

Feeding THE Future

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Green Revolution Partnership

Kano, Nigeria, February 1998:

Amadu Lawan, a small-scale farmer from Kodo village in Kano State, Nigeria, enthusiastically welcomes his visitors to his land. He points energetically with his fingerless hands – ravaged in an earlier day by leprosy – to his irrigated wheat field, talking excitedly in his native Hausa language about his wheat crop. “Last year, I harvested 12 bags. This year I expect more”, he says, proudly showing his visitors the range of crops that he plants on his

one-hectare farm fields. Amadu, 50, was the first in his village to take up the improved wheat technology. Now it is spreading to other farmers, including Amadu’s son, Sani Lawan, a powerfully built young man of 29 years. Sani’s wheat plot is even better than his father’s and yields are likely to approach 6 t/ha. He has learned well from his father.

Amadu’s 12-bag wheat harvest is equivalent to a 4.8 t/ha yield, explains SG 2000 Country Director, José Antonio Valencia. “It is a profitable cash crop for him, costing 10,000 naira and yielding 24,000 naira of grain. Last year, he sold 11 bags for a total of 22,000 naira, holding one back for home consumption.”

“The small-scale farmers in Kodo village are supported by many partners in this fadama irrigation development scheme,” says Chris Dowswell, SAA’s Director for Programme Co-ordination. The project is funded through a World Bank loan and implemented by the staff of KNARDA, the Kano

State Rural Development Authority, with assistance from SG 2000. Recommended technology comes from national (Institute of Agricultural Research; Lake Chad Research Institute) and international research organisations, (IITA, CIMMYT, ICRIASAT).

SMALL-SCALE IRRIGATION

‘Fadamas’ are the flood plain areas adjacent to rivers. Soils are fertile and water tables are

often close to the surface (within five metres). The current phase of the Fadama Development Project is bringing small-scale irrigation to 7,000 farmers in Kano state at affordable prices. Each participating family is being given the means to farm one hectare with their new tube well and motorised pump.

Sani Ben Tukur, Managing Director of KNARDA, talks glowingly about the Fadama Development Project. “We are ahead of schedule in meeting all project objectives,” he notes. “Some 7,000 farm families will benefit from this phase of our comprehensive development scheme.”

Much of the success of the fadama project, Ben Tukur believes, “has been its grass

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Amadu Lawan (right) and his son Sani: a brighter future awaits his family.



Photo: Robert Grossman

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roots participatory nature.” Farmers must organise themselves into water user associations and each is required to make a 25% down payment before well drilling can begin on his or her land. They must complete payment for the tube well and irrigation pump within three years after it begins to deliver water to their land. Total costs range from 36,000 to 44,000 naira (US\$450-500).

“The water user associations are also an extremely important dimension.” he says. “These organised groups improve KNARDA’s efficiency in delivering technical services, and give the farmers more leverage in obtaining inputs and marketing their produce.”

SG 2000 has collaborated with KNARDA’s extension service since 1993 in backstopping efforts to introduce improved crop production technology to fadama farmers. KNARDA’s frontline extension agent, Mono Danladi, works with farmers in Kodo village to establish plots that demonstrate the recommended technology.

Shiv S Singh, the World Bank manager who oversees the project, is also very pleased with the progress in fadama development. “Nigeria has enormous areas with the potential for fadama irrigation development at very low prices per unit area,” he says.

“In Kano State there are 70,000 ha of fadamas with the potential for small-scale irrigation development; in neighbouring Jigawa State, there are more than 200,000 ha, and fadama areas are found in many other states as well. Imagine the capacity for producing high-value agricultural crops if the irrigation potential of lands is developed.”

GUEST EDITORIAL

Identifying agriculture as the engine of change

Following are abbreviated comments prepared by Dr Gebisa Ejeta, Professor of Plant Breeding and Genetics, Purdue University, during a case study presentation on the SG 2000 programme that was made at the World Food Prize Symposium, “Food Security and the Future of sub-Saharan Africa,” October 17, 1997, Des Moines, Iowa. Dr Gebisa, an Ethiopian by birth, has spent a career developing improved sorghum varieties and hybrids, especially suited for Africa.

I have been following the activities of the Sasakawa-Global 2000 Programme since its inception in the mid 1980s. Though I have paid attention to their efforts in Zambia, Tanzania, Ghana, and Ethiopia, I was a little more involved in their early efforts in Sudan. I was the plant breeder responsible for the development of Hageen Dura-1, the commercial sorghum hybrid which SG 2000 took up as one of the first technologies to promote in Sudan. As a result of that intervention and subsequent government support (and despite the current embargo and international isolation imposed on Sudan) over 80,000 ha of this hybrid is grown annually. None of this existed in 1986 when SG 2000 started in Sudan.

It was in these early efforts in Sudan and during subsequent activities that I sensed the power of the SG 2000 approach, its likely success, and its efficacy under the African cultural and social environment. The SG 2000 approach has had success in most country projects. However, it is in Ethiopia that it struck its true magic.

What has taken place over the last five years is the beginning of a remarkable agricultural revolution: an aggressive farmer education programme, which encourages the use of improved seed, judicious use of fertilisers and recommended agronomic practices, combined with a credit support system, increased fertiliser imports and

availability, price liberalisation and, most of all, an unprecedented government backing and devotion to the agricultural enterprise.

Many educational, research and extension organisations, international and national – and too numerous to mention – here deserve credit for laying the institutional foundations for agricultural change we are witnessing today.

The government of Meles Zenawi deserves due credit for identifying agriculture as the engine of change, for seizing the opportunity of the SG 2000 initiative, and for launching an expanded and ambitious agricultural extension agenda, and backing it up with significant national resource commitment and unreserved attention.

Finally, the ever-resilient Ethiopian farmers deserve our glowing praise, for bouncing out of the war, misery and hopelessness perpetuated by the regime of Mengistu Hailemariam, and for embracing the new change with hope, desire, and a zeal that literally has to be seen to be believed.

The significance of the agricultural change in Ethiopia, to me, is that it was made possible through a conventional approach of extending modern agronomic practices and not as a result of another round of rationalisation for paradigm change, which has come to characterise African technical assistance over the past two decades.

For too long, detractors of Green Revolution technologies have argued that modern varieties and crop management practices won’t work in the Dark Continent.

The success of the Norman Borlaug approach proves that there are niches and aspects of African agriculture that can be addressed through conventional science-based approaches, provided that a concerted technology transfer effort is properly planned and executed within the right policy environment.

GUINEA WORM

launching the final assault

Global 2000, the international health and agriculture arm of The Carter Center – and SAA's partner in the SG 2000 programme – is launching a final assault in the battle against the debilitating Guinea worm disease (*dracunculiasis*).

The plans were laid at the Seventh African Regional Conference on Dracunculiasis held in Bamako, Mali, early in April.

