confidence. The Institute is in an excellent position to effectively support agricultural development in sub-Saharan Africa. It will pursue an active role in building partnerships for implementing a cohesive program of research for sub-Saharan Africa.

Sincerely,

Lukas Brader
Director General

Enrico Porceddu
Board Chair

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RESPONSE TO THE FIFTH EXTERNAL PROGRAM AND MANAGEMENT REVIEW REPORT OF IITA

PART I: GENERAL COMMENTS

The External Program and Management Review of IITA was carried out over a period of about one year, beginning with an initial visit by the Chair and a Consultant to study the operations of the Board of Trustees. This was followed by a first visit of the whole Panel between 14 and 25 January 2001 and the final phase of the EPMP took place from 20th April to 7th May. During this period, the Panel was provided with a wide range of information and had many opportunities for familiarizing itself with the Institute's work. IITA highly appreciates the dedication of all the Panel members and the tremendous amount of work undertaken to complete the Panel's heavy task. We want to express our very sincere thanks to the Chair of the Panel, Dr. Kenneth G. Cassman, and the members for having given so much of their valuable time to the Institute.

The Panel reviewed in detail IITA's draft Strategic Plan for the period 2001-2010 and fully supported the new directions proposed. It also cautions IITA to ensure that effective priority setting instruments are in place and applied to new activities that are being pursued. The Institute had used the priorities of the sub-regional organizations as the basis for the proposals developed in IITA's Strategic Plan, but sees opportunities for refining these following the Panel's recommendations.

IITA fully endorses the Panel's conclusion that "the Institute's research programs are making significant contributions to improving the quality of life in SSA." IITA is encouraged by the Panel's strong endorsement of its various research activities, particularly with respect to crop improvement and plant health management. The Panel saw opportunities for strengthening certain areas of resource and crop management, but it should be noted here that the Institute had already initiated new research in the areas identified.

The Panel gives very high marks to the Institute for its effective linkages with partners ranging from NARS to IARCs. The Institute is pleased that its efforts in that direction have been so successful and that they are well recognized.

The Board has carried out an in depth analysis of the extensive comments on Board governance and will continue to make certain adjustments in its operational procedures. It will keep the matter under further review in future Board meetings.

The Panel spent considerable efforts on checking the quality of IITA's research on the basis of peer reviewed publications and we welcome suggestions made for further improvements while noting that this matter was not emphasized in the 4th EPMP. The Panel felt that the CCERs carried out over the past five years did not help it much in its work because they did not adequately address the quality of research. These CCERs were undertaken in particular to address specific areas identified by IITA and, for example, focused more on impact. This experience shows us that there is a need for clearer guidance from TAC on the terms of reference of CCERs.

IITA welcomes the comments of the Panel on the future research structure and the role of the newly proposed agroecological zone teams and their leaders. This new structure is still under discussion in the Institute. The Board and management prefer that changes take place in an evolutionary manner so that there is an opportunity to evaluate whether such a structure will really strengthen the Institute's operations in the long term.

The Panel has shown an excellent understanding of the funding constraints for agricultural research and in that respect we are pleased that it recommended only a limited number of new positions.

Finally, IITA agrees with the Panel's comments that IITA can play a leadership role at the global and regional levels. IITA intends to continue and intensify its efforts in the development of strong regional CGIAR programs in West and Central Africa and East and Southern Africa.

The Board of Trustees and Management have carefully analyzed the 17 recommendations by the Panel and it is clear that some recommendations need further work. Our specific responses are presented in the following.

PART II: RESPONSE TO SPECIFIC RECOMMENDATIONS

Recommendation 1 - Prioritization Process

The Panel recommends that IITA place immediate emphasis on establishing a sound methodology for prioritizing their research agenda.

IITA welcomes this recommendation. In its new strategic plan the Institute has used a bottom-up priority setting exercise based in particular on the priorities developed under the strategic plans of the sub-regional organizations. These plans in turn were based on the strategic plans of the NARS. This collective knowledge and experience of IITA and its partners should be fully considered in any quantitative methodology used. However, the Institute fully acknowledges the potential usefulness of a sound and reliable methodology for prioritizing its research agenda and will undertake the necessary efforts for this. It will consult with its sister institutes and others to determine the best approach. The institute hopes that adequate reliable data are available to allow it to achieve trustworthy results.

Recommendation 2 – From Strategy to Structure: A Work in Progress

The Panel recommends immediate recruitment of a DDG-R with responsibility to guide and manage IITA's research program, evaluate its quality and relevance, and be accountable.

Following the recommendation of the fourth EPMP IITA proceeded with the recruitment of a Deputy Director General. Once the new staff member was identified the Institute looked at how the research leadership could be best organized. Given the current strength and interest of the Director General, it was decided that this could best be done by having a Deputy Director General at large with extensive responsibilities for research planning and management. However, it was felt also that the Director General should maintain an active role in research planning by continuing to chair the Research Program and Executive

Committee. After the retirement of the current DG the DDG's position could be formally denominated DDG Research. At IITA the three research divisions enjoy strong scientific leadership. Even in the future the Institute should continue to benefit fully from its combined research leadership capacity. Moreover, the incoming DG should be given the opportunity to make changes as appropriate.

Crop Improvement and Plant Genetics

Recommendation 3. The Panel recommends that IITA develop a concept and approach for yam ideotype breeding with the objective to render production less labor intensive in a systems approach.

