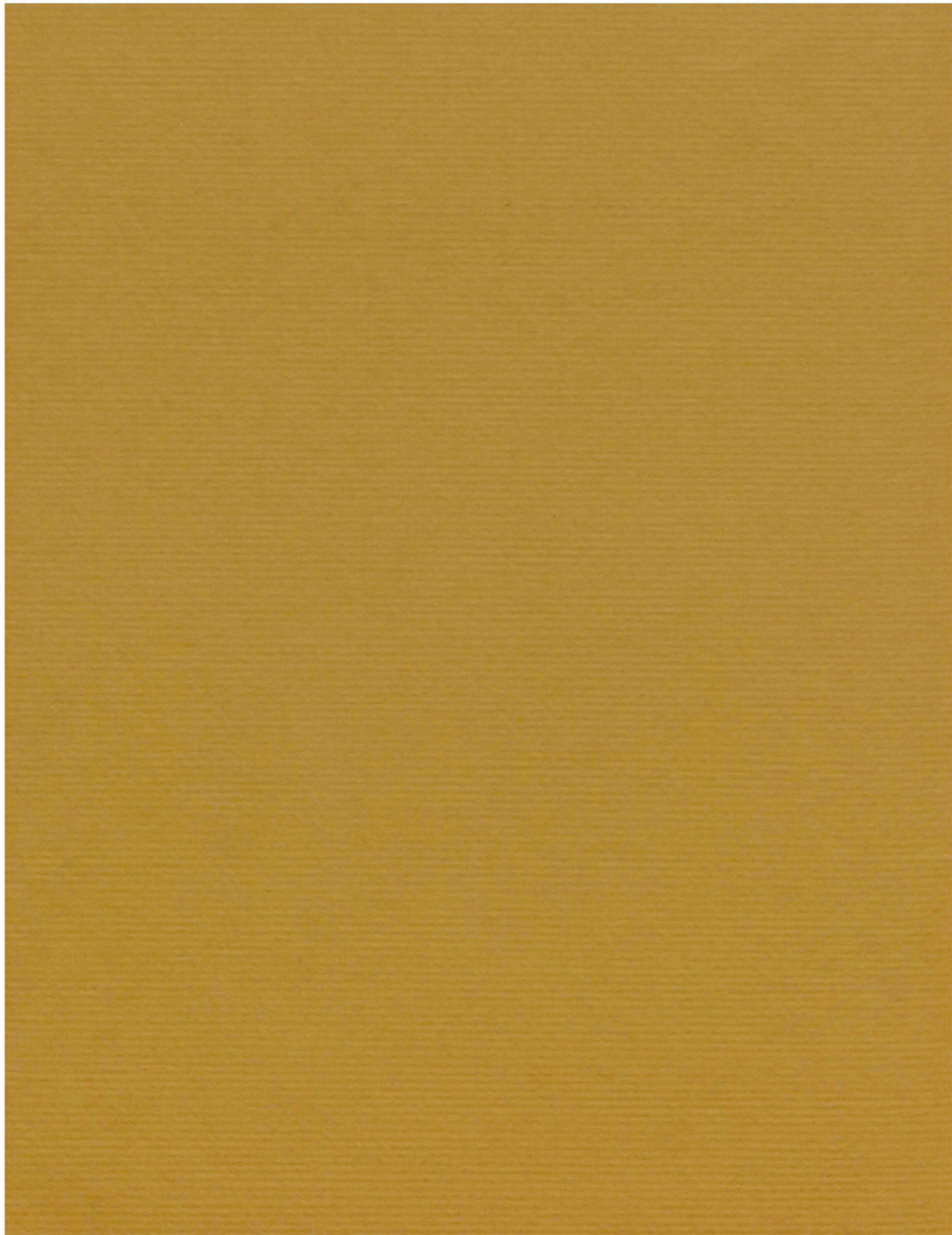


**Evolution of the Program
of the**

**International Institute of
Tropical Agriculture**

1967 — 1980





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Foreword

AN institute such as International Institute of Tropical Agriculture is often looked at and appraised at a particular point in time. I thought it useful at the time of completion of my assignment as Director General to review the record of the evolution of IITA from its original planning stage through to the present. I have not attempted to make any interpretation of issues but only to record them as I have extracted them from the various documents at my disposal.

I believe the record illustrates the work of an active and concerned Board of Trustees and an excellent staff. While some Board members are quoted and others are not, this is the way the record reads. From experience, I know that all the Board members have actively participated.

This record of the Evolution of the Program of IITA will not only serve as a historic document but will provide new staff members with a sense of the purpose for which the Institute was established and the vision of the founders and the thoughtfulness with which changes have been made.

I wish to recognize the excellent assistance given me by Dr. Sheo J. Pandey in the preparation of this document. His review and summaries of a wide range of documents have made it possible for me to complete this report in a timely manner.

William K. Gamble
Director General
30 April, 1980

Contents

Foreword	
Rationale for the establishment of the Institute	1
Initial Program Concepts	3
Factors in the sharpening of Focus - How the mandate evolved	8
Appendix A — Conclusions and Recommendations of the TAC Quinquennial Review Mission	21
Appendix B — List of Board Members from 1967 — 1979	26

Rationale for the establishment of the Institute

THE people of most developing nations live in the tropical zone. This zone is unique in its resources — it is the largest in the world in terms of potentially arable land area, human population, fresh water resources and available sunshine - suggesting its great potential for food production. Yet today, food production in the tropics is lagging far behind the rapid gains in population - and a majority of the people who live there are hungry. Most of these people are small farmers subsisting on less than 2 ha of cultivated land, hidden behind a poverty curtain in primitive villages, forgotten by the urban elite and the policy makers.

Early in the sixties, the Ford Foundation and The Rockefeller Foundation recognized the urgent need to increase food production in the developing countries of the tropics, to bridge their widening food supply-demand imbalance. It was realized that only infusions of new and strikingly better technologies of production, generated from research, will transform traditional to modern agriculture and tap the food potentials of the tropics. With this aim, they initiated the establishment of international centers of excellence in agricultural research for a few staple food crops. The first four international institutes,¹ including IITA, were supported in the beginning by the two foundations.

1. Subsequent institutes have been established under a new funding arrangement, which was established in 1971 with the formation of the Consultative Group on International Agricultural Research (CGIAR) — a group of donor countries, development banks, foundations and agencies. The CGIAR now also incorporates the initial four institutes founded by the two foundations.

Encouraged by the early results from International Rice Research Institute (IRRI) in the Philippines and International Maize and Wheat Improvement Center (CIMMYT) in Mexico, the Foundations started to look at the unique problems of tropical African agriculture of the lowland humid tropics, which continue to be the most complex and challenging among those encountered by the people living anywhere. Notable among these are:

- Millions of small farmers practicing shifting cultivation and related bush fallow systems on their small farms have few resources or little access to purchased inputs.
- Most of the farmers in Africa, as in other developing countries, do not have the power or means to identify and communicate their needs to the policy makers or research systems.
- Apparently fertile soils are highly weathered and fragile — very susceptible to erosion and loss of productivity under typical intense thunderstorms.
- Low yields, particularly of food crops due to insufficient improved plant materials, are a result of modest past agricultural research often diverted to export crops.
- Lack of qualified, competent and ex-

perienced agricultural research workers because most universities in the zone are young. The physical facilities for and the environment to engage in research are often inadequate and discouraging to young scientists entering the profession.