The 18 countries outside Sudan have made remarkable progress in reducing the 3.5 million cases of Guinea worm recorded in 1986, decreasing their burden of the disease by more than 95 percent. Pakistan was the first country to eliminate the disease through an organised programme. In 1997, it was officially certified by the World Health Organisation (WHO) as being free of Guinea worm disease. This was a satisfying victory for The Carter Center, since Pakistan began its eradication programme in 1986 at the personal urging of former US President Jimmy Carter and was supported by the Center's Global 2000 programme and the Centers for Disease Control and Prevention (CDC).

"Pakistan's certification was a milestone in our Guinea worm eradication effort," said President Carter. "Only one disease, smallpox, has been eradicated. With more than a 95 percent reduction rate worldwide, Guinea worm now is poised to be the second." Provisional data for 1997 shows that India has been free of Guinea worm for more than a year, the time necessary to break the life cycle of the Guinea worm. Cameroon, Senegal, Yemen, and Chad have reported only 1, 4, 7 and 25 indigenous cases respectively, for 1997.

However, despite these bold achievements and impressive case reductions in Benin, Cote d'Ivoire, and Mali, the total number of cases reported for 1997 among endemic countries outside Sudan will be almost the same as for 1996. This situation is due primarily to increased cases reported in Ethiopia, Ghana, Niger and Nigeria.

Problem in Sudan

The vast majority of Guinea worm cases are located in Sudan. At the end of 1996, almost 80 percent of all reported cases were in that country. "Sudan has been

embroiled in civil war for more than 15 years and represents the biggest challenge to eradicating Guinea worm," said Donald Hopkins, MD, associate Executive Director of the Carter Center and leader of the eradication initiative. "Health workers find that tracking existing cases is extremely difficult, and prevention efforts are impossible to undertake in areas where there is fighting. Only when the war ends will Sudan have a real opportunity to rid itself of this devastating disease."



Despite the ongoing Sudanese war and other challenges, the worldwide coalition fighting Guinea worm, led by Global 2000, works diligently to ensure that every single Guinea worm case is detected and contained.

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Teaching villagers prevention techniques, such as filtering water, will help eliminate the parasite.

Photos: Billy Howard



GUINEA WORM

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At the Bamako conference, President Carter, former Malian head of state General Amadou Toumani Touré, and health workers from all endemic countries urged citizens to launch a final, massive assault against the parasite. Country representatives exchanged ideas on helping villagers stay focused on eradication, and an exhibit of creative educational

materials and unique prevention devices was displayed.

The international donor community is also continuing the fight against Guinea worm. American Home Products (formerly American Cyanamid) has made another significant donation of the larvicide, Abate, in addition to in-kind donations of filter cloth received from DuPont and Precision Fabrics and vehicles from Keidanren.

Valuable financial contributions recently have been made to The Carter Center's Guinea worm eradication effort by Canada, Denmark, Finland, Japan, Luxembourg, the Netherlands, Norway, Qatar, the United Kingdom, and the United States, as well as from the Kuwait Fund and the OPEC Fund. Some of these have been channelled through a special new trust fund established and held by the World Bank, with

The Carter Center as executing agency. This is the first time a non-governmental agency has ever been named to such a position.

"The new World Bank trust fund for dracunculiasis eradication is indicative of the immense commitment of the global community," said President Carter. "Such strong support is critical as we begin the final push to wipe out this ancient scourge."

Agroprocessing: adding value to production

SAA's agroprocessing programme, conducted in collaboration with the International Institute of Tropical Agriculture (IITA), national Ministries of Agriculture, and various NGOs, continued to expand its operations in 1997.

"While Ghana and Benin remained our primary area of operation," comments Toshiro Mado, SAA Programme Officer-in-Charge, "we also conducted field demonstrations of improved crop post-production technologies and equipment in Togo, Guinea, Nigeria, Burkina Faso, Mali, Ethiopia and Uganda. In addition to our demonstration work of food processing equipment and technologies to farmers' groups, we also are reaching out to local manufacturers to strengthen their capacity to fabricate such equipment."

The equipment and process technologies, developed by the staff of IITA's Post-harvest Development Unit, serve a broad range of postharvest needs – from grain shellers and threshers, to cassava chippers, graters, presses, to improved fireplaces, to flour mills. Both hand- and motor-powered models are available for most equipment.



Postharvest processing in Guinea: a multi-crop thresher has been imported from IITA and threshers are now being manufactured locally.

The IITA-SAA partnership has been very effective and productive. IITA staff are responsible for developing and modifying prototype equipment as required to serve the needs of small-scale farmers, and also provide the vital manufacturers' training to local fabricators. SAA staff and national organisations focused on working with farmers groups who will use the new

technology. During 1997, more than 3,000 farmers in Ghana alone participated in 48 field demonstrations, with several thousand more attending such demonstrations in other SG 2000 project countries.

FINANCIAL MEANS

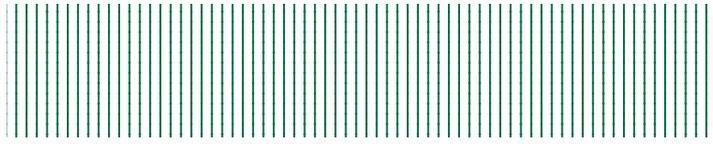
The purchase of various types of equipment is increasing rapidly. In 1997, farmers purchased several hundred pieces of equipment, worth nearly US\$ 60,000. Purchases by farmers from organised savings and credit organisations (CREPs) in Benin have been especially strong. With 15,000

members and US\$ 3 million in deposits, these CREP members have the financial means, especially when organised in groups, to purchase a range of harvesting and agroprocessing equipment needed to develop new business enterprises.

During August 1998, SAA and IITA will jointly sponsor a Training Course/Workshop, titled, "Development and Dissemination of Improved Crop Post-Production Technologies in sub-Saharan Africa." Hands-on training, led by IITA scientists Y W Jeon and L Halos-Kim, will be offered to some 24 postharvest specialists from SG 2000 project countries. At the end of the two-week course, participants will present the specific postharvest development action plans they have developed for each of their countries, to an international workshop made up of donors and government leaders responsible for funding such initiatives.

"Adding value to agricultural production," says Chris Dowswell, SAA Director for Programme Co-ordination, "is central to increased prosperity in sub-Saharan Africa."

Linked as it is to SG 2000's efforts to assist small-scale farmers intensify food crop production, the SAA/IITA agroprocessing project is an important strategy towards achieving this objective.



Four universities on course

The Sasakawa Africa Fund for Extension Education (SAFE), established in 1992, has two complementary and parallel tasks – to create opportunities for outstanding front-line extension staff from SG 2000 project countries in obtaining higher academic qualifications, while strengthening extension curricula in selected African universities of agriculture. Apart from curriculum enhancement, institution building includes the acquisition of teaching and reference materials and networking among the participating universities – thus helping to build strong pan-African academic links.