*IITA agrees with the recommendation of the Panel. Because in many yam-growing areas, the most serious constraints to productivity are the high costs of planting material and of labour for field operations like land preparation, planting, staking, weeding and harvesting. Studies in yam physiology and agronomy, currently in progress, are defining plant characteristics that would lead to increased production but reduce labour requirement in yam cultivation. For instance IITA and some NARS partners have demonstrated differential responses of yam genotypes to staking. There is also the potential for dwarfing to obviate the need for staking, as established by the selection of dwarf and semi-dwarf plant types from *Dioscorea rotundata* (white Guinea yam) populations sent by IITA to CTCRI in India in the 1970s.*

*Likewise, hybridisation between *D. rotundata* and *D. alata* (water yam) could lead to a valuable combination of attributes that would make the product superior to either species. This is because *D. alata* is superior to *D. rotundata* in terms of factors such as yield potential (especially under low to average soil fertility), ease of propagation (production of bulbils and reliability of sprouting), early vigour for weed suppression, and storability of tubers. Efforts will continue towards the production of viable hybrids between these two major species.*

Recommendation 4. The Panel recommends that IITA initiate in the framework of CORAF/WECARD, a regional scientists' forum on the development and use of genetically modified crops, which gives NARS scientists a sense of co-ownership in transgenics research and might serve as the nucleus for a future network.

IITA agrees with this recommendation, including the possibility of extending the initiative beyond the CORAF/WECARD region/membership. IITA has been engaged in such activities since the 1990s. IITA organized three workshops for Nigerian scientists who were to form the core staff to implement the biosafety guidelines for the country. These workshops took place in 1993, 1994, and 1999. The 1994 workshop used the Nigerian Biosafety Guidelines, which IITA helped to draft as a working document. This year IITA is planning a workshop on biosafety for scientists and other stakeholders from some West African countries with funding provided by The Gatsby Charitable Foundation. In addition, a USAID funded workshop will be held at IITA from 28 to 31 May 2001 between Nigerian, Ghanaian and IITA biotechnologists to strengthen research collaboration among the participants and with partners in USDA and US Universities. Biosafety issues will be included in the discussion at this workshop. Moreover, the Global Biodiversity Institute (USA) and IITA conducted in March 2001 a one-month course on biodiversity, biotechnology and law for 40 participants (scientists, lawyers and policy makers) from 9 sub-Saharan African countries. The Institute is concerned about the slow progress in the implementation of biosafety guidelines in countries in sub-Saharan Africa.

Recommendation 5. The Panel recommends that IITA develop clear priorities for crop improvement research, structured and justified on the basis of relevance to the target environments and users, the Institute's comparative advantage, and the prospects for achieving impact.

IITA acknowledges this recommendation. Priorities for crop improvement research, have been established based on expressed needs of partners (NARS, SROs, NGOs, farmers and other end-users) after due consultation in several fora (network/collaborative meetings, symposia, workshops, farmer field days) as well as baseline studies for some crops in target environments, e.g. COSCA. Additional regional objectives from SROs were included based on the market and end-user demands such as high protein, micro-nutrients, nutritional qualities and other post-harvest characteristics. The relative distribution of the Institute's research capacity over each of the six mandate crops is largely a reflection of the economic importance of these crops in sub-Saharan Africa. With emerging needs of the ecoregional and agro-ecozone orientation of research at IITA, prioritization will be further refined, particularly for selection of the most appropriate biotech approaches for crop improvement in sub-Saharan Africa.

Review of Biological Control and Integrated Pest Management

Recommendation 6. The Panel is concerned that productivity in PHMD appears to be declining. The Panel recommends that IITA assess the research output of all IRS and NRS to help maintain PHMD's world-wide reputation in biological control and IPM.

IITA is also concerned about a gradual decline in scientific output as measured by the number of peer-reviewed journal articles produced by the Plant Health Management Division. To some extent, the decline in the number of peer-reviewed publications per scientist is explained by the fact that departing principal staff had a long career of scientific publishing, often on laboratory or process studies. The institute is also concerned that the success in biological control of cassava green mite has been largely undocumented and shall take appropriate action. The shift towards long-term field and impact studies inherent in maturing projects and recommended by the previous EPMR naturally led to a reduced frequency of publications. IITA recognises that some scientists who are involved in special projects concerning implementation over several countries have not published in peer reviewed journals. Their impact has been in writing training manuals or monographs, or in giving training courses or bench training to national staff. Notwithstanding this commendable effort, we are urging them to present the process and impact of technology transfer in appropriate journals and to integrate the corresponding literature on farmers' participatory research and similar topics.

Resource and Crop Management Research

Recommendation 7. The Panel recommends that RCMD develop a clear business plan for each of its project components; identifying clear outputs by expected time lines that are substantiated by peer-reviewed publications; and particularly with respect to the concepts and methodologies of the benchmark approach.

IITA accepts the tenor of this recommendation but notes that detailed logframes with outputs, milestones and means of verification are available for projects 11 – 14, as is the case for all

the projects carried out by the Institute. These are reviewed annually and upgraded in preparation for work planning week at IITA. The Institute acknowledges that peer reviewed publications detailing the methods and concepts on the benchmark approach have been somewhat lacking in the past; however, just such a publication is proposed for presentation at the next CGIAR INRM annual conference at CIAT in August 2001 and will be subsequently published in a suitable peer reviewed journal. More emphasis will be placed on this aspect of publication in the future. In addition, further efforts to associate project outputs with peer reviewed publications will continue the trend established after 1999 following the CCER which led to the establishment of the current projects 11-14.