- National economic policies have often given low priority to agricultural development, an omission that only recently, albeit belatedly, is being corrected.
- Greater part of Africa's population lives in the humid and subhumid tropics with poor intakes of dietary energy, especially protein. Protein deficiency is common, particularly in babies, growing children, pregnant women and in nursing mothers.

In 1963, following a visit to Africa and discussions with the Government of Nigeria by Dr. George Harrar, then President of The Rockefeller Foundation and Dr. F.F. Hill, then Vice President of the Ford Foundation, concrete proposals for an international agricultural research center in Africa were drawn by the Foundations in cooperation with the Government of Nigeria. By 1965, discussions with the Government of Nigeria had progressed to the point where a tentative decision to proceed was taken. A site for an institute at Ibadan was selected and in December 1966, the Ford Foundation allocated \$5 million for initial planning and construction cost of Phase I.

The Federal Government of Nigeria started the land acquisition procedure in December, 1965 and approximately 1,000 ha, a short distance from the University of Ibadan, were acquired and provided for the use of IITA. The Federal Government agreed to compensate the approximately 3,000 villagers living in 33

villages in the area allocated to IITA for their land, buildings and crops. The amount paid so far has added up to more than ~~N~~2.25 million (\$2.25 million). The last of the residents on the land moved before 15 April, 1970. Most of the villagers were resettled in a new village named "Ibadan Parapo" adjacent to the Institute with a primary school, market and other facilities.

The Institute was formally established as an autonomous, non-profit corporation on 24 July, 1967 with the publication of Decree No.32 of the Federal Republic of Nigeria. Formal organization of IITA was achieved at the first meeting of the Institute's Board of Trustees on 11 July, 1968, in Ibadan. The first director-designate, Dr. W.M. Myers, left in January, 1967 to become Vice President of The Rockefeller Foundation. The second director-designate, Dr. H.R. Albrecht joined in February, 1968, and continued until his retirement in August, 1975. The third Director General, Dr. W.K. Gamble, was appointed for a 5 year-term starting 1 September, 1975. The members of the Board of Trustees of the Institute are noted in Appendix B.

Initial Program Concepts

IT is worthwhile to review the historical growth of the Institute to understand:—

- What IITA's role is as an international institute,
- How the Institute works toward those goals,
- How the Institute keeps abreast of changes that need to be made in its objectives, and
- How the Institute perceives its relationships with national programs and with other international institutes.

Objectives

The initial charge to IITA by its Board of Trustees was, "The Institute will concern itself with the improvement of food crops of the tropics, both as to quantity and quality" (Board of Trustees, July 1968). The objectives of the Institute's research, consistent with this charge, were to focus primarily on problems of improving food crop production in the humid tropics and on the soil and crop management requirements for developing a stable, permanent, and productive agriculture in which the food crops occupy a central position.

The early ideas tended to organize the Institute's research in several departments such as:

- the plant sciences,
- agronomy and soil science,
- plant protection,

- biochemistry,
- animal sciences,
- agricultural engineering, and
- economics and social science.

Approach to research

The record of discussions in early years, 1969 and 1970, indicates the evolution of thinking behind the long-term plans for the Institute.

It was felt that despite research efforts to date, no system of crop production has yet been developed which is a satisfactory replacement for bush-fallow or shifting cultivation. Yet a solution to this problem must be found if the potential agricultural abundance of the humid tropics is to be unlocked. Speaking at the April 1969 meeting of the Research Committee of the Institute, Dr. F.F. Hill asked "How is the move made from bush fallow to a system capable of producing more food for more people? It seems that the whole business of management is still the key question ... IITA should not launch a bits-and-pieces approach to research but should place emphasis upon the whole ecological system."

Dr. Bunting said "When the IITA program was first talked about, much was said about food crops. Now there is more thought given to systems." He remarked that "It should be held in mind what the central intellectual problem is — what is the most effective way in which research on agricultural production in the tropical environment can be exploited, what

are the limitations, and how can systems be made more productive."

Dr. Albrecht in his response stressed that he has "always felt that IITA research should be interdisciplinary. If IITA must limit its efforts, it should restrict the number of crops rather than the number of disciplines." *He pointed out that the other institutes haven't done much on farming systems — they haven't had to. IITA may find that its research might not yield results as quickly as some research at the other institutes (Italics added).*

Following this important meeting, we can note a clarity in ideas and plans about the approach to pursue the Institute's objectives.

Dr. W.M. Myers in his presentation to the Development Assistance Committee of the Organization of Economic Cooperation and Development (OECD) in Paris in May, 1969 said, "IITA will seek to accomplish its purposes through sharply focused production-orientated research on major problems that impede progress in increasing food production in the tropics; training programs for research and production specialists; fostering development of networks of cooperative research programs involving scientists at regional, national and local research institutions; providing assistance in the development of national research, extension and production programs, maintaining germplasm banks of important tropical food crops; and maintaining a library, documentation and information service relative to pertinent aspects of tropical agriculture.

"The research program of IITA will have two major thrusts:

- The development of cropping and soil

management systems for the tropics will make it possible to replace bush-fallow with continuous cropping.

- The development of improved production technology that will make it possible to substantially increase the yields and improve the nutritional quality of important food crops.

"The solution to the problems of soil and crop management must come from intensive multidisciplinary research involving agronomists, soil fertility specialists, soil chemists, soil physicists, soil microbiologists and soil management experts.

"Improved programs for individual food crops will be led by plant geneticists and plant breeders, but plant protection specialists, agronomists, plant physiologists and plant chemists will be important members of each team" (italics added).

Dr. F.F. Hill immediately noted the significance of commodity approach to crop improvement in Dr. Myers' paper. In a letter of 25 June, 1969, to Dr. Rodney Briggs, then IITA Associate Director, he wrote, "It strikes me that a team approach, as suggested in Bill's (Dr. Myers) paper, would help to solve the problem of focus which I think is very important. It is clear that an important factor in the success of Borlaug's work on wheat, Wellhausen's work on corn and IRRI's work on rice has been the fact that in each case a scientist zeroed in on a single crop.... Why not organize crop research at IITA on the same basis with one team working on corn, another on cowpeas, another on soybeans, and another on cassava, etc.?"

Scope of the program

As the ideas for interdisciplinary team approach to research evolved, the Board of Trustees took keen interest in seeing that the scope of the Institute's work was also properly defined. The report of the Research Committee of the Board of Trustees — 18 April, 1970 (Minutes of the Dedication Meeting of the Board of Trustees April 1970), first defined the scope of the responsibilities of the Institute as follows: "The bio-geographical scope of the responsibilities of the Institute was defined as including those *regions* of the earth which lie *between the northern and southern desert belt with particular reference to those parts which are lower than 2,000 feet above sea level and in which precipitation exceeds evaporation for 6 or more months of the year ...* The institute is, therefore, *not* a specifically Nigerian, West African or even African institution."