The new BSc course for mid-career extensionists started last year at Ethiopia's Alemaya University of Agriculture (AUA) with a first batch of 30 students from 4 of the country's 11 regions. A further 5 regions signed agreements with AUA in August and provided candidates for a second intake of 21 which started in October thus bringing the total number of students up to 51. Plans for this year include agreements between AUA and the two remaining regional governments. Under these agreements, the regional governments undertake to release their staff on study leave with full salary and take them back after graduation. They also provide support to the students during their Supervised

Enterprise Projects (SEPs) – undertaken in the field.

A workshop held at AUA last December, involving the Ministry of Agriculture, the staff of AUA and students, provided a further understanding of what the field extension projects or SEPs were expected to achieve. At the workshop, the students presented and defended their project proposals before their employers and AUA staff.

MUTUALLY REWARDING

"The students of the first intake have applied themselves diligently, revealing an impressive level of commitment," commented SAA's Deola Naibakelao, who runs the SAFE programme from Ghana. "The experience they brought with them to Alemaya has proved to be mutually rewarding for staff and students."

At the University of Cape Coast – where SAFE was first launched – there are 79 students currently involved in the programme: 27 post diploma, 25 third year post certificate and 27 first year post certificate. The post-diploma students have been engaged in their off-campus SEPs this February.

They should complete their studies in August/September and graduate in March 1999.

The immediate task at UCC is to consolidate the progress made since the inception of the programme. This will include correcting any shortcomings while institutionalising the SEPs component of the curriculum. Grant proposals will shortly be drawn up to be presented to national and international donor organisations to support the extension training programme – particularly the off-campus SEPs.

It is also hoped, in 1998, to reach a final decision on an agricultural college – hopefully Kwadaso Agricultural College in Kumasi – to handle the training of certificate holders to diploma. The diploma programme should be developed and launched in the 1999 academic year.

In Tanzania, Sokoine University of Agriculture (SUA)

Two MSc sponsored students at the University of Ghana, Legon, working on their data analysis with the assistance of the instructor (left). Second left is Dr Joe Geker, the academic supervisor. The students' degree course has been sponsored by SAFE.

is now ready to launch its BSc Agricultural Education and Extension Degree Programme for mid-career extension workers. The curriculum has been finalised by the university council. Funds are now being sought to enable the programme to start as soon as possible. In the meantime SAFE will sponsor and facilitate a small workshop with staff of SUA and UCC to clarify and streamline the implementation of SEPs.

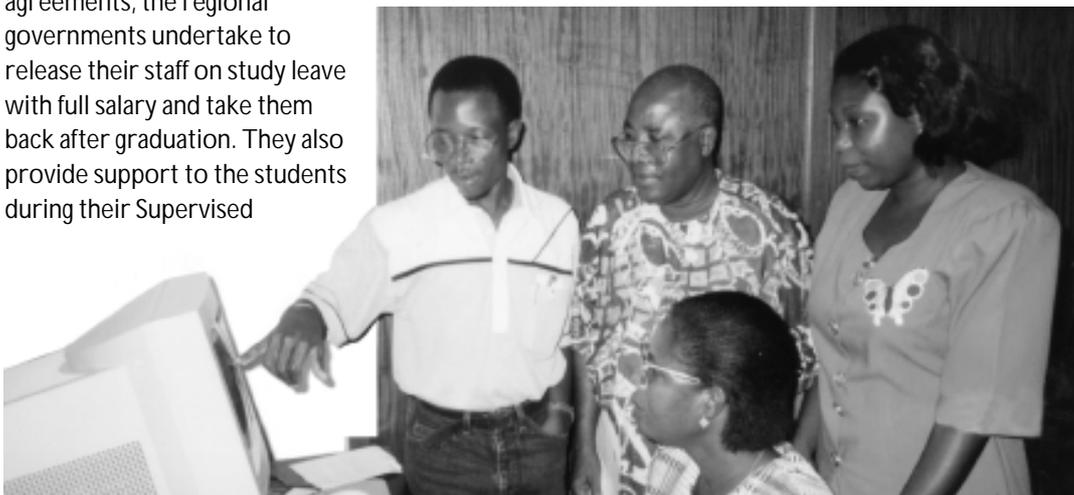
In Uganda, Makerere University launched, in November 1997, a BSc in Agricultural Extension and Education for mid-career extension workers – the fourth African university to be brought into the programme. The first twelve students have been enrolled, including one from Kenya. It is expected that a second batch of 24 students will enrol later this year.

The SAFE programme is run in collaboration with Winrock International Institute for Agricultural Development, headquartered in Arkansas, USA.

Extensionists from Mozambique are now benefiting from the SAFE programme

Following a visit by Deola Naibakelao to Maputo, Custodio Mucavele, Technical Director of Extension at DNER, the national extension service, will be taking his Masters in Extension and Economics at the University of Pretoria under Professor Jan Van Rooyen. This is being funded partly through the Southern Africa Development Community (SADC) and SAA through SAFE.

Inacio Nhancale, Head of Training at DNER, will be taking his BSc in extension at the University of Cape Coast, also with a SAFE scholarship.



SG 2000 country profiles

A round-up of project activities in project countries

BENIN

The field programme in Benin mainly focused in 1997 on demonstrating a new high-yielding quality protein maize (QPM) variety, and on improved rice production. The work to introduce the green manure crop, velvet bean (*mucuna utilis*), has been brought to a conclusion, since this technology has 'taken off', adopted by more than 100,000 farm families over the past four years.

Increasing lowland rice production continues to be a key area for SG 2000 support in 1998. Benin is importing more than 50,000 tonnes of rice annually, vastly exceeding production.

The CREP movement (the savings and loan associations for farmers and other members of the local community) continues to expand. By the end of 1997, there were 50 CREPs well established in Benin with 15,000 members and deposits of US\$ 3 million. Loans to members now exceed US\$ 700,000, and low

repayments are nearly 100%.

The CREPs are serving as a vehicle to finance crop production as well as agroprocessing enterprises. At a field day in October 1997, 1,597 rice growers from five CREPs, including 572 women farmers, raised a total of US\$ 66,000 – for the purchase of 250 tons of fertiliser for rice production. At the field day, agroprocessing equipment was also demonstrated including a motorised rice thresher; increased sales of these machines are anticipated.

"Rice production, using the recommended package, is very profitable," comments Marcel Galiba, Country Supervisor. "Using the CREP to support access to inputs," Galiba adds, "is a real step towards sustainable development. As a result, an increasing number of farmers are turning to rice production and using improved varieties and fertiliser, mainly DAP."