Recommendation 8: The Panel recommends that RCMD lead a concerted effort to fully understand the driving forces, extent, rates, and types of cropping system intensification in the major AEZs of West and Central Africa (wet and dry savannas and humid forest), using innovative approaches and appropriate partnerships.

IITA accepts that understanding the major driving forces behind cropping system intensification allows not only prediction of problems that will occur during the intensification process, but also insight into potential solutions. These concepts were developed in the early 1990s and published in the mid 1990s by Smith, Weber and Manyong and incorporated into the theory underpinning the size of benchmark areas, i.e. large enough to contain gradients in intensification as well as different driving forces such as population and market access. IITA concurs with the need to analyze the data that have been collected in 5 EPHTA benchmark areas and will therefore step up the analytical effort, particularly with regard to how the driving forces are impacting on the adoption of IITA technologies.

Recommendation 9: The Panel recommends that research capacity in the social sciences at IITA be strengthened, through two actions:

- **appointing an eminent agricultural economist to provide leadership and cohesion to the socio-economic research activities; and**
- **ensuring representation of a senior economist on the RPEC.**

An additional social scientist IRS position added to RCMD project 14 team would be welcomed by IITA particularly a scientist with experience in policy, agricultural economics and other issues. However, IITA needs to treat this recommendation pragmatically, as the availability of such senior candidates with the willingness to be based in West Africa is very limited. In addition, IITA is pleased to note the recent stronger leadership and cohesion in social sciences resulting from the re-organization of Project 14, and its complementary alignment with projects 11-13 since the 1999 CCER.

Representation of a senior social scientist on the RPEC is in theory desirable but would be dependent on the outcome of current IITA restructuring at senior management level.

Recommendation 10: The Panel recommends greater emphasis on the development of geo-spatial analysis capabilities within IITA coordinated with other ongoing programmes in the CGIAR System and with appropriate ARIs.

IITA fully endorses an increased emphasis on geo-spatial analysis capabilities and has been retooling capacity since late 2000. IITA will upgrade the current core post-doc GIS specialist position to that of full international staff level. IITA has joined the CGIAR Consortium for

Spatial Information in 2001 and is developing closer GIS links with WARDA and ICRISAT in West Africa in particular. It also has further plans to cement it's continued linkage with ARIs, in particular Yale University Centre for Earth Observation (for remote sensing) and Mud Springs Geographers Inc., the Regional Center for Training in GIS and Remote Sensing (RECTAS) in west Africa at Ife, Nigeria and with the United States Geological Survey (for GIS data). GIS work is expanding at village and benchmark level through existing CGIAR Alternatives to Slash and Burn Agriculture Consortium partners. IITA will also seek other ARI partnerships where appropriate in the future.

Research Support

Recommendation 11. The Panel recommends that the Center develop a specific strategy on information dissemination and training, particularly emphasizing mid-career scientist development for researchers from national programs, even at the expense of some postgraduate training.

The institute accepts this recommendation while noting that over the last five years it has implemented a deliberate policy of outsourcing to relevant NARS the organization of most group training courses.

Recommendation 12. The Panel recommends that IITA act now to fully implement its new IPR policy, namely:

- **Ensure that it has freedom to operate (FTO) in its present operations**
- **Put in place an infrastructure to ensure that all future IP issues be monitored and databased.**
- **Ensure that IITA's IP policies effectively cover its designated germplasm, breeding products, publications, databases, trademarks and proprietary technologies.**
- **Periodically review the IPR policy in the light of evolving international regulations and conventions.**

IITA accepts the recommendation to fully implement the new Board approved (May 2001) IPR policy and to:

- *continue to check that it has freedom to operate in its present operations,*
- *make any necessary modifications to its Research Database Management System (RDBMS), with advice from the CGIAR Central Advisory Service (CAS), to ensure that information on IITA generated intellectual property is properly stored,*
- *ensure that the IITA policies do effectively cover all of IITA's intellectual properties,*
- *keep under periodic review the IPR Policy in light of changes in IITA's operating environment.*

Private Sector

Recommendation 13. The Panel recommends that IITA work more closely with IFDC, IFPRI and other international partners to achieve a better understanding of constraints to adoption and performance of its improved varieties, with particular consideration given to the agricultural input sector of Nigeria and other countries.

IITA is already working closely with IFDC as co-members of the CGIAR Systems –wide Initiative on Soil Water and Nutrient Management (coordinated by CIAT), as part of the “Best Bets” group working in the dry savannas of Nigeria, Niger and Mali funded by the Systems-wide Livestock Program (coordinated by ILRI) and in the specific case of seed and inputs has recently collaborated with IFDC and WARDA in preparing a review of the constraints in the agricultural input sector in Nigeria “Agricultural Input Markets in Nigeria: An Assessment and a Strategy for Development”. 2000, IFDC, Muscle Shoals, Alabama. This has led to a major funding proposal to USAID “Management of Agricultural Inputs” project in which IFDC and IITA are the major partners and IITA has responsibility for the outputs concerning the seed industry.

IFDC and IITA are also initiating collaboration in GIS and modelling issues. With IFPRI, IITA is collaborating on the 2020 projection study and with USDA, IFDC and others in the “Africa Trade and Investment Policy Programme” in association with the West African Seed Network the coordination of which will shortly be transferred from Ghana to IITA Ibadan. IITA will continue to collaborate with complementary partners in the complex issues surrounding the input sector in West Africa.