Priorities

A historical point, and at the same time an issue, is the matter of *priorities*. Priorities are interrelated with the *mandate* and in a research institute take on a historical perspective. The Board at the same meeting (1970) further suggested to develop two approaches: (1) research which will pay off quickly, and (2) the long-range program.

Hence priorities were set under three categories:

Short-term: Improvement in yield and nutritional quality of maize and rice, particularly of upland rice.

Medium-term: To breed and to learn how to

grow and protect improved varieties of grain legumes (especially cowpea, soybean and perhaps *Phaseolus* beans), to understand the reasons for cassava's superior caloric yield per unit of land and time, especially on poor soils, and to produce a new fertilizer responsive plant type in sweet potato.

Long-term: To develop systems of farming which optimize the return of economic farm products per unit of land per year.

Cooperation with other institutes

It was considered quite early to have close cooperation with IRRI in rice, with CIMMYT in maize and with CIAT on cassava and grain legume research. Additionally, cooperation with IRAT, INEAC and the then proposed WARDA was being explored in 1970. A memorandum of cooperation between the University of Ibadan and IITA had been exchanged by April, 1970.

Physical facilities

It was planned early to build a well-designed self-sufficient physical plant including adequate and well-equipped facilities for laboratory, library and information center, screen-houses, and experimental farm with an irrigation reservoir, farm service building, repair workshop, dormitories and residential area to provide the physical and mental environment conducive to research and training.

Training

The significant value of training in making long-lasting contributions to national research and production programs was noted in the first meeting of the Board (July, 1968), "Principally this is a research center, but training services which can be provided, and upon which a good deal of research will be built, will become a very significant part of IITA activities. It is hoped that *through IITA, there will pass many who will make their careers at other institutions throughout the tropical world.*" (Italics added)

Staff

The planners were keen to attract competent and well motivated staff — international in character.

The central theme behind all these efforts was, as Dr. F.F. Hill indicated, to build not only an agricultural institute but an institute of quality in management so as to set a standard in Africa to underline the importance of agriculture in an African economy.

Early construction

The construction program began in October, 1968, and the first building completed was the Threshing and Crop Drying Building which was occupied by IITA in June, 1970. Firm agreements for additional construction for the following 3 years had been made in 1969.

During 1968-70, as staff was being assembled, IITA's administrative office operated from downtown Ibadan, the scientific staff was located at a science center in Bodija and the Engineering Complex at the Site. In spite of

several delays in arrival of shipments and due to shortage of steel and cement during the Nigerian civil war partial occupation of some administrative and later scientific work was begun on site in 1969/1970. The Dedication Ceremony of the Institute was performed at site by Nigeria's Head of State on 20 April, 1970.

Early research

The first observational experimental plantings were established in the "Riverside" Plots in April, 1969 and enlarged and again planted in September, 1970. These plots were located in an area which was inundated by water when the reservoir dam was completed prior to the 1970 rain season. Most experimental planting during 1969 and 1970 were observational in nature. All were placed on newly cleared land — without adequate staff and research facilities.

Following the Board of Trustees' approval of the scope of research program on 19 April 1970, the Institute's research program was functionally organized into two main activities — cropping and soil management systems, and selected crops.

In September, 1970 the Research Committee of the Board noted that between April and September, 1970 the professional staff of 17 scientists "... have conducted an impressively large volume of research in the field..... Most of them are young Their achievement in the past five months is impressive by any standards, particularly as only one building, the Crop Threshing and Drying Building, has come into use — though others are well advanced." The Research Committee, Professor Bunting was the Chairman, remarked, "The Trustees will no doubt wish to express their appreciation of what has been done, and

meantime the Research Committee can report with confidence that the show is on the road.

After eight long years of ceaseless efforts, often interrupted by insurmountable obstacles, including the civil war in Nigeria, Dr. F.F. Hill saw his vision of the Institute taking shape. Nevertheless, he looked into the future. At the September, 1970 Board meeting, he expressed his interest in how to 'zero in' on the problems in the research areas. He said he was, "... very impressed with the presentations made to the research committee, and ..." The scientists we have know what the problems are." He went on, "The most important aspect of any research is that there must be the *feeling among staff of contributing to the end result*. Dollars aren't going to solve anything, and buildings won't solve anything, but the scientists *themselves, by staff cooperation, are the ones that will bring the results desired.*" (Italics added).

Factors in the sharpening of Focus - How the mandate evolved

T^{HE} basic program of the Institute has remained constant but from the early program concepts, the focus on research has been sharpened and adjusted as needed to meet new challenges — the mandate evolves.

Attempts to sharpen focus

Three factors significantly contributed to IITA's relevance to problem areas.

Institut de Recherches Agronomiques Tropicales et des Cultures Vivrières (IRAT)/Ford Foundation/IITA Seminars

One of the first things IITA undertook was a series of seminars in cooperation with IRAT and the Ford Foundation to determine the state of knowledge on the major research with which IITA has to be concerned. Twelve seminars were held, each dealing with a specific topic, which brought together the agricultural leaders from the francophone and anglophone regions of Africa as well as the most outstanding experts on each subject that could be attracted.

The seminars were initiated in January, 1970, and concluded in July, 1971. The papers presented at the seminar were later edited by C.L.A. Leaky and J.B. Wills and published in a book entitled *Food Crops of the Lowland Tropics*, which was widely distributed.

The seminars intended to identify the status of agricultural research underway in West African countries, to determine where the gaps might be and to establish a professional and working relationship among agricultural scientists in the region.

The seminars proved very valuable to IITA scientists because they not only acquainted the staff with programs underway in tropical countries but also with the scientists with whom they expected to work cooperatively later. The series underscored some of the major gaps in research areas of IITA's concern and assisted its scientists in sharpening the Institute's research focus.

Among the major gaps in agricultural research in West Africa highlighted through the seminar series were such areas as economic and social sciences, maintenance of germplasm and interdisciplinary approaches to problem solving. Production systems research was indicated as one exceptionally high priority. It was also noted that in the region, there had been far too little research designed to improve the quality of crops from nutritional standpoint. Training became a topic at each seminar, being generally recognized that all nations of West Africa need to enlarge their pools of skilled manpower in the agricultural sciences.

The Board of Trustees and IITA staff continued to discuss the best means to pursue the tasks set forth in the Institute's mandate. For

example, at the September 1971 meeting the Board decided that, "The work with forage species could lead to some evaluation of their nutritional values, but extensive *investigation involving animals is not planned.*" (italics added). It might not be out of place to mention here that the Board noted that an international research institute for livestock in Africa was being planned.

External executive review panels

Another factor which appears to have played a significant role in sharpening the focus was the role of External Research Review Panels.

The system of annual evaluation of the Institute's research by an external review panel was initiated in 1971 and continued till 1973. In 1974, annual In-house Reviews were established. The nature of external reviews at international agricultural research institutes was altered in 1974 as a result of the Bell Committee Report of 1973 to CGIAR. In conformance, IITA agreed to arrange for an external review of the four programs each year in rotation and then a 5-year overall review. The first TAC (Technical Advisory Committee) of CGIAR quinquennial review mission visited IITA during October-November, 1977.