BURKINA FASO

The Nahouri Province was the first to be selected for the Ministry of Agriculture/SG 2000 field demonstration programme in 1996. Fifty-five kilometres from Pô, and close to the border with Ghana, the village of Boala is at the centre of a cotton growing area with millet, sorghum and rice as the main food crops. When the programme started, maize was limited to scattered fields, infested with weeds. Today, the

cropping landscape is rapidly changing.

Fifty farmers in the area were offered two varieties of maize – the QPM Obatanpa from Ghana and SR 21, a streak resistant variety with some drought tolerance. With guidance from Ministry of Agriculture extension staff, the farmers of Boala first protected their fields by building dykes to reduce soil erosion, made phosphate rock enriched compost pits, and then

applied the recommended technological package to their maize fields. An average maize yield of 4,500 kg/ha was recorded, with the maize also inter-cropped with lablab. Field days were organised in which farmers from neighbouring villages participated. The response was enthusiastic. Indeed, SG 2000 could not support all the farmers who wanted to join the scheme.

Boala has now become a focal point for the sale of Obatanpa and SR 21 maize variety seed. Increasing from 50 farmers in 1996, nearly 500

Burkina – the QPM variety Ma Songo ('good mother' in the local language) from Obatanpa seed from Ghana. The maize is intercropped with cowpea.

farmers planted maize in 1997, and the numbers are expected to exceed 1,000 in 1998. The Ghanaian QPM maize variety, Obatanpa, has been given a name in the local language, Ma Songo, meaning 'good mother'.

Collaboration between SG 2000/Ministry of Agriculture, Hydro Agri International and Novartis has been established to help extend the reach and impact of the field demonstration programme. These companies are providing product and technical expertise to backstop the technological packages. In addition, the companies are working with their local partners to extend input distribution systems to the village level.



ERITREA

Persistent and excessive rains caused serious damage in late 1997 and early 1998 to Eritrea's food crops. Some of the damage was due to shattering (as in the case of teff) but, with other crops, such as barley, wheat and sorghum, mould that grew on the head of the crop severely affected or spoiled the quality of the grain.

In the 1998/99 season, SG 2000 will sponsor 5,000 farmers on 0.25 ha plots, FAO will sponsor 5,000 farmers,

with the Eritrean government supporting a further 40,000 farmers. The objective is to have a total of 50,000 farmers growing demonstration plots.

"The strong financial backing being given by the government for the field demonstration programme," says Marco Quiñones, SG 2000 Country Director, "gives me real hope that the diffusion of improved crop technology to Eritrean farmers will continue, long after SG 2000 ceases to operate in the country."

ETHIOPIA



President Carter with farmers in Ethiopia last year.

in collaboration with researchers at the Ethiopian Institute for Agricultural Research (IAR); and 100 late blight-resistant potato varieties."

However, Quiñones notes, "SG 2000 will significantly increase its activities to assist frontline extension workers to introduce improved on-farm postharvest grain storage systems."

Finally, SG 2000 efforts are also planned to promote the development of community-based agroprocessing enterprises.

A report, recently released by the FAO, indicates that Ethiopia's 1997/98 main harvest of cereals and pulses may be 25% below last year's estimated figures. The report was produced following an FAO/World Food Programme crop and food supply assessment mission, which visited Ethiopia in November-December 1997.

The mission has forecast a 1997/98 main harvest of 8.8 million tons of cereals and pulses and estimates total grain import requirements of 530,000 tons in 1998. This includes 420,000 tons of food aid for relief to 5.3 million rural people affected by poor harvests and structural poverty. The rest of the shortfall is expected to be covered by commercial imports.

"In spite of these problems it is worth noting that the 1997/98 harvest will still be similar in size to 1995/96, which was the second highest harvest in Ethiopia's history," comments Marco Quiñones, SG 2000's Country Director.

The reduction in production is mainly attributed to the failure of the rains during the minor season, which usually provides for 15% of total national production. This was followed by late, low and erratic rainfall during the main season. The problem was also exacerbated by unusually heavy rainfall at harvesting time. A further factor was a 20% decrease in the use of fertiliser due to the removal of subsidies.

Prime Minister Meles Zenawi has publicly declared that his government is aiming to reach at least two million farmers in 1998 with improved technology through the national extension programme. "With such fantastic government commitment," notes Quiñones, "SG 2000 has drastically cut back its direct activities in support of field demonstrations. Only 1,000 plots are planned for 1998: about 600 in wheat, demonstrating line planting; 300 in sorghum, using striga resistant varieties developed by Purdue University scientists,

GHANA

SG 2000's Ghana project, its oldest, is in a Phase II mode of operation, with only maintenance budgets for selected activities. The Ministry of Food and Agriculture (MOFA) field demonstration programme, operated by the extension department, continues to establish around 2,000 extension test plots (ETPs) with selected farmers throughout the nation. ETPs in 1997 included more vegetable crops (pepper, eggplant), especially in areas nearer urban centres. A number of rice and cowpea ETPs were also planted.

The Crops Research Institute (CRI) released two new quality protein maize (QPM) hybrids, and a considerable number of ETPs in 1998 are planned to demonstrate these new QPM materials.

After a decline in availability of certified maize seed in 1997, production has been increased due to higher prices and the largest volume of seed to date

will be available in 1998. Of a total of maize seed production of 1,140 tonnes in 1997, the QPM variety, Obatanpa, consisted of 840 tonnes.

The collaboration with Monsanto in no-till farming continues to strengthen. This form of conservation farming is finally taking off, as more farmers deepen their skills in employing this technology. Several hundred ETPs in Brong Ahafo and Ashanti regions are demonstrating the no-tillage technology.

Ghana's National Soil Fertility Action Plan has now been completed. The Plan calls for emphasis on agricultural intensification. It further states that "loss in soil fertility mandates that immediate action be taken to increase the use of mineral fertiliser if we are to have sustainable production." The interdisciplinary Ghanaian/International Fertiliser Development Centre (IFDC) team of experts was led by Dr C S Ofori and the study financed by the World Bank.

GUINEA

The SG 2000 programme in Guinea is "well integrated with SNPRV (*Service National de la Promotion Rurale et la Vulgarisation*), the national extension service," says SG 2000 Country Director Tareke Berhe.

Over 1,400 farmers participated in the SG 2000 programme during 1997 in four regions covering 17 districts. The primary focus of the field demonstration programme was rice, Guinea's staple food. In addition, plots were established to demonstrate the green manure crop, mucuna, as well as groundnuts, soybeans, potatoes, and vegetable crops, such as tomatoes and okra. Quality protein maize (QPM) seeds were introduced from Ghana. Despite input constraints, results were encouraging with yields of up to 4.5 t/ha in both the maize and rice plots.

In 1997, SG 2000 also supported six research centres to carry out various lines of experimentation, mostly on farmers' fields. Individual farmers have also been contracted to produce seed for the programme.

In 1998, the number of participating farmers is expected to double with the programme extending into two more regions, each with five districts. Input delivery should improve this year with the entry of new private enterprises.

