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REPORT OF THE MEETING OF NATIONAL AGRICULTURAL RESEARCH  
DIRECTORS OF SAFGRAD MEMBER COUNTRIES  
(23 - 27 February, 1987)  
Ouagadougou, Burkina Faso

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Arid Food Grain Research and Development  
Coordination Office  
B.P. 1783, Ouagadougou  
Burkina Faso.

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## THE MEETING

The meeting of National Agricultural Research Directors of SAFGRAD member countries was held in Ouagadougou, Burkina Faso from February 23 - 27, 1987. Eighteen delegates from seventeen member countries attended the meeting. These included Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Gambia, Ghana, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, Tanzania and Uganda. Representatives of the following organizations were also present at the meeting; FAC, USAID, INSAH, ICRISAT/SAFGRAD, ICRISAT, IITA/SAFGRAD, IITA and OAU/STRC Executive Secretariat.

At the opening session a welcome address was given by the Representative of the Executive Secretary of OAU/STRC. He stated that the Executive Secretary wished to attend the meeting personally, but this was not possible, due to the 46th Session of the OAU Council of Ministers which was being held in Addis Ababa, Ethiopia at the same time. The Representative of OAU/STRC thanked the Burkinabe Minister of Higher Education and Scientific Research and acknowledged the latter's presence as an expression of his country's interest in SAFGRAD. He also transmitted the Executive Secretary's gratitude to the Burkinabe Government; to the African governments cooperating with SAFGRAD; to donor agencies, particularly, USAID, IFAD, and FAC; to the IARCs such as IITA and ICRISAT; and all the National Agricultural Research Systems (NARS) of member countries for supporting SAFGRAD. In his address he stressed that SAFGRAD is one of the most important mechanisms conceived by OAU in its effort to stimulate self-sufficiency in food production in Africa.

Following the welcome address, The Minister of Higher Education and Scientific Research of Burkina Faso gave the opening speech. He welcomed the participants on behalf of the National Revolutionary Council, the government and people of Burkina Faso. He recalled that during the extraordinary Consultative Committee meeting of August 1985, the government of Burkina Faso endorsed the idea of a new orientation for SAFGRAD.

The Minister told participants about a recent national research symposium organized by the Burkinabe government to look at national scientific and technological research, taking into consideration existing research structures, bilateral and multilateral scientific cooperation and major constraints to scientific and technological research in Burkina Faso.

After expressing the readiness of the Burkinabe Government to support the decisions of the meeting, he thanked various donors; in particular, he mentioned USAID, IFAD and FAC whose financial support enabled SAFGRAD to carry out its activities in Phase I and to implement Phase II which is now in progress.

### SAFGRAD I - HIGHLIGHTS

Participants were briefed on the progress made on various components of SAFGRAD I activities. With regard to the generation of suitable technologies the following points were made:

- 1.0 The thrust of the SAFGRAD/IITA collaborative research has been the development of early maturing and drought resistant varieties of maize and cowpea.
  - 1.1 Maize - Two high-yielding early maturing varieties noted as SAFITA-2 and SAFITA-104 have been widely tested by national programmes. These have either been released or are in the process of pre-release in Burkina Faso, Ghana, Mali, Benin, etc... Another variety, SAFITA-102, is a medium maturing variety developed for the Northern Guinea savanna zone. It has been widely tested in many SAFGRAD countries. Major agronomic practices that minimize risk to drought stress were identified such as tied-ridges, soil tillage practices, use of early varieties and maize-cowpea rotation practices.
  - 1.2 Cowpea
 

A multiple disease resistant and high yielding variety KN-1, was released in moderate (700 mm) rainfall zone. SUVITA-2, a drought and striga tolerant variety was developed and widely tested. It is included in the pre-extension trials in many SAFGRAD member countries. Another variety, 58-57 has also been shown to have a high level of resistance to striga. Considerable progress has been made in defining and recommending practices for the maize-cowpea cropping system in the Northern Guinea savanna zone. Some progress was made for sorghum and millet/cowpea inter-cropping systems also.

2.0 The SAFGRAD/ICRISAT collaborative research emphasis has been on the improvement of sorghum and millet

2.1 Sorghum West Africa - The varieties E 35-1 and Framida have been widely tested in many West African countries. Several elite materials and hybrid lines were introduced to different NARS. Varieties identified as S - 34 and S - 35 were found suitable in Nigeria and Cameroon.

2.2 Eastern Africa Sorghum Improvement

Most of the elite materials of sorghum and millet were developed in the region from the national research programmes and from diverse sources of germplasm received from ICRISAT.

3.0 Farming Systems Research

Between 1979 and 1981 the Farming Systems Unit (FSU) of Purdue University collaborated with SAFGRAD in developing and evaluating production strategies. Since 1982 the FSU programme has looked into various technological options in order to increase food production in the semi-arid tropics. The research was aimed at alleviating climatological and physical constraints. The following technological options and their economic feasibility were evaluated.

3.1 Soil fertility/water retention technologies

- a) Tied-ridges
- b) Use of crop residue, complete - chemical fertilizers, indigenous rock phosphate fertilizers and indigenous rock phosphates.
- c) Animal manure and composting.