Going back to the historical developments in the evolution of IITA's mandate in the efforts to sharpen its research focus, we see that the first IITA Review Panel in its report of 16 April, 1971, noted that the location of the Institute falls within the humid tropics and defined by the Board of Trustees in April, 1970, but it is situated in the transitional zone between the low-humid forest and the savanna. The report states, "Considering the short distance from

the site to these other ecological zones, the Review Panel suggests that the Institute take advantage of its location to extend the focus of its program to include both low-humid forest and tropical savannas. Another reason for modification in the ecological orientation of the Institute's program is the complementary economic relationships between the agricultural systems of the savanna and the forest zones in Africa." The Executive Committee indicated general agreement for widening the scope of the Institute's program but deferred action for the full Board meeting in September, 1971.

At its meeting in September, 1971, the Board agreed that IITA has a first mandate to serve the humid tropics, but in consideration of the broader responsibilities the Institute would be expected to assume in the African community, the following statement on the scope IITA was approved, "Within the system of cooperating international agricultural research institutes and provided funds are available, IITA will:

- take responsibility, in respect of the humid-tropical region as hitherto defined, for research on agricultural systems on all continents (as in the past),
- accept worldwide responsibilities covering all climatic regions for research on cowpeas, soybeans, pigeon peas and lima beans among the grain legumes, and on yams, *Colocasia*, *Xanthosoma* (taro and cocoyam) and sweet potatoes among the root and tuber crops,
- accept appropriate responsibilities, if asked to do so, within the African continent, for other crops (particularly those of interest in the humid tropics) for which

other institutes have worldwide responsibility, such as maize, rice and cassava, and

- conduct or take responsibility for such research on other crops or topics as the Board may approve."

The minutes of the Board meeting in June, 1972, note as follows. "Dr. Sawadogo, in referring to the Research Committee Report, commented that the activities of the Institute may be too limited geographically. Obviously, the results obtained can also be used in other countries in Africa. He encouraged the development of more cooperative efforts with other countries in Africa where there are many areas in the humid tropics where there is little or no research underway. IITA ought to cover all the zones in Africa which are not being attended to by other Institutes. He stressed the importance to cooperating countries of the training aspect of IITA."

The minutes of the same meeting further note, "Dr. Sawadogo expressed the hope that plantain would be added to the list of research commodities at IITA. This suggestion met with general approval for consideration for the future and the staff was asked to make preliminary feasibility investigations."

In subsequent meetings, there have been no changes in the general responsibility of the Institute, except for the action of the Board at its May, 1975, meeting to enter into an agreement with the International Board of Plant Genetic Resources for grain legume crop and root and tuber crop germplasm collection and preservation at IITA.

Let us now look at what was being stated about how to organize and conduct research

at IITA. In September, 1970, the Program and Budget Presentation, states:

"The following general principles shall apply to the organization of research at the International Institute of Tropical Agriculture:

- The organizational plan must reflect those areas of research priority clearly identified by the Board of Trustees.
- That an interdisciplinary approach to research can be applied whenever possible.
- That such research organization shall be functional and program-oriented, and should not develop additional channels or echelons of administration.
- That workable budgets can be established and staff time can be evaluated.
- That the scientific staff have continuous opportunity to review, discuss, and critique the on-going research of the Institute."

With the general principles in view, the following organizational plan has been developed for IITA which meets the stated principles:

1. For the purposes of meeting our primary research thrust a "Program" concept of research organization is established. Each identified program will have an appointed "Program" coordinator who shall provide the necessary coordination and liaison of the program and would develop and document all program plans.

A. The following programs will be included in the program organization:

1. Cropping Systems
2. Maize Improvement Program
3. Rice Improvement Program
4. Grain Legume Improvement Program
5. Root & Tuber Crop Improvement Program.

- B. For the purpose of identifying those segments which make up an interdisciplinary research effort, "project proposals" will be developed. The project proposals, however, will be submitted to the appropriate program leader where by "group committee" action, they can be reviewed by all workers within the program. Such review and evaluation within a program concept will assist in the establishment of priority within the program and will ensure that gaps in research do not exist.
- C. The Research Committee of the staff shall review program proposals with a view toward Institute-wide priorities.
- D. Budget will be assigned to each of the five main program areas.
- E. Other programs may be established within the major thrust such as on specific grain legumes or root and tuber crops or other program areas."

It is interesting that the principles and organization set forth as just noted basically still apply. There have been modest changes of consolidation, e.g., maize and rice into one cereals program and an expansion on research

support areas but nothing of really major change in organization or review procedures. The Research and Training Committee of the Institute meets monthly and is considered the most important committee in the Institute. It deals with a range of issues from trivial to the most important recommendations on priorities.

Discussions within the Institute (Staff and Trustees)

Dr. John L. Nickel, one-time Associate Director, presented a proposal to the Research Committee of the Board of Trustees at their 13-14 September, 1971, meeting suggesting a reorganization of IITA's Research Program. He felt that the five main program thrusts established in September, 1970, namely, Cropping Systems, Maize Improvement Program, Rice Improvement Program, Grain Legume Improvement and Root and Tuber Crop Improvement Program should be reorganized into four programs for greater efficiency and reduced administrative units. The proposed structure listed four research programs: Farming Systems, Cereal Improvement, Grain Legume Improvement, Root, Tuber and Vegetable Improvement and five research support units, Biometrics, Communications, Farm, Library and Training. The proposed reorganization was approved by the Board on 16 September, 1971.

Subsequently with the Board's concurrence, plantain was added to the list of research commodities in 1972 and the staff was asked to make preliminary feasibility investigations.

Let us now turn to 1973, which historically was the next important year in the Institute and to quote from the Program Budget Presentation for that year:

"The IITA Research and Training Program - Scope and Focus

"A clearly defined program is now emerging from the broad mandate originally given to the Institute. The stated purpose of IITA is to develop advanced technology that will enable farmers of the humid tropics to increase the quantity and quality of food production, and the original large scope of activities envisaged for the Institute provided a base from which a more sharply focused program could evolve. A thorough appraisal by the Institute's committees and the Board of Trustees and discussions with colleagues outside the Institute regarding areas in which priorities are highest and the Institute's potential for contribution is greatest have resulted in two major areas: Farming Systems and Crop Improvement.

"Farming Systems

"The Board of Trustees of IITA has asked the Institute to accept international responsibility for finding solutions of the problems related to replacing shifting cultivation with more productive forms of land utilization in the lowland humid tropics.

"When tropical rain forests are cleared and planted to annual crops over an extended period of time, the following problems arise:

- Depletion of soil fertility and organic matter.
- Soil erosion
- Deterioration of physical properties of the soil.
- Uncontrolled weed growth.

- Increased pest and disease problems.

"In some regions farmers cultivate a piece of land until it is virtually destroyed and the topsoil has been lost before clearing and moving on to another patch. In other regions (e.g. West Africa) farmers have over the centuries developed intricate systems of rotation over large areas which maintain the long-term usefulness of the land. In this system, often referred to as 'shifting cultivation,' the forest is cut and burned, crops are grown on the land for 1 to 3 years, depending on fertility of the soil, and then the forest is allowed to regenerate (bush fallow) for 4 to 25 years when another cycle is started. Shifting cultivation results in very low productivity and inefficient use of land, water and manpower resources. It will, therefore, not support the growing populations anticipated in tropical regions. In order to produce sufficient food and a higher standard of living for increasing numbers of people more intensive land use is necessary, but this would bring about the problems listed above. The Farming Systems Program of IITA is dedicated to the solution of these and related problems through integrated, multi-disciplinary research on the economic, biological and physical factors that form the complex management and resource combinations of agricultural production units.