Board of Trustees

Recommendation 14. The Panel recommends that the Board carry out a programme of Board reform that includes, in particular:

- returning to two meetings a year of the full Board,
- reducing the number of members on the Board of Trustees, including the number of host country members
- defining the term of office of the Board Chair
- reducing the time taken at Board meetings for formal execution of its responsibilities,
- establishing, documenting and committing to ‘best practice’ procedures for the Board and its committees
- providing a budget for the Board Chair, and
- commissioning a CCER on Board governance approximately one year after the new DG has taken up his or her appointment.

The Board was pleased to read – page 76—“In 2000 the 13 members elected at large provided an appropriate representation of gender, north/south and discipline dimensions,” and page 77, “The Board gives the impression of being willing to carry out its responsibilities and at one level functions at its meeting in an active, engaged manner.”

In 1997, the Board conducted a self-assessment using the forms recommended by the CG Secretariat. As a result of this exercise in 1998, the bylaws and board policies and procedures were amended and a Trustees conflict of interest was adopted. The Board also

decided to assess Board and DG performance in written form every other year. A draft of a Board policy manual specifying governance style, Board/DG linkages and executive limitations was prepared as a result of 2000 Board of Trustees meeting to be discussed and approved at the May meeting in 2001 as proposed at the Executive Committee in February 2001. Further improvements may be introduced after the establishment agreement has been revised and the future of the CGIAR is more clearly defined.

- *The Board of Trustees had already agreed to meet for a second time in 2001 at the end of November. The Panel's recommendation confirms the need for this and is accepted by the Board. It will contribute to inclusiveness in the Board.*
- *The Board recognized that a smaller Board would further enhance inclusiveness and help to mitigate the costs of reverting to two Board meetings a year. It agrees that in the context of a smaller Board, a reduction in the number of host-country members would have to be considered. Against the reduction is the complexity of IITA's mandate, the disciplinary diversity of its staff and the variety of its activities along the research continuum. There is no guarantee that absentees would reduce and this might penalize the ability of a smaller Board to have a properly rounded discussion on some issues.*
- *The term of office of the Board Chair is specified in the By-Laws and Policies and Rules of Procedures of the IITA Board of Trustees, which state "the Chair and Vice-Chair may not serve for more than three consecutive years." Extension of the term of the current Chair was a decision taken in the light of the timing of the 5th EPMR and the Search for a new Director General. The Board considered it important for the existing Chair to see such critical Board processes to a successful conclusion.*
- *The Board is unclear on the exact meaning of this recommendation. The text of the report and the consultant's larger report see greater formality in several aspects of the evaluation and performance monitoring (paragraphs 5.1.4 and 5.1.6). It is unclear whether this could or should reduce the time taken at meetings. Clarification is requested.*
- *As mentioned in the preamble, revision of the Board policy manual, revision of practices are in progress. The Board accepts the recommendation.*
- *The Board was unable to find a reference to this recommendation in the text of this report. Nor does it appear in the extended report by the Consultant, either as a recommendation or in the text. In the past the Board has encountered no difficulties in ensuring the funding of specific initiatives, hence it does not see a justification for providing a special budget for the Board Chair in the future.*
- *The Board notes that this recommendation is not consistent with the Panel's advice (though not a recommendation) in paragraph 3.1.23. i.e., "The Panel also considers that the CCERs should be conducted within two years of the next 5 year review."*

The Board will monitor progress in implementing the EPMR recommendations on governance and at its meeting in May 2002 further consider the need and time of a CCER on this topic.

Human Resources

Recommendation 15. The Panel recommends that a single manager oversees the human resource function, reporting to the Director of CSD, and secondly, that there is a greater degree of flexibility in its NRS scientist policies to ensure consistency between the administrative and research staff and among the CGIAR Centres operating at one station.

IITA does not see the benefit of one single manager overseeing the human resource function and cannot find significant arguments for it in the Panel's report. The two positions require very different skills and experience that are adequately met under the current arrangements.

In recent years, the Institute has actively tried to reduce the International Staff in research support, administrative and service functions and replace them by well-qualified national staff. Such staff can only be attracted and maintained by paying salaries comparable to those in the industrial sector around us. The Institute is not in the strict sense employing NRS scientists; these are all classified as research associates. These staff members are encouraged to pursue MSc or Ph.D research. Once they have obtained a Ph.D they are eligible to apply for international positions at IITA or seek employment in their national institutions. IITA does not wish to employ two categories of scientists; this is contrary to its recruitment policies, and can lead to significant staff dissatisfaction.

Finance

Recommendation 16. In sum the Panel recommends that the following steps be taken with regard to financial management:

- putting in place an effective internal audit function
- a comprehensive framework for the installation of the Oracle-based MIS/FIS be put in place
- consideration be given to engaging an overseas development officer
- adoption of an overhead charge policy.

Steps have already been taken to maintain an effective internal audit function.

A steering committee for the installation of the Oracle MIS/FIS has been established; additional resources, financial and human, have also been made available to the project.

The Institute will look into possibilities of how the activities to be undertaken by an Overseas Development Officer can best be fulfilled, and in particular in a cost effective manner.

The Institute in principle charges the overhead percentage calculated on the basis of the latest CGIAR methodology. There are a number of situations where, for a variety of reasons donors do not accept this full percentage, and it is the DG's responsibility to negotiate the best rate, keeping in mind the interest of the research program of IITA.

Recommendation 17. The Panel recommends that the status and importance of the position of the Head of the External Liaison Office be upgraded, but not to DDG level.