Postharvest processing is an important part of the programme with the importation of a multicrop thresher from IITA. In addition, two Guinean machinists were given one month of fabrication training in Benin. The two machinists have now manufactured two threshers and are expected to manufacture ten more in 1998. Local manufacturing of other IITA equipment (a cassava



processing machine and a rice polisher) is also expected to begin in 1998.

SG 2000 helped to establish, in 1997, five women's groups, with 200 women farmers, to produce vegetables and other crops. Inputs were loaned to grow potatoes, tomatoes, okra

and quality protein maize. Four of the groups have repaid their loans with the fifth expected to do so soon. In 1998 it is anticipated that more than 15 women's groups will participate in the scheme.

Representatives from the five women's grower groups and

Guinean farmer Ibrahima Sherif shows off his successful rice harvest.

five extension workers went to Ghana in 1997 for a one week training course on the utilisation of QPM and soybeans in national dishes. On their return to Guinea they conducted follow-up training courses for their remaining members, which were enthusiastically received.

Combating soil degradation, a major problem in Guinea, is being tackled through the promotion of mucuna and vetiver (a lush, sturdy and deep rooted grass used for the control of soil erosion). The mucuna area should increase to around 300 ha in 1998. The residual effects of mucuna on rice and maize yields are being studied at Kilisi and Bordo research stations.

MALI

The village-based savings and loans movement which has proved so successful in Benin and Togo – the *Caisse Rurale d'Epargne et de Prêt*, or CREP – was launched in Mali in 1997 in close collaboration with the Ministry of Rural Development

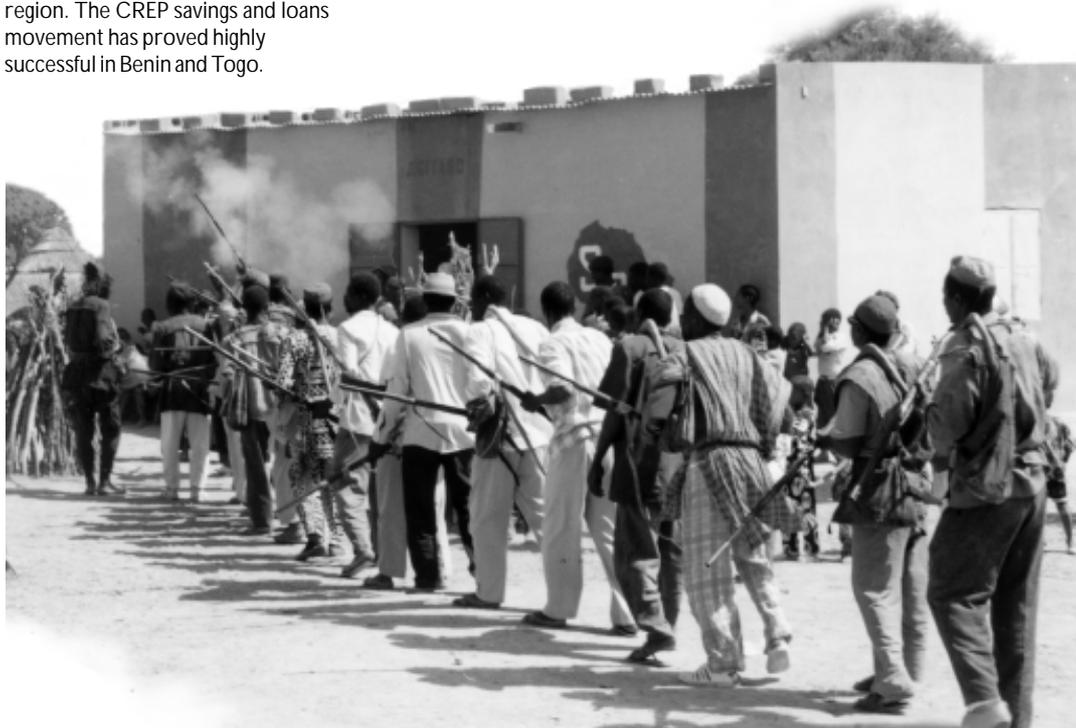
A ceremony to launch Mali's first CREPs – at Zambougou in Segou region. The CREP savings and loans movement has proved highly successful in Benin and Togo.

and Water. The CREP brings together the key members of the local community (farmers, small traders, artisans and cattle owners) who are prepared to contribute resources and create their own village bank as part of a savings and loans association.

The CREP movement has rapidly established a foothold in

Mali. The region of Segou was selected for Mali's first CREPs and, by the end of the year, five of the nine initially formed had completed the formalities of official registration and organisation.

Membership of these first five CREPs has reached 655 farmers, 270 of whom are women. Initial deposits exceeded US\$ 4000.



"This is an encouraging start," comments Country Director Marcel Galiba, "we regard the establishment of the CREP movement in Mali as a key part of our programme."

The introduction from Ghana of the QPM variety,

Obatanpa, in the Projet de Baguineda (a 3,000 ha irrigation project 30 kilometres from Bamako) has led to its adoption by 400 farmers on 200 ha of land. Rice is the main crop in this area from June to October but local farmers, following

maize field demonstrations last year, have enthusiastically embraced Obatanpa as an off-season crop. Hydro Agri International has donated 25 tonnes of fertiliser from its bulk blending facility in Abidjan, Cote d'Ivoire, to help expand the

Ministry/SG 2000 field demonstration programme. "Blended fertilisers have more precise nutrient formulas," says Marcel Galiba, "which are tailored to the specific needs of the crop on which it is being used."

MOZAMBIQUE



This project is in a Phase I mode of operation and continues to grow in scope. The field demonstration programme being developed with the Ministry of Agriculture and Fisheries (MOAF) extension service focuses on improved maize and rice production. SG 2000 Country Director Wayne Haag reports that "about 800 demonstration plots (670 maize, 130 rice) are planned for 1998 in Manica, Nampula, and Cabo Delgado provinces – also in Gaza and Sofala provinces in rice."

At present, high-yielding maize varieties (Manica-SR, Matuba and SEMOC-1) developed by the national research organisation (INIA) and the national seed corporation (SEMOC) are being demonstrated. However, work is under way to identify and release a suitable QPM variety for use by small-scale farmers.

Conservation tillage is part of the recommended production package. Monsanto is collaborating with national research and extension organisations and SG 2000 to

develop the best recommendations for this technology.

Efforts initiated in 1996 and 1997 to develop a network of input distributors to serve farmers in areas where demonstration plots are being grown, are producing results. More than 20 input stockists will be operating in such areas in 1998, supplying farmers with improved seed, fertilisers, crop protection chemicals and various farm tools.