"Crop Improvement

"The purpose of crop improvement programs is to develop combinations of improved technology that will make it possible for farmers to substantially improve the yields of a few crops selected for their importance in the humid tropics. Original plans for the Institute

included work on animals, forages and vegetable crops, but these are not included in current plans for intensive crop improvement research in order to focus activities on a limited number of high-priority crops. The role of animals, forages, vegetables and tree crops will not be neglected as part of the farming systems research. However, it is anticipated that the advanced technology for these commodities will come from other sources rather than being developed at IITA. This will permit concentration on three groups of food crops — cereals, grain legumes and roots and tubers.

*Having decided to concentrate on these three groups of crops, it is further necessary to limit intensive research to one or at the most a few species in each of these commodity groups. The Board of Trustees of IITA has approved:

International - type* activities for three crops-

Cowpeas
Yams
Sweet Potatoes

Regional - type activities for five crops -

Rice	- backstopped by IIRI
Maize	- backstopped by CIMMYT
Pigeon peas	- backstopped by ICRISAT
Soybean (Tropical)	- backstopped by existing national centers of strength
Cassava	- backstopped by CIAT

* "International activities" are defined as including responsibility for maintenance of world germplasm; in-depth studies on physiology, biochemistry and genetics; international training; workshops and symposia.

Exploratory studies of several other crops with a view to determining their possible usefulness in different parts of the humid tropics. Among the grain legumes, these include the yam bean, jack bean, winged bean and lima bean for possible use in low, highly humid areas. Among root and tuber crops, potatoes and cocoyams have been approved for exploratory studies. The extent to which intensive research ultimately carried on with respect to crops in the exploratory category will depend upon the results of the studies that are made, work being carried on at other national and international research centers and, of course, the availability of additional funds to the extent, if any, that additional funds are required."

Present Mandate

To close the history of priorities and the mandate, we move to April, 1977, when the revised present mandate, reproduced below in full, was approved by the Board of Trustees.

"At the meeting of the Board of Trustees at IITA in April 1976, the mandate of the Institute was reviewed and modified but remained under study throughout 1976. It was approved by the Board of Trustees at its Tenth Annual Meeting in April 1977. The modified mandate is as follows:

"Within the system of cooperating international agricultural research institutes and associated with the Consultative Group on International Agricultural Research (CGIAR) and provided funds are available, IITA will:

- (a) Conduct studies of and research on systems in the humid and subhumid tropical zones* in order to identify viable alternatives to shifting cultivation which will maintain the productivity of the land under continuous cultivation, with particular reference to food crops;
- (b) Accept worldwide responsibility, covering all climatic zones, for research directed to the improvement of cowpeas, yams and sweet potatoes;
- (c) Conduct studies and research, in the humid and subhumid regions of Africa, for the improvement of crops such as maize, rice, cassava, pigeon pea and soybean, for which other international institutes and organizations have special responsibility, cooperating in whatever ways be appropriate with those institutes and organizations;
- (d) Conduct research directed to the improvement of other crops which are, or may become important in the farming systems of the humid and subhumid zones, such as lima bean, winged bean and other grain legumes, cocoyam, taro and other aroids, and plantain and other forms of *Musa*

which contribute substantially to the diets of the people of the zones;

- (e) To make available the results of studies and research carried out in accordance with paragraphs (a) to (d) above to nations and institutions which wish to use them through co-operation with regional and national programs;
- (f) Take responsibility in collaboration with the International Board for Plant Genetic Resources for the exploration, collection, conservation, documentation and evaluation of genetic materials of food legumes, root and tuber crops and rice in the humid and subhumid regions of Africa in order to make these materials available for use by plant breeders and scholars;
- (g) Respond to requests from appropriate authorities for cooperation with regional and national programs in the humid and subhumid regions of Africa concerned with the improvement of farming systems and crops in respect of which IITA has appropriate competence;
- (h) Respond, in association where appropriate with other international institutes and organizations particularly those associated with the CGIAR, to requests from appropriate authorities for cooperation with regional programs, in countries other than Africa, concerned with the improvement of farming systems and of crops in respect of which IITA has appropriate competence;

* The humid and subhumid tropical zone is taken to include those parts of the earth, in all continents, which lie between the Tropics of Cancer and Capricorn in which, on average, precipitation exceeds evaporation for five or more months in the year. In West Africa, it thus includes the forest (Guinean) zone and part of the Guinea savanna zone, but not the Sudan savanna, the Sudanian or the Sahelian zones.

- (i) Respond, insofar as it is competent to do so and in cooperation with other institutions where appropriate, to requests from governments in the humid and subhumid regions of Africa for cooperation in developing the agricultural knowledge systems of their countries, including their agricultural research capabilities;
- (j) To provide or organize training, conferences and workshops on topics relevant to the tasks outlined in paragraphs (a) to (i) above with the particular purpose to increase the number of well qualified persons to carry out effective research and development on crops and farming systems;
- (k) Conduct, or take responsibility for, such research or studies on other crops or topics and for such activities concerned with the application of results of research to rural, agricultural and national development as the Board of Trustees may approve."

Rationale for the present mandate

The Institute's new mandate as approved by the Board of Trustees is quite clear and self-explanatory. A great deal of thought and study went into this statement of the mandate — it evolved out of the historical experience of the Institute, benefited from inputs from staff, and the Board itself generally agreed upon a first draft and then waited a full year to assure time for reflection and to interpret it in terms of needs, competence to carry it out, and to be in conformity with the system of international institutes.

The case to make IITA responsible for an enlarged and comprehensive area was best put by Dr. F.F. Hill of the Ford Foundation in an inter-office memorandum of 10 June, 1976. The relevant portion makes interesting reading and is reproduced below.

"Geographical Expansion

"A statement entitled *The Purpose of IITA* drafted by IITA management was presented to the Board for consideration at its April, 1976, meeting. It is recommended that IITA's geographical mandate be enlarged to include 'the humid and subhumid tropical zones' defined to include all areas 'between the Tropics of Cancer and Capricorn in which on the average precipitation exceeds evaporation for 5 months of the year'. IITA's mandate has so far been limited to the 'humid tropics'.

"In Africa the effect of the proposed change would be to make IITA's 'northern boundary' roughly follow the 10° N. parallel of latitude. This would include a substantial area of 'subhumid' savanna. As I understand it (I have not checked), the suggested change in IITA's 'northern boundary' would make it correspond with ICRISAT's 'southern boundary' of the semi-arid tropics.

"Some members of the IITA Board (e.g. McKelvey of RF) have believed from the outset that IITA's 'humid tropics' mandate was too limiting; that at least what the *Purpose of IITA* paper refers to as the 'subhumid' savanna should have been included. They see this as part of the 'south of Sahara' crop-growing region in which large numbers of people are located and in which maize, for example, is a common crop. Different crops

and farming systems phase into each other as annual precipitation and patterns of rainfall change. They see disadvantages rather than advantages from a research point of view in attempting to serve the subhumid savanna by international institutions other than IITA. I think it is fair to say that most of the scientists at IITA working on cereals and food legumes feel the same way.