After very careful analysis of the best way to strengthen the relationships with NARS, the Institute decided that this could be done more effectively by integrating the relevant activities

to be undertaken into each of the projects. As a result the responsibilities of the External Liaison Office became more focused. It is evident from the Panel's own discussion of IITA's partnership and linkages that this change has been very beneficial. Consequently, the Institute sees the present model as more than adequate to meet its needs.

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6 May 2001

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Dear Drs. Javier and Reifschneider,

On behalf of the Panel, I am pleased to submit to you the Report of the Fifth External Programme and Management Review (EPMR) of the International Institute of Tropical Agriculture (IITA). The Panel has reviewed, as requested, the research programme and management aspects of the Centre making every effort to present an accurate account of the outputs, achievements and what is known about the impact of the Centre during the review period.

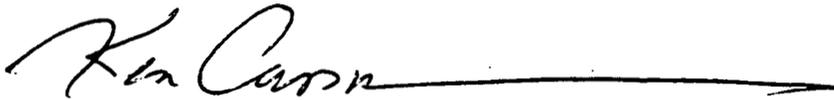
IITA is, like the CGIAR itself, on the verge of a new era. The challenge is especially great for IITA as it moves forward under new leadership and guided by a new strategic plan. We have noted in this report the many strengths of the Centre and its critical role in conducting research aimed at poverty alleviation, enhancing food security and sustaining the environment in sub-Saharan Africa. Although we highlight in the report several areas in need of strengthening, the Panel is unanimous in its view that there are exciting opportunities for IITA to exert its leadership as the premier international agricultural research organization in SSA. This owes much to the fine leadership and dedication of the person who has steered this institute during the last 10 years, Dr. Lukas Brader.

This review was, by all accounts, a very challenging assignment, but one which I and the members of this Panel found stimulating. I would like to take this opportunity to thank you for assembling such an able and experienced team for this task. Notwithstanding the tough

debates and long hours, the Panel worked exceedingly well together, with incredible energy and commitment. On behalf of the Panel, I would like to express our sincere appreciation for the contributions of our two consultants, Michael Gale and Julie Noolan, who shared the same sense of purpose and level of commitment as the Panel did. They were essential to this review.

I appreciate the opportunity to have served as chair of the review team. I trust our review will prove useful to the CGIAR members, TAC, and to the Centre.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ken Cassman", followed by a long horizontal line extending to the right.

Ken Cassman, Chair
External Review Panel

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
TECHNICAL ADVISORY COMMITTEE AND CGIAR SECRETARIAT

**REPORT OF THE
FIFTH EXTERNAL PROGRAMME AND MANAGEMENT REVIEW
OF THE
INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE
(IITA)**

Panel: Kenneth G. Cassman (Chair)
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Consultants: Michael Gale
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TAC SECRETARIAT