3.2 Labour saving technologies

- a) Mechanical ridge-tier
- b) Animal traction
- c) Herbicides

### 3.3 Crop production technologies

- a) Improved varieties
- b) Crop associations

## 4.0 Workshops

- 4.1 Sorghum - Nine workshops on sorghum and millet improvement were held between 1980 and 1986. The final workshop involved most SAFGRAD countries. Two of the workshops were held in West Africa involving 16 countries. The remaining workshops were held in Eastern and Southern Africa. About 360 scientists participated in these workshops. Results of regional trials and research plans for the following year were discussed in these workshops.
- 4.2 Maize/Cowpea - Since 1979 seven workshops were held on maize and cowpea involving 400 scientists from different SAFGRAD member countries.
- 4.3 FSU Workshop - Two workshops were organized including the workshop on appropriate technologies for farmers in semi-arid West Africa. This took place in Ouagadougou from April 2 - 5, 1985. The primary purposes of the workshops were to assess agricultural technologies currently available in the region and to focus on technology needs and new avenues for research. Over 100 scientists and agricultural administrators from national and international research institutions engaged in research in West African semi-arid tropics attended.
- 4.4 The Accelerated Crop Production Programme (ACPO)

In the countries where the programme is operational, it was reported that the ACPOs were able to :

- a. conduct multi-locational trials of improved packages of technology in different ecological zones;
- b. strengthen linkages between national research, extension and farmers;
- c. up-grade the technical skills of national extension agents;
- d. facilitate the introduction of research results from SAFGRAD regional trials to respective national programmes; and
- e. provide high-value on-the-job training for the ACPO national counterparts

#### 5.0 Training

The following training activities were carried out :

- a. in-service or on-the-job training provided to 31 participants;
  - b. crop production-oriented short courses were provided to more than 100 participants;
  - c. supervision of thesis work was done for 18 participants; and
  - d. long-term training (MSc. and Ph.D levels) for 28 participants from various countries on different aspects of food grain research and production.
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## SAFGRAD II

The global objective of the SAFGRAD programme will continue to be the enhancement of the production of sorghum, millet, maize and cowpea. SAFGRAD Phase II, however, is designed to optimize the utilization of scientific talent, resources and available technologies so as to improve the research capabilities of participating NARS through collaborative networks. Lessons learned during the last decade indicate that regionally oriented networking activities (if properly managed) could be most efficient and cost effective. It was noted that the major weakness of SAFGRAD I had been the lack of a clear definition of the function and roles of the partners involved in the implementation of various entities of SAFGRAD (i.e. NARS, IARCS, SCO and other cooperating agencies). SAFGRAD I has also shown that there is a need to identify and bring leaders and scientists of NARS to the forefront, in order to assume a leadership role in directing and managing research networks.

The major emphasis of SAFGRAD II is to :

- 1) strengthen commodity research networks, concentrating on linkages within and among NARS research systems in order to promote the development and diffusion of technology. There will, therefore, be a shift of primary emphasis from resident research to collaborative research networking;
- 2) create a simplified oversight structure or committee comprised of full time researchers, managers of research and university academicians. This body will initiate policy and monitor the activities of the SAFGRAD Coordination Office in particular, and the implementation of SAFGRAD project in general; and
- 3) restructure the SAFGRAD Coordination Office to focus on specific service functions.

Although SAFGRAD II is a five-year project, it was reported that:

- 1) the four research networks (Improvement of sorghum in West Africa, West and Central African maize and cowpea improvement research networks; the East African sorghum and millet collaborative research network;) are supported for the entire phase;
- 2) Resident crop research support for about one year;



- 3) support to four crop coordinators for the entire phase;
- 4) support to OAU/STRC - Coordination Office initially for two years;
- 5) the accelerated crop production programme (ACPO) in Mali and Burkina Faso for about one year; and
- 6) support to management entities of SAFGRAD i.e Oversight, Advisory Committees and for the occasional meeting of the Directors of Agricultural Research during the entire phase.

During the discussions which followed, participants expressed great concern over the uncertain future of SAFGRAD with regard to funding. It was agreed that based on its positive contribution to the strengthening of national programmes of member countries, SAFGRAD should be considered a long term activity and continuous services to participating NARS should be maintained. In this regard, it was suggested that other donors should be solicited to complement the USAID contribution. It was also agreed that the OAU should be requested to increase its financial contribution to the SAFGRAD Coordination Office, in particular, and to the SAFGRAD Project in general.

The second salient discussion point was the elaboration of a strategy to make SAFGRAD more efficient in Phase II. The delegates stated that there is a great need for further strengthening of NARS of the member countries. To date, there had been insufficient assistance in the training of national research scientists and technicians. Some participants expressed their concern that the SAFGRAD II Project was developed without adequate consultation with NARS. It was pointed out that a series of technical workshops, consultative meetings and the technical advisory committee were held in order to prepare the SAFGRAD II Project. The following suggestions for strengthening NARS were also made:

- there is a need to integrate the SAFGRAD collaborative research networks with others existing in Africa and with those to be created by the French Government through CIRAD in Francophone Africa;
- the appointment of members to the Advisory Committee should be on the basis of their individual merit; and
- there is a need to assist weaker national research programmes and less privileged member states in establishing basic research structures currently non-existent.