The International Fertiliser Industry Association (IFA) will

Fernando Mavie, (right) of Mozambique's DNER (Rural Extension Directorate) who is also SG 2000's liaison officer – with a participating farmer in Manica Province.

hold its regional conference for Africa in Maputo in June. The Fertiliser Society of South Africa and SG 2000 have been involved in the development of the conference programme. Mozambique is one of several countries in Africa which are at an 'operational' level in the FAO Special Programme for Food Security. The Maputo conference is linked to the FAO initiative.

Meanwhile MOAF and SG 2000 have been working closely with IFDC. Several Mozambicans attended IFDC workshops and training programmes in South Africa, Kenya and Togo in 1997. In April-May 1998, IFDC will conduct a fertiliser sector study to identify the best strategies to expand fertiliser use in Mozambique. The results

of that study will be presented at the IFA workshop.

The programme to promote collaboration between MOAF, INIA and Brazil's research organisation EMBRAPA on a range of agricultural research issues, including soil fertility and QPM, strengthened in 1997. With support from the World Bank and SG 2000, former MOAF Vice Minister José Pacheco led a team to Brazil in July 1997 to visit various centres – the national research corporation (EMBRAPA) as well as the Minas Gerais state extension organisation (EMATER MG). This visit was followed up by an EMBRAPA team visit to Mozambique in October. Out of these exchanges, a significant programme of scientific and technical co-operation has been developed between Mozambican and Brazilian institutions. It is scheduled to begin in 1998 and continue into the next century.

Data obtained between May and July last year involving 155 maize farmers participating in the SG 2000 project in Nampula and Manica provinces has now been analysed. Data was divided into lower, middle and upper yield terciles. Net income was calculated using a grain price of US\$ 128 per tonne. Prices ranged from a low of \$40 to over \$200 per tonne from May 1997 to February 1998.

Tercile	Manica (78 farmers)			Nampula (77 farmers)		
	1	2	3	1	2	3
Mean yield Kg/ha	1023	2374	3883	724	2163	3611
Net income US\$/ha	(45)	131	309	(27)	148	323

In the upper two yield groupings, yields and net income were promising, supporting the use of the technical package. In the lower tercile, yields were low resulting in net losses. However several low yielding plots suffered from severe flooding or drought and in many cases the full technology was not applied. Lack of acceptable weed control was the most obvious problem in low yielding fields.

Information supplied by MOAF, DNER (Rural extension directorate), MSU/USAID/MOAF Food Security Project and SG 2000.

NIGERIA



Over 11,000 farmers have participated in the SG 2000 programme in Nigeria since 1992, planting wheat and maize management training plots (MTPs) in the four northern states of Kano, Kaduna, Jigawa and Katsina.

"Irrigated wheat yields in the fadama riveraine belt have been excellent," comments SG 2000 Country Director José Antonio Valencia. "Wheat yields have averaged above 3 t/ha," he notes, "with the top 10% of plots yielding in excess of 4 t/ha. Wheat prices have been running around US\$ 300 per tonne, making wheat a very attractive crop for fadama farmers."

Maize yields in the programme are also quite spectacular. In the rainfed areas of Kaduna state, hybrid maize yields have averaged between 4 and 5 t/ha. In Kano and Jigawa states, where fadama farmers use supplemental irrigation, maize yields have consistently averaged over 5 t/ha of maize,



Safiyya Tukur, Director General in the Ministry of Agriculture and Natural Resources, Kaduna State, addresses delegates at last year's national maize workshop.

with the top 10% of plots yielding more than 7 t/ha.

The Agricultural Development Projects (ADPs) in Bauchi and Gombe states, which are responsible for agricultural extension, have taken up the MTP field programme methodology of SG 2000. Moreover, the Federal Ministry of Agriculture and the Federal Agricultural Co-ordination Unit (FACU) have been actively promoting this technology transfer approach in other states.

The successful introduction in Kano and Jigawa of new varieties of wheat seed, such as Seri, has led to seed request from most of the northern states where wheat can be successfully grown, as well as from the Republic of Niger. SG 2000 supplied 300 kg of Seri seed to the National Research Institute of Niger (INRAN) for multiplication and on-farm evaluation.

As a result of a joint seed multiplication programme, new IITA cowpea seed varieties were introduced last year on 36 MTPs in Kano, Katsina and Jigawa states. Last September, 92 farmers and extensionists attended a two day course of cowpea production and storage in Kano – also attended by officials of the Kano State Agricultural and Rural Development Authority (KNARDA), IITA scientists and SG 2000. Similarly, in collaboration with IITA, a soybean programme was

Nigeria's SG 2000 Country Director José Antonio Valencia, with extensionists and farmers.

started concentrating mainly in areas infested with striga, again targeting 12 farmers in each state. High-yielding, disease-resistant cassava varieties, too, were introduced during the wet season – with three cassava varieties from IITA being demonstrated. Cassava performs well, with little or no fertiliser being used, in the northern part of Nigeria.

This year some 1,500 farmers will grow new wheat MTPs in Jigawa, Kano and Katsina – with Bauchi and Gombe being allocated 40 MTPs each. Maize plots will be increased by 3,300, which will also include Bauchi and Gombe. All technical aspects of the programme have been developed jointly between SG 2000 and the ADPs, although funding for these new expansions is coming from the Nigerian government.

For the second year running, SG 2000 has collaborated in adaptive wheat research work with scientists from Ahmadu Bello University in Zaria and the Lake Chad Research Institute in Maiduguri.



Ways to control the menacing parasitic weed striga is a major research and production objective in Nigerian agriculture.

A national workshop on wheat production was held in Kano State in February this year. Organised by SG 2000 in collaboration with the Lake Chad Research Institute (LCRI), the Federal Agricultural Co-ordinating Unit (FACU), and the Agricultural development programmes of Kano, Jigawa, Katsina and Bauchi states, it was attended by a wide range of policy makers, scientists, agricultural extension workers, flower millers, representatives of agrochemical companies, farm leaders and farmers.

TANZANIA

Unfavourable weather conditions severely affected Tanzania's agricultural sector in 1997. The failure of the short rains and the lateness of the long rains had a serious impact on crop production. This was then further compounded by excessive rains, reportedly the result of the El Niño factor. Food import requirements for 1998 are estimated at 700,000 tonnes for maize, 28,000 tonnes for wheat and 22,000 tonnes for beans. However, the need to repair the transportation infrastructure after the ravages of El Niño may well be the greatest challenge of all.

As a Phase II project country, SG 2000 only supports a reduced set of activities in Tanzania. In 1997, the main programme components were maize-pigeonpea intercropping systems, animal traction, phosphorus enriched compost making, postharvest technology, and savings and credit co-operative societies.

In 1997 eight Savings and Credit Co-operative Societies (SACCOs) were formed; by year end, they had accrued savings of US\$ 30,000. Ministry of Agriculture officials are very pleased with these initial successes and plan to mobilise

many more farmers' groups to form SACCOs in 1998.