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

May 2001

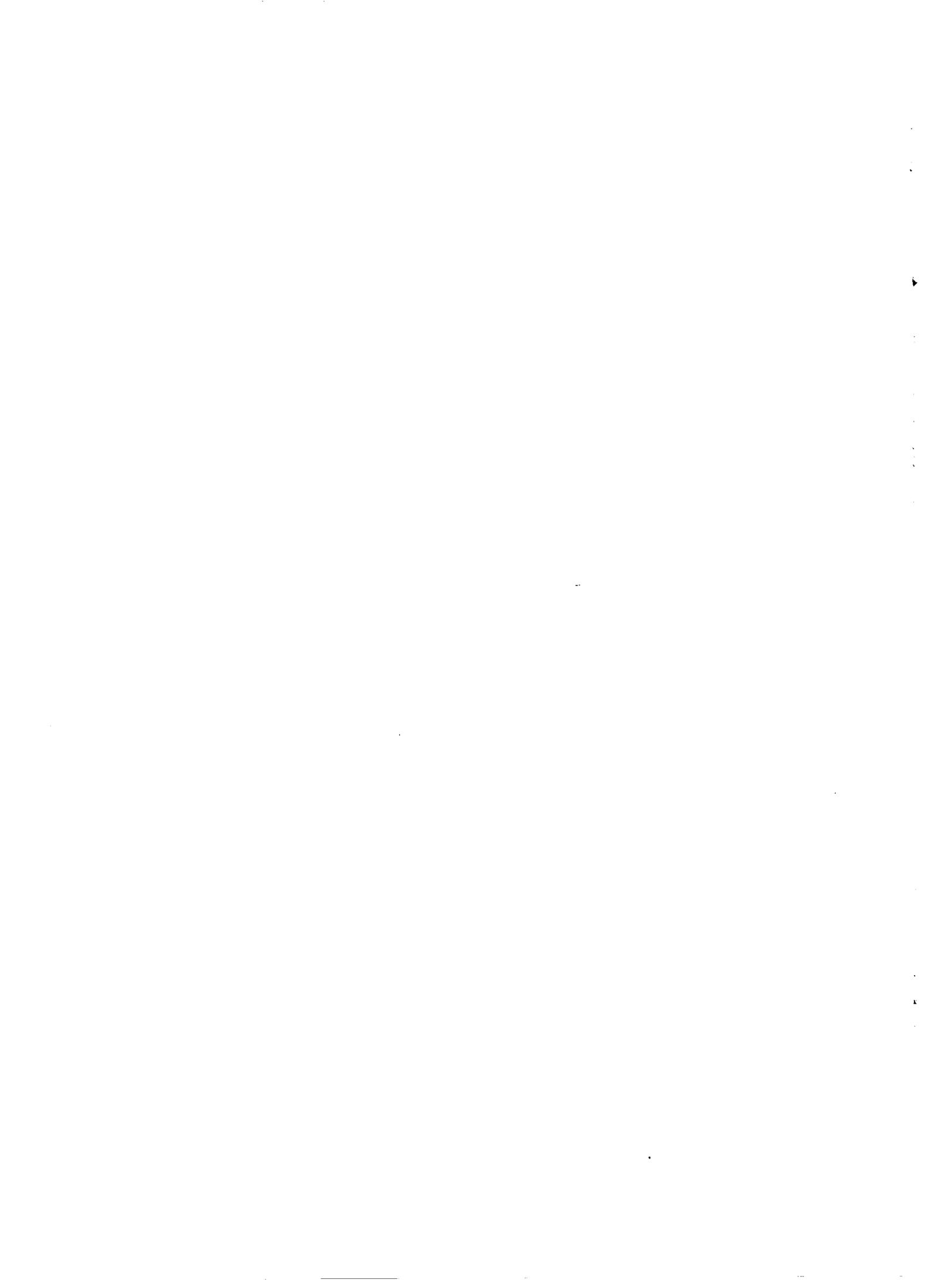


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PREFACE

This is the report of the Fifth External Programme and Management Review (EPMR) Panel appointed to evaluate the research programme and management of the International Institute of Tropical Agriculture (IITA). The composition of the Review Panel is listed in Annex I along with brief biodata. The Terms of Reference for this Review are found in Annex II. The Panel's itineraries during the Initial and Main Phases are provided in Annex III.

In producing its report, the Panel was guided by the two broad objectives of EPMRs: (a) providing CGIAR members with an independent and rigorous assessment of the institutional health and contribution of the Centre; and (b) providing the Centre and its collaborators with assessment information that complements or validates their own evaluation efforts. The Panel made every effort in this report to present an accurate account of the outputs, achievements and what is known about the impact of IITA during the review period.

With respect to the conduct of its review, the Panel relied on numerous sources of information in reaching its conclusions and making its recommendations. These were the following:

- documentation provided by the Centre and the TAC and CGIAR Secretariats (Annex IV);
- IITA staff presentations given during the Initial Phase of the review at HQ and IITA stations in Kano, Yaoundé and Cotonou (14-25 January 2001) and immediately preceding the Main Phase in Kampala (16-19 April 2001);
- follow-up discussions with Divisional leaders and project scientists and other staff groups at IITA HQ during both the Initial Phase and the Main Phase (20 April – 7 May 2001);
- meetings and discussions with government officials, NARS scientists, representatives of regional and sub-regional organizations and networks, university collaborators, NGOs and farmers associated with IITA's programmes in Nigeria, Cameroon, Benin, Ghana, and Uganda;
- visits to NAROs research stations and farmers fields in or near Kano, Yaounde, Kampala, and Cotonou and extensive follow-up discussions with IITA staff in the field;
- information derived from the IRS staff survey (March, 2001);
- review of Board agendas, minutes and other documentation, observations of the Board in action (Board Meeting, May 2000) and direct interaction with Board members individually; and,
- discussions with individuals representing private and public sector donors, other CGIAR Centres, and CGIAR cosponsors, in person and through e-mail correspondence.

For this review, the Panel took as its departure point the major recommendations from the 1996 EPMR. These recommendations, the Centre's updated response to them, and a brief commentary by the current Panel on the adequacy of those responses, can be found in Annex V.

The Panel made every attempt to conduct the review in an objective and transparent manner with a focus to the future as well as to the past. The Centre was kept informed of the Panel's activities and progress through the review. Key issues identified by the Panel at the conclusion of the Initial Phase were discussed with senior management of the Centre. As

they were completed, drafts of various chapters of the report were shared with the Centre for comments and to check for factual accuracy prior to finalizing the report.

Because of time constraints, the Panel could not go into detail for every element of the Centre but chose to focus on what it believed were the most significant issues. For example, after visits and discussions at Kano, Yaoundé, Cotonou, and Accra during the initial phase, based on a consistently favourable impression of IITA-NAROs relations, the Panel chose not to conduct a formal survey of NAROs in the region. However, the Panel did spend considerable time meeting various government officials, regional and subregional organization leaders and other IITA collaborators.

Most other CGIAR Centres (including those with whom IITA has active collaboration) provided comments - almost all very positive - about the nature of the collaboration with IITA. These reports indicated good relationships with other IARCs. The Panel found this information useful in making its assessment of the Centre. Finally, during the course of the review, the Panel encouraged staff to contact them (confidentially) if they had any concerns or issues to discuss.

SUMMARY AND RECOMMENDATIONS

Introduction

This review covers the period since the 4th EPMR, which was completed in 1996. During this period, both internal and external environments in which IITA operates have changed markedly. The current Director General (DG) is soon to complete a term of 11 years and has provided strong leadership and institutional stability in a difficult operating environment. The Chair of the Board of Trustees will end a six-year term and a draft Strategic Plan for 2001-2010 heralds new research directions and partnerships. The Panel also notes an increasing emphasis on a regional research approach and global challenge programmes within the CGIAR.

External to the Centre, there has been an accelerating pace of innovation in the basic sciences and information technology, trade liberalisation, greater concern about intellectual property rights, and rapid economic development in most regions of the world. Unfortunately, sub-Saharan African has not shared equally in this prosperity as a result of political upheaval, inappropriate policies, and rapid population growth.