## Management of SAFGRAD

Under the auspices of OAU/STRC, the activities of SAFGRAD in Phase I were guided by the Consultative Committee (CC) and the Technical Advisory Committee (TAC). The CC functioned basically as a policy making body whose actions were based on the reviews of all aspects of SAFGRAD activities by TAC. The TAC task consisted of a review of annual research work plans of the collaborative research programmes with IITA, ICRISAT, the ACPO programme, and farming systems research and submission of its recommendations for further action to the Consultative Committee.

Because the TAC and the CC were not able to shift management of SAFGRAD into the hands of participating NARS, alternative management entities were designed. The participants were briefed on the following SAFGRAD management entities.

### 1.0 The Oversight Committee is expected to:

- a) provide guidance in management and policy issues of SAFGRAD;
- b) review work plans and provide guidance on how SAFGRAD can provide effective technical services to national research programmes of member countries;
- c) facilitate the realization of food grain crop commodity and other related networks administered by scientists of participating countries; and
- d) review annual technical progress of network resident research, ACPO, FSR and other SAFGRAD activities to ensure further financial support.

It was suggested that members of the Oversight Committee be selected from among agricultural research scientists, administrators and university academicians of participating NARS.

### 2.0 Advisory Committee

Four crop commodity collaborative research networks were discussed. It was suggested that each should be assisted in its organization and direction by an Advisory Committee. According to the SAFGRAD II project document, the role of the Advisory Committee would be to :

- a. determine objectives and prioritize activities of the network;

- b. implement and monitor the network;
- c. develop collaborative research projects to be executed by lead centres, or by IARCs, where the required expertise is not available in NARS; and
- d. ensure that appropriate technologies for the attainment of network objectives are made available to NARS.

The membership of each Advisory Committee would include practising researchers of SAFGRAD member countries, a network Coordinator from the IARCs, a representative from the SAFGRAD Coordination Office (SCO), as an observer, and a representative of the Institute of Sahel (INSAH) in West Africa as an observer.

The West African sorghum collaborative research network and the East African sorghum/millet network have already organized their advisory committees.

### 3.0 Sponsoring Group

The suggested main role of the Sponsoring Group would be to find ways of generating funds to enable SAFGRAD to fully play its role as an African coordinating organization. The Sponsoring Group would have as its members representatives of OAU/STRC, donor agencies (USAID, IFAD, PAC, etc...), a few member countries, the Coordination Office, as well as the chairman of the Oversight Committee. The Sponsoring Group is not a structured management entity of SAFGRAD. This committee, however, will receive financial and technical reports to assist SAFGRAD to solicit funds.

The SAFGRAD Coordination Office, its cooperators and its member countries are primarily responsible for upholding the integrity and credibility of SAFGRAD. During Phase I, the activities of SAFGRAD were monitored and evaluated periodically by OAU Headquarters, OAU/STRC and the donors.

In addition to such evaluations, SAFGRAD prepares financial, technical and administrative reports for different levels of its clientele.

The discussion following the presentation on the management of SAFGRAD focused primarily on the roles of the Coordination Office, the Oversight Committee and the network advisory committees. Various views and suggestions related to the restructuring of SAFGRAD were expressed as follows:

- 1) National Agricultural Research Systems of member countries should play a key role in the management of SAFGRAD.
- 2) SAFGRAD should become more service oriented. Because it is a project and depends heavily on external sources of funding, delegates were asked to bring to the attention of political authorities in their respective countries the need for increasing the financial contribution of OAU to SAFGRAD.
- 3) A Council of National Agricultural Research Directors should be created, which meets every two years to review programmes, discuss reports and provide general policy guidelines to the Oversight Committee for the following two years.
- 4) The Oversight Committee should work as an executive entity of the council of National Agricultural Research Directors.
- 5) A regular meeting with donors was recommended in order to solicit financial and other support.