"Historically, emphasis in the IITA mandate was placed on the humid tropics because of concern with the problem of shifting agriculture. It was believed a major long-term problem confronting African agriculture was that of developing production technology for other than tree crops. This would make it possible to materially shorten or eliminate bush fallow in the production cycle as population in the humid tropics increased. Otherwise as the period of bush fallow is shortened, loss of soil fertility and erosion might drastically reduce the human carrying capacity of these vast areas which now support large and increasing populations (although frequently on poor diets). Scientists familiar with the humid tropics generally agreed that the development of sustainable systems of continuous cropping would be a long-term undertaking because plant/soil/water relationships in these regions were so imperfectly understood.

"From the outset, it was assumed that IITA would work on the improvement of food crop production technology; on corn and rice among the cereals and on selected food legumes, roots and tubers. But, geographic limitation to the humid tropics was in the original mandate and has so far been retained.

"It seems to me there are two major considerations in thinking about the possible geo-

graphical expansion of IITA's mandate to include the subhumid part of the African savanna. One has to do with the development of improved production technology for this area, the other with increasing the agricultural research capabilities within the region. In my opinion, the latter is the more important of the two.

"Africa consists for the most part of a large number of relatively small states in the early stages of modernization of food production, they have limited trained manpower, physical facilities and research management capability. There is no equivalent of Mexico or India in this region. Although countries such as Indonesia and Bolivia are extremely short of scientific manpower, there are more countries in Africa south of the Sahara in this category than in Asia or Latin America. There is a big job of institutional development with respect to agricultural research ahead in this region of Africa.

"Not only is nationalism currently strong in Africa south of the Sahara but so is regionalism. If Africans who have served or are now serving on the IITA Board reflect African thinking and feeling, IITA is regarded as primarily a regional institution whose job it is to help African countries get on with the job of modernizing African food production. They are looking for help in developing their national research capabilities as well as in developing improved production technology. This constitutes both an opportunity and a challenge to IITA. The opportunity is there to help develop badly needed institutions in a region of major importance. The challenge is to find ways to do this that will not result in IITA getting bogged down in the nuts and bolts of insti-

tutional development to the neglect of agricultural research, which also is of critical importance.

"My personal estimate is that the Gamble administration is interested in and competent to do both jobs. By enlarging IITA's geographical mandate, the research capability of African states will be increased.

"These states would have one international center with which to deal; it would help them in both research and training. This is particularly important in the case of francophone countries because of the language barrier. It would, of course, be up to IITA to work out arrangements with crop-oriented centers such as IRRI and CIMMYT to make sure that full and effective use is made of their findings, materials and knowledge. An agreement among IRRI, IITA and WARDA has already been signed and I know that Gamble is interested in working out an agreement with CIMMYT.

"The attitude of at least some Africans with respect to IITA is illustrated by the comment of a professor from Ahmadu Bello University who I met. He asked me why IITA limited its activities to the humid regions of Africa, and went on to remark, 'that I have always considered the savanna as part of Africa too.'"

TAC Quinquennial Review Mission and IITA Mandate

A 12-member TAC Quinquennial Review Mission to IITA headed by Prof. Guy Camus spent different times between May-November, 1977, in visiting the IITA co-

operative programs in Tanzania, Zaire, Nigeria, Liberia and Sierra Leone; reviewing the program goals, accomplishments and plans for the future; conferring with groups of scientists and the management staff on specific issues; and visiting the heavy-rain-fall substation in Onne. The panel presented the highlights of its draft report to the senior IITA staff on 4 November, 1977, and later finalized the draft report in March, 1978, which was presented at the 19th meeting of the TAC in Nairobi, 6-13 June, 1978. The conclusions and recommendations of the TAC Quinquennial Review Mission are attached as Appendix A.

Some members of the panel visited the Farming Systems section of the other International Agricultural Research Centers (IARCs) in a Stripe Review of the Farming Systems Research (FSR) and prepared a separate report, which was endorsed after discussions in a Farming Systems Workshop in Nairobi 29-31 May 1978. The participants at the FSR workshop represented a wide range of FSR workers, including representatives of all IARCs concerned and of national programs.

Both reports deal with the challenge facing IITA in conducting the tropical food crop-production-promoting research and the complexities of program organization and balance, sharpening the focus on the Institute's mandate and the need for inter-IARC collaboration.

The two reviews proved extremely profitable for IITA for an introspection of its mission and made some valuable recommendations to the continued success of IITA.

The TAC Quinquennial Review Mission was in general agreement with the mandate but underlined particularly:

- Minimizing the research on plantains, vegetables and tree crops;
- Emphasizing the Institute responsibilities to Africa for sweet potato research; and
- Maintaining the current low level of research on less important crops in GLIP (lima bean and winged bean) and in TRIP (cocoyam, taro).

The concern of the panel in avoidance of dissipation of research efforts on several crops is indisputable. The Board of Trustees and the staff in their review of the TAC report emphasized that the distinction between the exploratory and in-depth involvement of the programs in any particular crop is not entirely reflected in the man-years of time devoted to the crop. They also noted that a small investment of program time (e.g. nodulation in Asiatic soybean types by cowpea-type rhizobia) in some cases might justify a later increased involvement in a particular research. It is therefore wise that so-called exploratory or low-level research does find adequate support in order to quickly decide whether or not to escalate or drop the particular research lead. With this reservation, the Institute supported the panel's view on sharpening the focus on the mandate.

Cooperative Programs

In the evolution of the Institute, cooperative programs along with training have been viewed as the means for IITA to take the results of its program to the national and farm level. In its

early years, IITA had to develop a body of technology which it believed would provide answers to production constraints in the region it was to serve. As this body of knowledge became known, it was first necessary to test it under a wide range of ecological conditions in the tropics. With feed-back from these tests, the research was modified and more precise answers sought. When this was accomplished, IITA then sought the means to join partners with national governments to put into practice the results of the research under closely monitored conditions whereby a constant feed-back on progress and problems could be given to IITA staff. These joint programs -- cooperative programs -- do not conflict with the core activities but rather are highly complementary to the core program and are an integral part of each of the research programs of IITA.

In the early 1970, cooperative programs were established on a small scale in a few countries. Due to development of highly applicable research, the cooperative programs have increased particularly since 1976, in number, and also in distribution among the programs of IITA.

The cooperative programs of IITA are not limited to research/development collaboration with developing nations. It has also been the policy and the practice of IITA since its inception to have contractual or cooperative arrangements with institutions specialized in advanced research or for some research which requires particular expertise or equipment not available at IITA. It is the policy of the Institute to continue to seek this type of collaboration.

Cooperation among Institutes

At several points in this document, reference has been made to cooperation with other institutes within the CGIAR system. Excellent progress has been made and even greater cooperation is seen in the years ahead.