Given these dynamic internal and external forces, the Panel conducted the 5th EPMR of IITA with a strong forward-looking perspective. We have attempted a rigorous and comprehensive review that included meetings with IITA scientists and administrators, site visits to stations in five countries, and meetings with NARS stakeholders, though we recognise it was not possible to see all aspects of IITA's work. At the completion of our assignment, we conclude that "the Institute's research programmes are making significant contributions to improving the quality of life in SSA" (Chapter 6).

Mission, Strategy, and Priorities

Although 65% of the population in SSA is employed in the agricultural sector, support for agriculture research and extension has received low priority. Because overall economic development must be built upon strong agricultural growth, the Panel believes that the need for IITA today is more pressing than it was when it was first established more than 30 years ago. The Centre's mission statement is consistent with the CGIAR goals of reducing poverty, hunger and malnutrition by increasing the productivity of resources in agriculture. Its objectives are sound.

IITA's draft strategy for 2001-2010 proposes new modes of conducting research, based on strong partnerships with sub-regional research organizations (SROs), and a wide range of stakeholders in the National Agricultural Research Systems (NARS). Compared to the previous strategy, it emphasises an agroecological zone (AEZ) framework and a demand-driven approach for identifying research needs and understanding the biophysical and socio-economic dynamics of the agricultural intensification process. The Panel supports these shifts in programme emphasis.

The Panel did not find clear priorities or a transparent process for setting the research agenda. We believe there is need for a Deputy Director General for Research (DDG-R) to ensure rigour and co-ordination throughout the Centre's research programmes in support of

the new DG, especially given the increasing emphasis on a regional research approach within West and Central Africa (WCA) and global challenge programmes in the CGIAR.

Quality and Relevance of Science

Crop Improvement. IITA has a global mandate for yam and cowpea, and regional mandates for cassava, plantain, soybean and maize. The Panel commends the Crop Improvement Division (CID) for excellent progress in developing varieties of these crops with higher and more stable yields than germplasm currently used by farmers. Research quality was enhanced by the use of new methods: flow cytometry on *Musa*, development of molecular markers for use in breeding, low-cost screening methods for physiological and quality traits in cowpea, and innovative approaches for vegetative propagation of tuber crops. Sustaining these strengths will require improved prioritization of breeding objectives, greater integration of the crop improvement research with other disciplines—especially within the AEZ framework—and a clear strategy for the use of biotechnology in crop improvement. Publication output and quality were good given the emphasis on germplasm development. Efforts are encouraged to ensure an appropriate balance between germplasm development and scientific understanding of the basis for genetic gains.

Plant Health Management. The quality and relevance of research conducted by the Plant Health Management Division (PHMD) group is highly commendable. Biological control research and implementation have made excellent contributions to solving pest problems of resource poor farmers in SSA while producing strong scientific outputs. PHMD scientists have made extensive use of modelling and multivariate analyses in assessing ecological relationships in biological control. The methods developed for assessing losses in yield and quality from grainborers in maize sets new standards for such work. Other areas of strength are the biosystematics, virology, and germplasm health units. Training of African scientists and strengthening NARS capacity in biological control and integrated pest management are additional features of this work. Publication productivity was excellent and the Panel urges continued emphasis on maintaining the world-class reputation of this unit.

Resource and Crop Management. The Resource and Crop Management Division (RCMD) accounts for nearly 40% of IITA's research investment. In the past five years, RCMD research has placed greater emphasis on: (i) a participatory research approach to identify stakeholder needs and implement more sustainable cropping systems in the moist savannahs and humid forest AEZs; (ii) a multi-disciplinary approach to understand interactions between the biophysical and socio-economic features of selected benchmark areas; and, (iii) impact assessments on improved cereal-legume cropping systems and reasons for low adoption of alley farming systems. Since the last EPMPR, productivity and quality of RCMD research remains below the expectations of an international centre and publication output is very uneven across the group. Future plans call for greater use of advanced GIS and modelling applications, and further extension of the benchmark approach. These and other methodological developments will require rigorous testing of hypotheses and better definition for effective implementation. Greater collaboration is encouraged with ARIs and other IARCs that have complementary research capacities in key areas.

Social Science. Although IITA's social science is mostly housed within the RCMD, the Panel gave it separate coverage. Social science research in the past five years has focussed on systems characterization, impact assessment, and market and consumer demand studies. While this work has been used by the Centre to better understand the determinants

and impact of technology adoption, it has not been rigorously validated by peer review through publication in discipline-based journals. Greater cohesion and leadership are needed to guide the social science research effort within research projects, and to provide rigorous intellectual challenge to the basic assumptions that drive the overall research agenda.

Impact and Accomplishments

The Panel found strong evidence of impact from the Centre's research on biological control and germplasm development. Effective collaboration with NAROs has resulted in the establishment of biological control for a number of important pests of major crops in WCA. In crop improvement, the Centre released 41 cassava varieties and 44 maize varieties to NARS and estimates that the resulting increase in yields would feed an additional 100 million people in SSA. Improved varieties and disease-free planting materials of the other mandate crops also have been widely distributed through networks and research collaboration with the NARS. Improved legume-cereal cropping systems are beginning to be adopted in some areas of the dry savannah AEZ as a result of the interdisciplinary research conducted by the RCMD. Despite greater attention to impact assessment during the past five years, the Panel believes more thorough documentation is needed with explicit linkages to its mission.

Clear progress has been made on establishing stronger linkages with a wide range of NARS stakeholders and in co-ordinating the Centre's strategic planning efforts with the SROs. Strong networks are in place to support breeding efforts and technology transfer of improved varieties by NARS and NGOs. The Centre has continued to build NARS capacity through training activities. The Panel commends IITA for its proactive and successful efforts to strengthen collaboration and partnerships with the NARS.