Efforts continue to spread the benefits of 'phospho-composting' technology, which was introduced into the Iringa region during 1996/97. In this technology, phosphate rock is inter-mixed with organic compost materials. Subsequently natural decomposition and acidulation helps to convert the

phosphorus into an available form for plant uptake. Several hundred farmers are expected to adopt this technology in the southern highlands during 1998, through the combined efforts of the Ministry of Agriculture, SG 2000, and IFAD.

The Ministry of Agriculture extension staff plan to expand the number of farmers participating in pigeonpea production (inter-cropped with

maize) in the Arusha and Kilimanjaro regions. The demonstration programme, which aims to improve soil fertility, reduce the cost of maize production, and provide better nutrition, grew from 300 acres in 1996 to 500 in 1997. The target this year is 900 farmers on one-acre plots.

SG 2000 Country Supervisor, Marco Quiñones, is intensifying his efforts on the agricultural

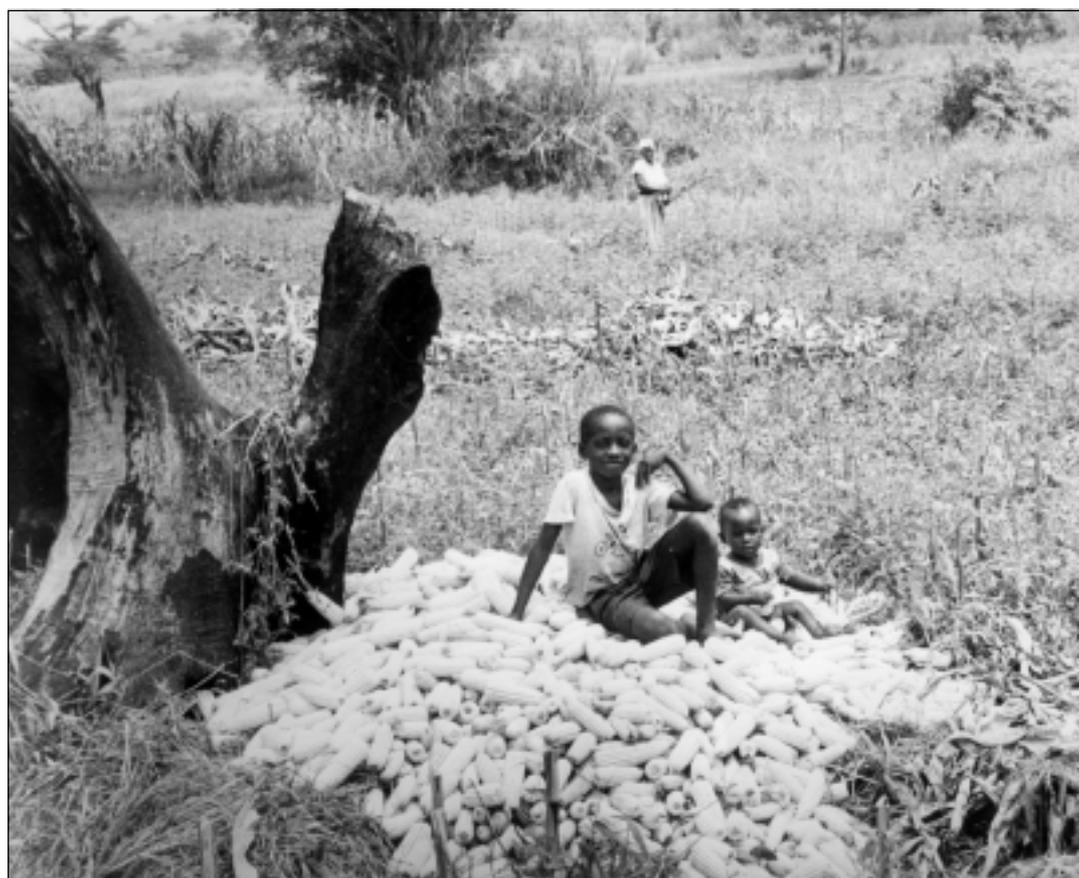
policy front. Objectives include the incorporation of input-assisted demonstration plots as a central feature of the national extension service; further grain market liberalisation, especially for maize; increased efforts to develop a national seed system, involving both public, private, and non-governmental organisations; and further development of a village-based input delivery system.

UGANDA

SG 2000 and the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF), made an encouraging start in Uganda last year to introduce a dynamic crop demonstration programme into the national extension system. More than 500 demonstration plots were established in seven districts. Despite high input prices, the profit from these plots was good in 1997, due to very good grain prices in the marketplace (above US\$ 250/tonne).

SG 2000 and MAAIF now plan to expand their joint crop demonstration programme to fourteen districts in 1998, with some 1,500 maize demonstration plots to be established with selected farmers. Input packages are being assembled for 1,200m² plots, which include two kg of seed, five kg of DAP and five kg of urea. A further 10,000 sets of these maize input packs (improved seed and fertiliser for 1,200m²) will also be produced and promoted in areas with demonstration plots by co-operating input stockists. The national maize seed organisation, as well as two major fertiliser suppliers, are now packing seed and fertiliser in units that correspond with SG 2000's maize demonstration package.

In 1998 SG 2000 expects to start seed multiplication programmes for pigeonpeas, beans and *Dolichos lablab* to



Issah Katambala, his baby brother – and newly harvested maize. Their father, Habidu Katambala, has just had a harvest of 26 bags from his 1,200m² plot using MAAIF/SG 2000 technical advice and supervision: quite a change from the eight bags he used to get, using traditional methods.

provide sufficient seed of appropriate companion crops for cereals in the various farming systems within the project area. Verification plots for sorghum and millet will be carried out in the more northerly and eastern locations of Uganda. SG 2000 also plans to help farmers grow around 200 acres of cassava resistant to

African cassava mosaic virus. These farmers will provide a source for improved materials to other farmers. Uganda's national cassava programme and IITA have allocated original planting materials for this scheme.

Training programmes for farmers with complimentary activities such as animal traction and post-harvest will be expanded in 1998.

"Farmers participating in the MAAIF/SG 2000 demonstration programme are becoming increasingly concerned about grain storage

capacity and methods as they begin to see their yields increase," says Country Director Abu-Michael Foster. Drying down maize and its safe storage still pose a major challenge to achieving food security in Uganda.

SG 2000 also plans to collaborate with the Government of Uganda and the World Bank in co-hosting an agricultural policy workshop in May, which will include a high-level meeting of the Agribusiness Forum, similar to the one held in Addis Ababa last September (see article, page 12).

AGRIBUSINESS FORUM ETHIOPIA: Identifying constraints to foreign investments

In February 1997, President Carter hosted a meeting of corporate leaders from six major agribusinesses, the World Bank, and senior SG 2000 management at the Carter Centre in Atlanta, to explore how best to accelerate private sector investment in agriculture in sub-Saharan Africa.