IITA led the way by posting a senior scientist with the WARDA headquarters staff to serve as a liaison officer between IITA and WARDA and to assist WARDA in its rice development work in West Africa. Similarly, IRRI has posted a scientist to IITA for increased collaboration on rice research and development in Africa and CIMMYT is in the process of posting a scientist at IITA for greater collaboration on maize research and development in Africa. IITA and ICRISAT are working together in national and regional programs in Africa and the climate is favorable for continued and expanded cooperation between these two Institutes. IITA provided office and logistic support to the International Livestock Center for Africa (ILCA) for 2 years during the stage of the establishment of its national program in Nigeria. A continued effort will be made by IITA to further cooperation among institutes.

Complimentary Units

In the evolution of the program of IITA, it is essential to note the important role played by the staff of the Physical Plant Services (PPS), the Research and the Administrative Support Units.

Without the backstopping of PPS, none of the progress of the Institute would have been possible. The commissioning of equipment, its maintenance and the assurance of essential

items of electricity, water and air-conditioning by PPS have been critical to the development of IITA. The high level of general maintenance of buildings and grounds has also provided a physical environment for work in keeping with the best international standards.

Of the Research Support Units, some were established at the initial stage of development of IITA. Among these were the Farm Management Services, the Library and Documentation Service, the Analytical Laboratory Services and the Communication and Information Services. Others, such as the Genetic Resources Unit, the Statistical Services, the Plant Growth Facilities, the Onne Station, and the Conference and Visitors Service have evolved out of program needs. Similarly in Administration, the Office of the Treasurer, Personnel, Purchasing/Mail and Records and Stores were established early on in the life of the Institute while Security, Ikeja office, Travel, International House Management, the Medical Unit and the Computing Center were developed later as the needs arose.

Each of the units is serving an important function in the programs and life of IITA.

Concluding Statement

The present program of IITA has evolved through a period of 12 years of practical experience with the wise counsel and support of an outstanding series of Boards of Trustees. (Appendix B). The Institute has attracted excellent scientists who have been dedicated to the task of problem solving and who are constantly aware of the pressing problems at the production level. The response by

leaders in agriculture throughout much of Africa and their positive seeking of cooperation with IITA is a valid testimony to the appropriateness of the program that has evolved. However, one must not be content and complacent; rather, the Institute must continue to be aware of changes required, and it must maintain the evolutionary process to keep its research program "on target."

Appendix A

Conclusions and Recommendations of the TAC Quinquennial Review Mission

Conclusions:

IITA was originally given a broad and somewhat ambitious mandate to develop improved methods and technologies in the humid tropics that would replace or improve shifting cultivation practices. To this end, the Institute has progressively defined specific objectives, formulated a research strategy and program structures which the Panel considers as basically sound and rational. The research problems addressed by the Institute are probably the broadest, most complex and challenging among those encountered by the centres and institutes in the CGIAR system. Because of the difficulty of the problems faced in shifting cultivation, progress in this type of research is necessarily slow and uneven, and, assuming success, its impact on land use in the tropics will take time. Moreover, it should be kept in mind that IITA was established at a time when the host country experienced severe difficulties, which resulted in important delays in the building of its infrastructure.

The Panel is satisfied that the scientific work at IITA is conducted with vigor and enthusiasm and the standards of research are

generally in accord with those expected of an international research institute. IITA, however, experiences difficulties in recruiting its senior and support staff and has a high rate of staff turnover. This has been sometimes disruptive to the continuity of the research.

In spite of these difficulties and problems, the Institute has made impressive advances in the improvement of some basic food crops in the tropics, particularly in cassava where lines with high yields and resistance to some of the major diseases have been produced. The Panel considers that the Institute is at the threshold of significant breakthroughs in cowpea and yam improvement, and its present work on sweet potato (in which significant achievements have been attained) and maize will provide in Africa an essential and increasing complement to other IARCs and national agencies. Some of these materials are already being tested and, in some cases, disseminated through national research and production programs. Another major achievement relates to the broad-based germplasm collections, which were assembled at IITA from Africa and other regions and provide a valuable resource for further progress in all IITA crop improvement programs.

The Institute has assembled a strong body of knowledge and experience in the very complex field of farming systems research in the humid and subhumid tropics. The *Panel commends* the comprehensive, integrated and purposeful approaches followed by the Institute in this regard, and its emphasis on the improvement of the conditions of the small farmer in Africa. Promising techniques of land management and cropping systems are being tested and demonstrated on the main site of the Institute. The farming systems team is now developing its research and testing methods and practices in other sites while continuing to study the long-term effects of its proposed farming practices and technologies on the main site.

The Panel commends IITA for its excellent and extensive program of training and for the quality of its library, documentation, publication and information services, which it provides to an increasing audience.

The Panel found that IITA has been provided with adequate physical facilities and services, which, in general, are well managed and suited for its work. The Institute, however, would face major constraints in housing and service facilities at Ibadan if it were to further expand its staff here. *The Panel approves* the policy of the Institute, which tends to limit its growth at the main site.

IITA is increasingly recognized as a center of excellence in tropical agricultural research in Africa and has responded in a valid manner to increasing requests for cooperative programs with countries in Africa. The Panel visited several of these programs and *is happy to report* that IITA is making important contributions in this regard while being mindful not to over-extend its staff and management capacities.

The Panel is satisfied that an overall balance has been achieved among the main components of the Institute's program, and this is expected to be maintained in the years to come. *It notes* the close inter-relatedness and complementarity of the program activities of the Institute and *approves* the present policy of the Board in consolidating the present structure and maintaining close cooperation among the programs. It also *supports* the efforts made and the overall balance achieved to assist the main programs by adequate disciplinary research.

Recommendations:

The Panel has made a series of recommendations on each of the programs and activities of the Institute in the preceding chapters. *It fully realizes* that these individual recommendations have to be considered by the management of the Center and its Board of Trustees in the broader context of the allocation of the resources which are expected to be made available to IITA in the years to come. *The Panel is also conscious* of the fact that several of the problems that the Institute is facing will not have immediate solutions on the basis of these recommendations and several issues require further assessment and consideration than was possible in the short time available to the Panel for their review.

IITA has reached a stage in its development which it must make some critical choices in its priorities for future progress and impact. It should ascertain, verify and consolidate the geographical validity of the experimental farming systems and tackle the second-generation problems, which have emerged from its work so far. It has been pointed out already, however, that many additional staff members for

new activities cannot be accommodated at IITA headquarters without a very substantial additional capital expenditure and would require careful consideration of the likely cost/benefit ratio. *The Panel firmly believes that priority should be given by IITA over the coming years to a range of actions aimed at consolidating and concentrating its activities. To this end, the Panel recommends that the Board continues its efforts to increase the precision of the mandate of the Institute and that the management reinforces the existing mechanisms whereby priorities can be set more clearly and utilized for formulation of plans addressed to specific goals that the Institute might expect to attain in the next 5 years.*

Among the actions that may contribute to concentration and consolidation, the Panel recommends for the next 5 years the consideration of the following measures that have been synthesized from the Panel's recommendations on various activities reviewed in the preceding chapters:

(1) Farming Systems Program

- (a) *to give priority to the validation and off-site evaluation of systems presently being developed at IITA for the subhumid zone;*
- (b) *to proceed with research in the humid zone, where feasible, in collaboration with national or regional institutes and limit work at Onne, for the time being, to system components rather than full system synthesis and testing;*
- (c) *not to undertake plant breeding within Farming Systems Pro-*