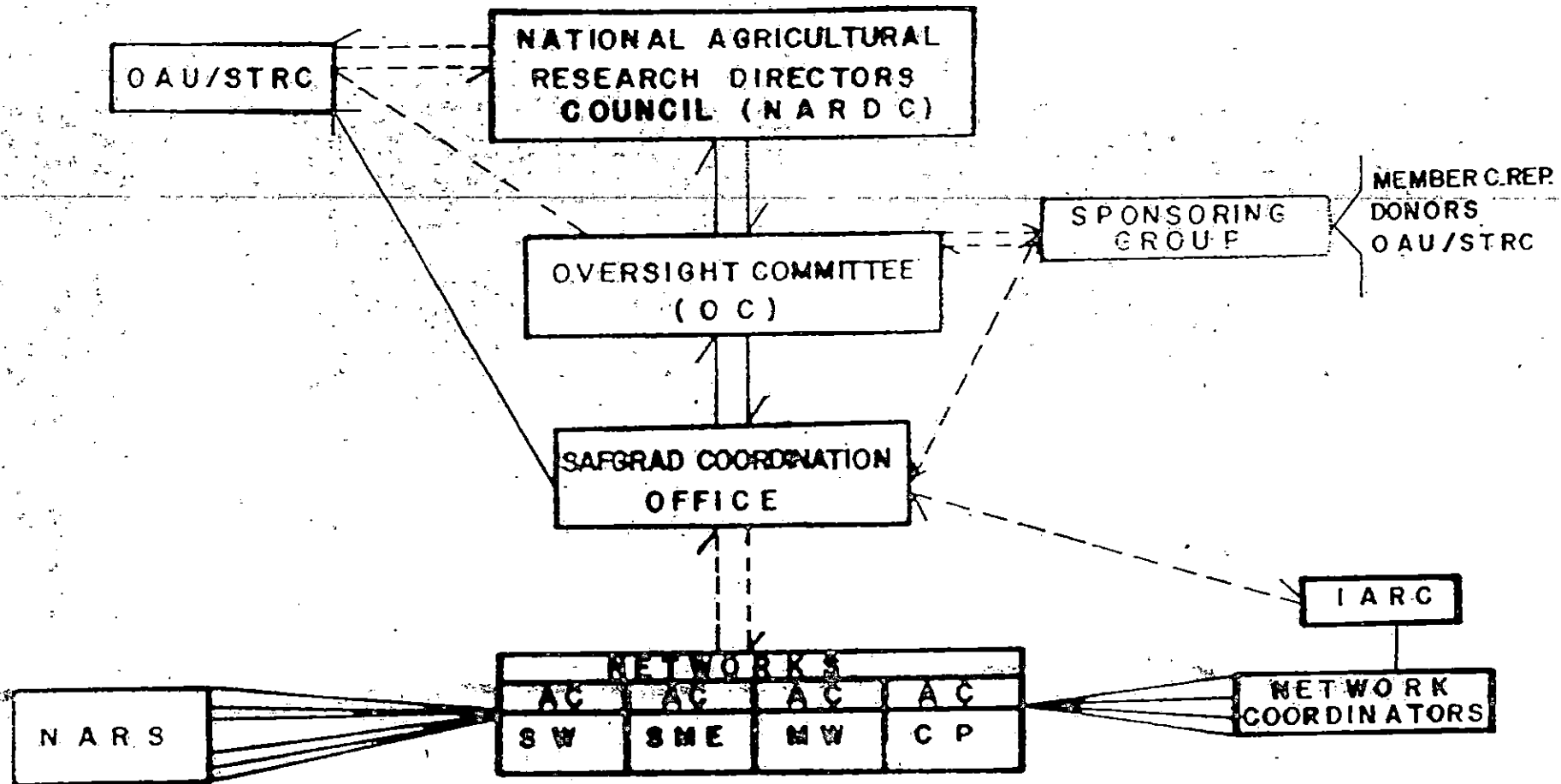
### Networking

The original purpose of the meeting was to discuss new management entities and collaborative research networks of SAFGRAD II. Paper presentations provided background information to participants to help them make balanced and rational decisions. This subsection is a summary of papers, and discussions, which present various views and suggestions for collaborative research networks.

Philosophy and objectives The approach of SAFGRAD II to promote food crop research networks was chosen to illustrate the philosophy and objectives of networking. The case of the West African FSR network was briefly presented as a means of stimulating thinking on the future role of SAFGRAD in reinforcing crop research and other networks in general.

The networking approach is particularly appropriate for regional research cooperation. This approach has enabled farmers from continents other than Africa to increase production of wheat, maize, sorghum and millet. It has the advantage of facilitating concerted efforts intended to lessen the effects of constraints of food production which often transcend national boundaries.

# SAFGRAD ORGANIZATIONAL RELATIONSHIPS



NARS = NATIONAL AGRICULTURAL RESEARCH SYSTEMS

AC = ADVISORY COMMITTEE

SC = STEERING COMMITTEE

SW = SORGHUM WEST AFRICA

SME = SORGHUM AND MILLET EASTERN AFRICA

MW = MAIZE WEST AFRICA

CP = COWPEA

FIG. 1

In order to ensure the success of networking, several problems which hampered the efforts of SAFGRAD I need to be solved; in particular, problems of resource allocation, the poor to non-existing agricultural research structures and the under-utilisation of qualified national researchers need to be resolved.

Other important points mentioned are summarized as follows:

- a) In order to resolve the problems outlined above, it was recommended that an inventory of available resources be made; that priority areas and common needs of network participating countries be identified; and that efforts be made to train research administrators and promote technology transfer.
- b) Three types of networks were outlined as possibilities for expansion: information exchange networks, scientific consultation networks and collaborative research networks.
- c) A diagram was presented to illustrate the links among various entities of SAFGRAD (as depicted in Figure 1).

During the plenary session and in working group meetings on networking the following issues were discussed:

- 1) rationale for participating in collaborative research networks - It was emphasized that each participating NARS should examine and determine if the activities of the network coincide with its research interest and priorities. It is important to note that collaborative research networks entail both staff and resource commitment.
- 2) perceptions and commitments of governments of participating NARS to collaborative research networks - It was suggested that research administrators and leading scientists of member countries and OAU/STRC - SAFGRAD Coordination Office, sensitize appropriate ministries of research and development of the need of joint efforts and committing resources to promote collaborative research to solve food production constraints that transcend frontiers of participating NARS.