Governance and Management

Boards world-wide are paying more attention to their good governance function and IITA's BoT needs to keep pace with this shift in emphasis. The Panel highlights the need to streamline activities, meet more often, and document its responsibilities and accountability.

Management has done an extraordinary job in keeping IITA functioning on a sound financial and operational footing in a difficult environment. The Panel believes, however, that the new DG must make a series of organizational changes in financial management and training of personnel, and ensure that a number of steps will be taken to counteract the constant erosion of funding. Improved overhead return on donor contributions needs attention.

Conclusions

The Panel believes that IITA must be maintained. It is faced with a difficult operating environment, a complex agricultural sector, and farming systems that are both intensifying in place and expanding into marginal soil areas or humid forests that are a storehouse of biodiversity. To succeed in its mission, IITA must carefully focus and prioritize its research efforts. It also needs to attract and retain the best scientists available. The challenge for the new DG is to sustain and energize the Institute to ensure it remains a world-class research institution.

LIST OF RECOMMENDATIONS

Prioritization Process (Section 2.2.1)

1. The Panel recommends that IITA place immediate emphasis on establishing a sound methodology for prioritizing their research agenda.

From Strategy to Structure: A Work in Progress (Section 2.4)

2. The Panel recommends immediate recruitment of a DDG-R with responsibility to guide and manage IITA's research programme, evaluate its quality and relevance, and be accountable.

Crop Improvement and Plant Genetics (Section 3.2)

3. The Panel recommends that IITA develop a concept and approach for yam ideotype breeding with the objective to render production less labour intensive in a systems approach.
4. The Panel recommends that IITA initiate in the framework of CORAF/WECARD, a regional scientists' forum on the development and use of genetically modified crops, which gives NARS scientists a sense of co-ownership in transgenics research and might serve as the nucleus for a future network.
5. The Panel recommends that IITA develop and present clear priorities for crop improvement research, structured and justified on the basis of relevance to the target environments and users, the Institute's comparative advantage, and the prospects for achieving impact.

Review of Biological Control and Integrated Pest Management (Section 3.3)

6. The Panel recommends that IITA assess the research output of all IRS and NRS to help maintain PHMD's world-wide reputation in biological control and IPM.

Resource and Crop Management Research (Section 3.4)

7. The Panel recommends that RCMD develop a clear business plan for each of its project components; identifying clear outputs by expected time-lines that are substantiated by peer-reviewed publications; and particularly with respect to the concepts and methodologies of the benchmark approach.
8. The Panel recommends that RCMD lead a concerted effort to fully understand the driving forces, extent, rates and types of cropping system intensification in the major AEZs of West and Central Africa (wet and dry savannahs and humid forest), using innovative approaches and appropriate partnerships.

Social Sciences and Impact Assessment (3.5)

9. The Panel recommends that research capacity in the social sciences at IITA be strengthened, through two actions:
- appointing an eminent agricultural economist to provide leadership and cohesion to the socio-economic research activities; and
 - ensuring representation of a senior economist on the Research Programme and Executive Committee (RPEC).

Geo-Spatial Analysis and Crop Systems Modelling (Section 3.6)

10. The Panel recommends greater emphasis on the development of geo-spatial analysis capabilities within IITA, co-ordinated with other ongoing programmes in the CGIAR System and with appropriate ARIs.

Research Support (Section 3.7)

11. The Panel recommends that the Centre develop a specific strategy on information dissemination and training, particularly emphasizing mid-career scientist development for researchers from national programmes, even at the expense of some postgraduate training.
12. The Panel recommends that IITA act now to fully implement its new IPR policy, namely:
- ensure that it has freedom to operate (FTO) in its present operations;
 - put in place an infrastructure to ensure that all future IP issues be monitored and databased;
 - ensure that IITA's IP policies effectively cover its designated germplasm, breeding products, publications, databases, trademarks and proprietary technologies; and
 - periodically review the IPR policy in the light of evolving international regulations and conventions.

Private Sector (Section 4.5)

13. The Panel recommends that IITA work more closely with IFDC, IFPRI and other international partners to achieve a better understanding of constraints to the adoption and performance of its improved varieties, with particular consideration given to the agricultural input sector in Nigeria and other countries.

Board of Trustees (Section 5.1)

14. The Panel recommends that the Board carry out a programme of Board reform that includes, in particular:
- returning to two meetings a year of the full Board;
 - reducing the number of members on the Board of Trustees, including the number of host country members;
 - defining the term of office of the Board Chair;

- reducing the time taken at Board meetings for formal execution of its responsibilities;
- establishing, documenting, and committing to "best practice" procedures for the Board and its committees;
- providing a budget for the Board Chair; and
- commissioning a CCER on Board governance approximately one year after the new DG has taken up his or her appointment.

Human Resources (Section 5.4)

15. The Panel recommends that a single manager oversee the human resource function, reporting to the Director of the CSD, and secondly, that there is a greater degree of flexibility in its NRS scientist policies to ensure consistency between the administrative and research staff and among the CGIAR Centres operating at one station.

Finance (Section 5.5)

16. The Panel recommends that the following steps be taken with regard to financial management:
 - putting in place an effective internal audit function;
 - a comprehensive framework for the installation of the Oracle-based MIS/FIS be put in place;
 - consideration be given to engaging an overseas development officer; and
 - adoption and rigorous implementation of an overhead charge policy.
17. The Panel recommends that the status and importance of the position of the Head of the External Liaison Office be upgraded, but not to DDG level.