*gram and only consider work with vegetables, *Musa* spp. or tree crops if there is evidence that they are essential to the viability of the farming systems research of IITA in particular ecological zones;*

- (d) *to avoid research on animals and to limit agro-forestry activities to the present project;*
- (e) *to relocate one senior staff position made available from agricultural engineering;*
- (f) *to ensure that the discipline of agronomy is strengthened within the Institute to facilitate cooperation of crop improvement programs with Farming Systems Program;*
- (g) *to strengthen the organizational structure within Farming Systems Program by the selection of a Deputy Program Leader.*

(2) TRIP

- (a) *to maintain top priority on all aspects of cassava improvement;*
- (b) *to provide two core positions (one additional breeder and an entomologist) in the Zaire program to intensify work on the cassava mealybug and green spider mite;*
- (c) *to ensure adequate facilities and support for the genetic improvement of white yams (if necessary by internal rearrangements);*

- (d) *to continue* improvement work on sweet potato at its present level but solely for African conditions.

(3) GLIP

- (a) *to concentrate* on cowpea and soybean while keeping work on lima bean, pigeon pea and winged bean at a low level¹ without further breeding work;
- (b) *to increase* cooperation with Farming Systems Program, particularly in soil microbiology and crop management.

(4) CIP

- (a) *to maintain* top priority in CIP on research and in-country testing to solve the major constraints on African maize and rice production;
- (b) *to breed* for maximum pest, disease and stress tolerance, focussed on major ecosystems, in close cooperation with Farming Systems Program;
- (c) *to pursue* integration of IITA cereal research and training activities with other national and international institutes, especially IRRI and CIMMYT.

- (d) *to expand* IITA's competence in upland rice improvement and to encourage the posting of an experienced rice breeder from IRRI and IITA.

(5) Research Support

- (a) *to concentrate* further exploration by the germplasm unit on those African crops which are within IITA's mandate and to complete storage and documentation facilities;
- (b) *to keep* the virology unit at the proposed level of two staff positions, equipped with an electron microscope;
- (c) *to expand* statistical services for the design and analysis of field experiments by adding one senior staff member and by improving computer facilities;
- (d) *to pursue* all possible measures to alleviate present constraints on the exchange of germplasm due to quarantine regulations.

(6) Cooperative Programs

- (a) *to concentrate* on and consolidate existing cooperative programs;
- (b) *to continue* to be selective in responding to opportunities and pressures for expanded cooperative programs;
- (c) *to reinforce* IITA's research and training linkages with institutions in Africa;

1. Should the cooperation between IITA and INTSOY enable either the outposting of an INTSOY scientist or provide funds for the opening of a new position in IITA, the Panel would recommend that this position reinforce the agronomic aspect of soybean work.

- (d) *to improve consultation; joint planning and cooperation among IARCs in the development of co-operative programs in Africa.*

The Panel is aware of the problems that the above recommendations may create for the management of the Institute where they cannot be implemented immediately. *The Panel, therefore, feels it may be helpful to give the management some indication of its priorities among the recommendations that may have budgetary implications:*

- (a) The appointment of at least one core staff position in Zaire together with that of a rice breeder as indicated above for the CIP program are given *first priority* because of the potential threat that the mealybug and green spider mite problems pose to cassava production in other countries in Central Africa and because of the importance of rice program.
- (b) The Panel gives *second priority* to the second core position in Zaire and to the new position of Statistician, and *third priority* to the support staff member for the virology unit.

The Panel is confident that the management of the Institute has sufficient flexibility and opportunities in the use of its core and non-core budgets to ensure that the above recommendations do not necessarily modify the development plans indicated in its forward projections. The existing and forthcoming vacancies, the use of PDFs and the new positions already earmarked in the budgets proposed for the

next 3 years should permit desirable internal readjustments. These internal readjustments within the planned limits of the budget of IITA until 1980 should be facilitated by the policy of the Board to strengthen its commitment to cooperative and regional programs and to limit capital expenditure at Headquarters.

Finally, *the Panel wishes to express to the management of the Institute and its staff its gratitude for their close collaboration in the conduct of this Review and express the hope that its recommendations will help in ensuring the continuing support from CGIAR which this Institute fully merits.*

Appendix B

List of Board Members from 1967 — 1979

Name	Nationality	Period Served
Dr. W.M. Myers	American	1968-70
Dr. F.F. Hill	American	1968-79
Mr. Hardcastle	British	1968
Dr. D.L. Umali	Filippino	1968-72
Mr. Y.K. Lule	Ugandan	1968-72
Dr. G. Camus	French	1968-72
Dr. T.A. Lambo	Nigerian	1968-69
Dr. Bukar Shaib	Nigerian	1968-76
Dr. H.R. Albrecht	American	1968-75
Mr. B.O.E. Amon	Nigerian	1969-70
Prof. A. Hugh Bunting	British	1969-72 & 1978-79
Dr. Robert Gardiner	Ghanaian	1969-72
Dr. J. Nya Ngatchou	Cameroonian	1970-74
Dr. L.K. Opeke	Nigerian	1970-72
Dr. S.S. Peters	Canadian	1970
Dr. J.J. McKelvey, Jr.	American	1970-79
Prof. H.A. Oluwasanmi	Nigerian	1970-72
Dr. H.G. Dion	Canadian	1971-74
Dr. A. Samper	Colombian	1971-74
Dr. A. Sawadogo	Ivorian	1971-74
Dr. Ishaya S. Audu	Nigerian	1973-74
Dr. F.G.A. Fournier	French	1973-77
Dr. D.J. Greenland	British	1973-74

Dr. C.H. Obihara	Nigerian	1973-74
Dr. James T. Philips	Liberian	1973-76
Dr. B. Schweiger	German	1973-77
Dr. Thomas R. Odhiambo	Kenyan	1973-77
Dr. G. Lorougnon-Guede	Ivorian	1975-79
Dr. J.M. Menyonga	Cameroonian	1975-79
Dr. H.C. Kodilinye	Nigerian	1975
Dr. L. Marcano	Venezuelan	1975-79
Dr. L.H. Shebeski	Canadian	1975-79
Dr. W.K. Gamble	American	1976-79
Mr. D.E. Iyamabo	Nigerian	1976-79
Mr. B.S. Oloruntoba	Nigerian	1976-78
Prof. J.O.C. Ezeilo	Nigerian	1976-77
Cit. Mukendi Mbuyi Tshingoma	Zairois	1978-79
Prof. S.O. Olayide	Nigerian	1978-79
Dr. R.J. Olembo	Kenyan	1978-79
Mr. Guy Vallaeys	French	1978-79
Dr. Willi Ehmann	German	1978-79
Mr. G. Fatoye	Nigerian	1979

List of Board Chairmen from 1968-79

Board Chairmen

Period Served

Dr. H.R. Albrecht (Temporary)	1968
Dr. W.M. Myers	1969-1970
Dr. F.F. Hill	1971-1972
Dr. Bukar Shaib	1973-1976
Dr. Thomas R. Odhiambo	1976-1977
Prof. A. Hugh Bunting	1978-todate