- 3) Enhancement of NARS leadership in the management of networks - It was stressed that the initiative to create networks should also come from participating NARS, and not necessarily from IARCs and donors. NARS should also accept leadership in the generation of technology and management of networks.

Brief description of the current status of the four commodity networks was reported as follows:

#### 1.0 West African Sorghum Collaborative Research Network

The Advisory Committee of this network was formed in 1986. Countries participating in the network are: Benin, Burkina Faso, Cameroon, Central African Republic, Chad, The Gambia, Ghana, Guinea, Guinea Bissau, Cote d'Ivoire, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo.

ICRISAT and the SAFGRAD Coordination Office played a key role in enhancing the work of the committee. The advisory committee activities were reviewed by the crop coordinator.

The advisory committee has met once, during which members reviewed recommendations adopted during the first two workshops and ranked priorities for research based on major constraints. The committee also developed a projected work plan.

Basic research is to be carried out by ICRISAT in collaboration with NARS. Four types of regional trials i.e. early maturity, medium maturity, hybrid lines evaluation and progeny nurseries, of which most countries are participating, were reported. It was emphasized that SAFGRAD should continue to play a leading role in on-farm testing of elite varieties and agronomic practices.

The purpose of presenting this work plan was to illustrate the roles of ICRISAT, SAFGRAD (Coordination Office) and NARS and the relationships among these three entities.

#### 2.0 East African Sorghum Collaborative Research Network

The East African sorghum/millet collaborative research network is composed of: Burundi, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania and Uganda. North and South Yemen have sent their representatives to participate in some of the network meetings. The objective of the network is to increase and stabilize sorghum and millet production in the region.

Though it has not been in existence for long, the SAFGRAD/ICRISAT East African Sorghum and Millet improvement programme has reported some positive results, namely:

- identification of sorghum production constraints;
- evaluation of nutritional value of a sorghum based local beer and Musalac (baby food) composed of sorghum flour (30%), maize (30%), soybean (20%), sugar (10%) and milk powder (10%);
- development of sorghum varieties resistant to insects;
- diversification of genetic variability through regional variety trials;
- holding of a regional workshop during which it was decided to give an identity to the network under the acronym EARSAM (Eastern Africa Regional Sorghum and Millet Network);
- identifications (during the same workshop) of common research priorities in the areas of variety selection (crop improvement in low and high altitudes), agronomy and plant diseases; and
- through active participation and encouragement of the SAFGRAD Coordination Office, the Advisory Committee of the network was established in July 1986.

The Advisory Committee met once and adopted the following research strategies and planned annual network activities:

- a) identification of sorghum and millet production constraints;
- b) identification of specific research priorities common to the network member countries;
- c) assignment of research tasks to participating countries according to available resources; and
- d) development of ICRISAT/SAFGRAD assistance plan based on specific research needs.



### 3.0 West and Central African Cowpea and Maize Collaborative Research Networks

The West and Central African Cowpea and Maize networks are among the oldest SAFGRAD regional crop research networks. During SAFGRAD II, these networks would be limited to West and Central Africa.

The IITA/SAFGRAD West and Central African maize collaborative research network has resulted in the development of high yielding maize varieties adapted to local agricultural conditions with appropriate management packages. Unfortunately the transfer and adoption of these improved technologies by farmers has been slow. Thus there is a need to identify constraints to national agricultural research and extension services.

It was reported that the maize network has been undertaking regional variety trials, agronomic research and training of research scientists and technicians. Major emphasis has been on the dissemination and evaluation of germplasm. Since 1979 two regional uniform variety trials were conducted. About 192 sets of early maturing and 171 sets of intermediate maturing were evaluated by participating national programmes. A total of 44 varieties of early and 42 varieties of intermediate maturity were evaluated. As a result, some varieties were released, some are used in crosses, and some are undergoing on-farm tests in many of the participating countries.

The West and Central African cowpea network has been relatively successful in dealing with the following four types of cowpea production constraints identified in the tropical semi-arid zones of Africa:

- a) climatic constraints such as erratic and insufficient rainfall, high atmospheric and soil temperatures and high winds;
- b) biological constraints such as low yield varieties, diseases, insects and striga infestation;
- c) soils with poor physical properties and low fertility; and
- d) socio-economic factors: poor to non-existent, infrastructures (credit and marketing systems) and high human and animal population pressures.

The West and Central African cowpea network reported positive results in cowpea breeding, agronomy and entomology. These results are summarized below.

- Cowpea varieties resistant to pests (Aphids and Bruchids) and diseases, drought and striga have been developed.
- Optimal planting dates for specific varieties in specific ecologies have been determined. Soil water management and appropriate maize-cowpea relay cropping systems have been developed.
- Less expensive and less toxic insecticides have been identified and screened. The development of integrated pest management packages has been promoted.

Discussions also centered on on-farm testing activities and comments by participants on the ACPO programme. Representatives of the following countries commented that the ACPO programme has had a very positive impact on agricultural development in countries where it is operational.

- a) Mali - Its success enabled Mali to have access to genetic resources from IARCs and facilitated the adoption of improved varieties of cowpea, maize and sorghum. It also promoted the utilization of Malian phosphate and other packages of improved technology.
- b) Cameroon - Despite its relatively short existence, the ACPO programme contributed to the improvement of sorghum and cowpea production in the country. Extensive on-farm testing during the last few years identified new improved varieties adaptable to Cameroon's semi-arid environment. The relative success of the Cameroon ACPO programme was attributed to the existence of a good extension service.
- c) Burkina Faso - The ACPO programme permitted the identification of constraints to extension services, and the adoption of new improved technologies by farmers.

Participants pointed out that several SAFGRAD member countries, including Mauritania, had requested such a programme. It was reported that the programme was not extended to other countries largely due to lack of funds.

RECOMMENDATIONSI. General

Strategies for strengthening regional research cooperation were discussed. Important decisions were then taken in order to promote collaborative research networks on food grains and to improve the efficiency of services provided to NARS by SAFGRAD management entities.

- Recognizing the proliferation of research networks promoted by various agencies and given the acute shortage of research scientists and resources in many NARS, the participants recommended that similar networks focussing on a particular crop commodity should be merged. The SCO, therefore, should make the necessary contacts with concerned agencies in order to harmonize network support and activities.
- As the Secretariat for the Oversight and Advisory Network Committees as well as for the Council of Directors of Agricultural Research, it was stressed that the Coordination Office should facilitate the work of these management entities of SAFGRAD.
- The impact of on-going SAFGRAD activities such as the ACPO programme should be determined in order to learn lessons from previous experiences and to improve current approaches and methods to on-farm testing.
- Participants expressed a vote of thanks to the donors (USAID, IFAD, FAC) as well as to OAU, and its participating member countries. Because of limited resources it was suggested that SAFGRAD (particularly SCO), utilizing its OAU channel, should undertake a campaign to sensitize governments of participating NARS to allocate more resources to agricultural research. Concurrently, the need to actively solicit different donors for more funds to support NARS and SAFGRAD services were suggested.

## II. Research Networks

### 1. Purpose and Objectives of Networking

It was noted that networks are not new concepts. Before the emergence of politically independent Africa networks were organized by former colonial research institutions in their respective territories.

After independence these networks ceased to operate. Through the initiative of international organizations and donors, however, several networks are currently operational in Africa.

✓ The main purpose for renewed interest in networking by member countries of SAFGRAD is the desire to break down linguistic and political barriers and to judiciously pool human, infrastructural, material, and financial resources of member countries to solve common problems of agricultural production and productivity.

The specific objectives of networking include the following:

- a) to facilitate the strengthening of national agricultural research systems in terms of personnel, infrastructure, funding, etc.;
- b) to enhance the transfer of appropriate technologies (developed at NARS and international research centres) to participating national programmes;
- c) to identify production constraints affecting crops, and to develop technologies in national programmes as well as in IARCs to solve these problems; and
- d) to facilitate exchange of information, technologies and scientists among national programmes, etc.

### 2. The Current Network Situation in Africa

The group noted that:

- a) There is multiplicity of networks in Africa, both by country and commodity.

- b) These networks are currently run by IARCS and other international agencies, often without due consideration for the needs of the national programmes they are designed to serve. There appears to be little effort by the different agencies to coordinate their network efforts with those of others.
- c) The number of the networks appears to be related to the multiplicity of coordinating agencies and the multiplicity of interests they attempt to serve.

### 3. Functioning of Networks (model network)

The decision to create a network for any commodity must be the decision of scientists of the national programmes comprising the network. The objectives for each network must be determined by the national programmes.

The scientists of the network programmes should identify and prioritize the common constraints affecting the commodity. They should decide how best to tackle major problems, including decisions on how the lead national centres will approach problems and generate appropriate solutions.

National programme scientists and research managers should also be aware of the strengths and weaknesses of each other and find ways of exploiting their strengths and of reducing their weaknesses.

Each network should have an Advisory Committee with 4 - 6 national programmes representing different disciplines. The Coordinator of the Network will be a full member of the Committee. Relevant international and regional organizations will participate as observers in advisory committees. The Advisory Committee will have the following functions:

- to determine the objectives of the network;
- to prioritize the activities of the network;
- to provide guidelines on the implementation of the objectives of the network;

- to monitor the implementation of the network objectives;
- in collaboration with the Network Coordinator, to develop collaborative research projects to be executed by lead centres, or by IARCs, where the required expertise is not available in national programmes; and
- to ensure that appropriate technologies for attainment of network objectives are made available to national programmes.

#### 4. Role of SAFGRAD

SAFGRAD is made up of member countries and the coordinating office. The following network roles are envisaged for SAFGRAD:

- the primary role of the SCO is to provide services to networks and ensure that the objectives of each network are met;
- to solicit financial support for networking;
- to coordinate the networks through the advisory committee;
- to act as the liaison between the advisory committees and regional and international organizations that support the goals of the networks; and
- to act as the Secretariat for the Advisory Committees, the Oversight Committee and the Council of Directors of Research.

The group further recommends that the Network Coordinators should be staff members of SAFGRAD.

#### 5. Role of different Partners in Networking

The Group considers that the following are partners in networking:

- National Agricultural Research Systems (NARS)
- International Agricultural Research Centres (IARCs)
- Donor Agencies

a) Role of NARS

(These include:)

- identification of major constraints affecting productivity of the commodity;
- initiation of networks on common food production problems;
- discharging assigned roles by the networks, such as, serving as lead centres for generation of appropriate technology (in particular) and diffusion of technology (in general); and
- participating effectively and appropriately in Advisory Committees, the Oversight Committee and in the Council of Research Directors.

b) Role of IARCs

(Includes the following:)

- to provide appropriate training of national programme scientists;
- to participate in exchange of technology with NARS;
- to provide solutions to problems which are still outside the competence of NARS, including execution of programmes on a bilateral basis;
- to conduct fundamental research that would contribute to the objectives of networks;
- to provide literature (documentation), especially scientific literature, to the national programmes; and
- in the short-term (say first 5 years), second network coordinators to SAFGRAD.

c) Role of Donors

To provide funds for networking and to participate in network evaluation as indicated below.

## 6. Coordination of Networks

The activities of each network would be carefully monitored by an Advisory Committee whose functions have been specified above. The 4 or 6 advisory committees, in their turn, would be monitored by the Oversight Committee which will report directly to the Council of Research Directors.

## 7. Funding of Networks

Financial support is required for the following aspects of networking:

- a) project identification and initiation;
- b) project coordination; and
- c) execution of networking activities proper; these include, inter alia:
  - strengthening national research capabilities;
  - generation of technology;
  - transfer of technology; and
  - exchange of scientific personnel and of scientific information.

There are several possible ways of securing funds, namely:

- a) the present donors, viz, USAID, FAC and IFAD;
- b) Other possible donors such as African Development Bank (ADB), World Bank, European Economic Community (EEC) through the Lome Convention, etc.; and
- c) OAU in general and member countries of SAFGRAD, in particular.

It was noted that the SCO has a major role to play in soliciting funds. At the same time the Directors of Research are expected to help convince their respective governments of the usefulness and benefits of networks and the importance of providing adequate funds to support networks.



## 8. Evaluation (appraisal) of Networks

The advisory committees should appraise the performance of their respective networks. Their appraisal should be submitted to the Oversight Committee which in turn submits an appraisal directly to the Council of National Research Directors. These reports constitute internal reviews by SAFGRAD.

The donor agencies will institute an external review panel to appraise the financial management and project execution by each network.

Both internal and external reviews will take place every other year. Reports of both reviews will be made available to the SCO and the Council of National Research Directors.

## 9. Regional Cooperation

### a) Collaboration between Franco-African Networks and SAFGRAD

It is very important to harmonize the proposed Franco-African maize network and the SAFGRAD maize network. It is recommended that there be only one network for maize. Thus, the budgeted funds for the two proposed networks should be pooled for greater thrust and quicker impact.

### b) Collaboration between INSAH and SAFGRAD

These two organizations should complement each other. As far as possible and as appropriate, SAFGRAD should complement INSAH in its research efforts. There already exists a memorandum of understanding between the two agencies. Every effort should be made to enhance smooth, mutual interaction between INSAH and SAFGRAD.

### c) Relationship between West African ESR Network and SAFGRAD

The proposed relationship is noted and endorsed.

### III. Policy Orientation and Management: The Oversight Committee and related Questions

Problems relating to the future orientation and management of SAFGRAD were treated in a special group session, focussing on policy orientation, management entities and funding of SAFGRAD. The following recommendations were made on issues discussed during the group session:

#### 1.0 Recommendations on Policy Orientation of SAFGRAD

J W  
 a) Status of SAFGRAD: The current status of SAFGRAD should be maintained until it becomes a permanent institution of the Organization of African Unity (OAU). The first step towards this goal is to recommend that OAU takes the necessary measures to change SAFGRAD from a project to a permanent institution

b) Terms of Reference of SAFGRAD: In general, and independent from USAID funding of SAFGRAD II, SAFGRAD should play a key role in the coordination of research activities on food crops in the Sudano-Sahelian zones of Africa. SAFGRAD must specifically:

- reinforce national agricultural research systems of member countries;
- facilitate the training of scientists and technicians of member countries;
- facilitate the implementation of on-farm testing programmes;
- reinforce the exchange of information among member countries through research networks; and
- facilitate links between IARCs and NARS

c) Relationships between SAFGRAD and IARCs, and SAFGRAD and NARS.

SAFGRAD should gradually reduce its involvement in basic technology generation and concentrate on its coordinating role in order to facilitate the exchange of information, materials and expertise between IARCs and NARS and among NARS themselves.

It was recommended that the SCO work closely with advanced NARS in order to help less resourceful member countries.

### Reinforcing the Personnel of SAFGRAD Coordination Office

To help SAFGRAD carry out its coordinating role efficiently, it was recommended that donors and OAU/STRC reinforce the personnel of the Coordination Office. This measure will facilitate the work of the SCO and allow more direct contact with member states and their NARS.

## 2.0 Recommendations on Management Entities of SAFGRAD

entities: The group recommended four SAFGRAD management

- a) Advisory Committee of research networks
- b) Oversight Committee of SAFGRAD
- c) Council of Directors of NARS of member countries
- d) Sponsoring Group of SAFGRAD (not a structured entity).

### 2.1 Advisory Committees of Research Networks

Each of the four crop research networks will have an Advisory Committee:

- a) Terms of reference: see Group I report.
- b) Membership: the membership of the Advisory Committee is as follows:
  - 4 to 6 active researchers from participating SAFGRAD member countries (see Group I report);
  - a network coordinator;
  - a representative of SAFGRAD Coordination Office (as an observer)
  - a representative of INSAH in the case of West Africa (as an observer);

- representatives of relevant international and regional organizations.

c) Each member will serve on the committee for two years. At the beginning, and to ensure continuity, 50% of the membership will change after the third year.

d) The relationship between the Advisory Committee and other management organs of SAFGRAD will be determined by the Oversight Committee and the Council of National Agricultural Research Directors.

## 2.2 Oversight Committee

a) Terms of reference for the Oversight Committee:

- to review work plans and advise SAFGRAD on better ways of providing efficient technical assistance to NARS of member countries;

- to facilitate the development of crop research networks and other networks managed by national researchers of participating countries; and

- To evaluate annually the technical results of resident research, ACPO and FSR programmes as well as other SAFGRAD activities.

b) Membership

The group decided to keep the membership at 7 individuals with 5 from regional agricultural research organizations of the 4 regions of Africa: West Africa (2), Central Africa (1), Eastern Africa (1) and Southern Africa (1). The two other members should come from universities.

c) Each member will serve on the committee for three years; the three-year membership may be renewed to ensure continuity.

d) Selection of members of the Oversight Committee

After the list of candidates (12) was submitted to the group with their curriculum vitae, the following 9 persons were short-listed:

1	J.A. AYUK-TAKEM	(Cameroon)	Agricultural Research
2	Ibrahim A. BABIKER	(Sudan)	University Prof. Res. & Management
3	DA Sansan	(Burkina Faso)	Agricultural Research
4	G.H. SEMUGURUKA	(Tanzania)	Agricultural Research & Management
5	D.F. ADJAHOSSOU	(Benin)	Director of Agricultural Research & Management
6	L.K. FAKAMBI	(Benin)	University Professor & Research
7	H. MERCER-QUARSHIE	(Ghana)	Agricultural Research & Management
8	Oumar NIANGADO	(Mali)	Agricultural Research
9	M.A. EMECHEBE	(Nigeria)	University Professor & Research

The above candidates were considered on the basis of their competence in research, teaching in the agricultural faculty of an African University or in agricultural research management. Out of the nine short-listed candidates, seven were to be selected during the plenary session.

### 2.3 Council of National Agricultural Research Directors

The Council of National Agricultural Research Directors will meet every two years. Its role consists of:

- giving political and management orientation to SAFGRAD;
- evaluating the reports of the Oversight Committee; and
- renewal of the Oversight Committee when necessary.

### 2.4 The Sponsoring Group

The Sponsoring Group is composed of:

- a representative of OAU/STRC
- representatives from donor countries and agencies;
- a representative of the Council of Directors; and
- the chairman of the Oversight Committee.

Its role consists of:

discussing ways of generating core funds for the Coordination Office so that SAFGRAD can fulfill its role. The committee will receive:

- reports on financial management of the SCO;
- technical reports of the Oversight Committee; and
- reports of the network Advisory Committees.

### 3. Recommendation on the Funding of SAFGRAD

The group made the following recommendations on the funding of SAFGRAD:

- 1) Participants were asked to bring to the attention of political authorities in their

respective countries the importance and necessity of agricultural research as the most crucial way to solve the problem of food crisis in Africa.

- 2) OAU should gradually increase its financial contribution to SAFGRAD so as to reduce its dependency on international donors.
- 3) OAU/STRC and the SCO should identify financial sources in order to facilitate support for the following:
  - reinforcing the structures of NARS in member countries;
  - training national scientists and technicians;
  - extending the ACPO programme to more member countries;
  - organizing and reinforcing the exchange of information, germplasm, etc., among research networks; and
  - increasing coordination between IARCs and NARS.

#### CLOSING SESSION

In his closing remarks, the representative of the Minister of Higher Education and Scientific Research of the Government of Burkina Faso drew the attention of the participants to the positive results obtained through the SAFGRAD process. He also commented that the participating NARS of SAFGRAD now have the mechanism for directing collaborative research networks. Finally, the representative thanked all countries for attending the meeting and contributing to regional research cooperation. After this brief comment, the meeting was officially closed.

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ANNEX

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African Union Specialized Technical Office on Research and Development

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1987

# REPORT OF THE MEETING OF NATIONAL AGRICULTURAL RESEARCH DIRECTORS OF SAFGRAD MEMBER COUNTRIES

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