Out of this meeting SG 2000 established the Agribusiness Forum initiative, whose primary objective was to develop public-private-NGO partnerships that would facilitate increased agricultural investments in African nations.

The goals of this initiative included, identifying:

- the main constraints to increased private sector investment in agricultural research and development in sub-Saharan Africa;
- ways in which economic policy could be improved to create a more conducive investment environment for the private sector, both foreign and domestic – thereby increasing the flow of private capital to the region;
- what organisations, such as the World Bank, USAID, and European development agencies, could do to help promote increased private investment in the region;
- what was needed to develop stronger partnerships among public, private, and

non-government organisations to promote the delivery to farmers of productivity-enhancing new production technology.

COLLABORATIVE INITIATIVES

Participants at the inaugural meeting in Atlanta agreed to concentrate their initial efforts at developing collaborative initiatives in three countries – Ethiopia, Uganda and Mali – and to organise with national leaders high-level policy meetings to discuss the opportunities and constraints for increased private sector investment in agriculture in these nations.

The first of such national Agribusiness Forum meetings – which lasted most of the day – took place in Addis Ababa in August 1997. Chaired by Prime Minister Meles Zenawi and Dr Marco Quiñones, SG 2000's Country Director for Ethiopia, the meeting brought together key ministers and senior advisors concerned with economic development, foreign investment, and agriculture; senior representatives of the World Bank; the United States; SG 2000; and five major multinational companies involved in agribusiness in Ethiopia – Cargill, Monsanto, Novartis, Pioneer Hi-bred International, and Hydro Agri International.

Ethiopian government officials developed an excellent information packet on the country's foreign investment law, parastatal companies and

state farms that were up for sale, and summaries of feasibility studies in priority areas identified for private sector investment.

Following these formal presentations by Ethiopian government officials, the meeting was opened for discussion about problems arising either with official government policies or the implementation of such policies. All the companies represented at the meeting had a range of business dealings and investments in Ethiopia, so the discussions were lively and to the point.

EXCESSIVE REGULATION

The multinational business representatives expressed concerns over the excessive regulation of the Ethiopian economy; the areas of the business sector excluded to foreign capital; the time taken to obtain export licenses; problems in repatriating profits; and the limitations of the tender system for imports. Access to local markets was identified as a key limitation for potential investors.

In his response, the Prime Minister said that the restrictions currently in place on foreign investors were not permanent and were established to protect the small local investor, as Ethiopia moved from a command to a market-oriented economy. He acknowledged that monopolies, both private and public, still existed. He also was critical of

some local private investors whose behaviour was not always exemplary.

On the issue of land tenure, the Prime Minister said that small landowners were not free to sell their land. However, they did have security of tenure. In the lowlands, he pointed out that land was under-utilised, especially in the lowlands – the area of greatest irrigation development potential. These tracts would be made available on long-term leases at low prices. The government wanted to encourage foreign investment specifically in this area.

The Prime Minister made it clear that he and his colleagues recognised the importance of private sector investment, which had increased from 11 to 19% of GDP in recent years. Still, he acknowledged that foreign direct investment had been much less than expected, and that his government was keen to find a common ground which would permit much larger flows of capital, technology, and managerial know-how.

G Edward Schuh, Chairman of SG 2000's Agricultural Council of Experts (ACE), commented at the end of the meeting, "there was an excellent exchange of ideas with the participants being frank and forthcoming. However, the 'proof of the pudding will be in the eating', which will be reflected in further policy reform in the future that provides incentives for private investment."

The Addis meeting provided a neutral forum to discuss foreign investment policies and practices. It allowed senior officials from the private and public sector to meet each other and establish important contacts for the future.

Workshop '97

securing the production base

Second generation problems including "adequate rural infrastructure, an effective marketing network for inputs and outputs and the provision of rural credit in a sustainable manner," were described by Prime Minister Meles Zenawi as major bottlenecks constraining agricultural productivity gains in

Dr Norman Borlaug, Yohei Sasakawa, ministers of agriculture from eight SG 2000 project countries, directors-generals of several international research centres, senior representatives of donor organisations and major private sector agribusinesses. Two days of field trips were followed by

protein deficiency on the continent, be encouraged. The ministers acknowledged that traditional agriculture depleted soil fertility and increased erosion. In the second session, the World Bank's Graeme Donovan urged for an increase in agricultural intensification as necessary for economic growth and environmental protection, but lamented the slow-down in funding for agricultural research – from both national and international sources.

During the workshop, participants divided into groups to identify high priority measures to be decided by governments to ensure sustainable rural development. Emphasis was put on strategic decisions to be taken by governments, agencies and the private sector to ensure agricultural intensification by securing the production base. These included identifying the areas where governments should concentrate their efforts – and those areas where the market should be free to operate.

In a concluding session Ed Schuh, Dean of the Hubert Humphrey School, University of Minnesota, and Chairman of ACE, argued that poverty alleviation was the key to food security and that the modernisation of agriculture was the key to poverty alleviation – "because it works on both production and income and its effects go well beyond the agricultural sectors."

Norman Borlaug cited the tremendous agricultural accomplishments that began in Asia during the 1960s and 1970s. "The same principles – science-driven agriculture supported by production inputs

"If we want to have the technology in the marketplace in the year 2010, we need to start today"

*Bernard Auxenfans,
Group Vice President, Monsanto*

two days of meetings. While no formal resolutions or recommendations were adopted, consensus on a number of important topics was reached and valuable information was exchanged and debated.

The pre-workshop tour themes included crop/livestock diversification and modernisation; research and extension; developing input delivery systems; output marketing and agro-processing enterprises; and developing financial intermediaries.

FACING CHALLENGES

In the first workshop session – "facing the challenges of rural development" – President Carter challenged the African ministers by asking why only 3% of foreign investments in the developing world came to Africa (and half of that to South Africa). He also urged that micro-loans, particularly to women, be increased and that quality protein maize, potentially a solution to human



"Why is it that the infrastructure which is so vital to 70% of the population is so inadequate? Is it due to the quiet political voice of the rural population?"
*Edward 'Kim' Jaycox,
former vice-president for Africa,
The World Bank*

and sound policies – are applicable to Africa," he said, "But the task ahead is great and time is passing too quickly."

Workshop proceedings are currently being published. For further information contact Raitt Orr & Associates.

Photos: Robert Grossman

Partnerships for development

Deepening areas of co-operation between the various stakeholders in Africa's agricultural development will be the theme of Workshop '98, to be organised by the Centre for Applied Studies in International Negotiations (CASIN) in Switzerland in September. Entitled, "Strengthening Partnerships for Rural Development in sub-Saharan Africa," the workshop will review a series of organisational partnerships (many involving SG 2000) linking agricultural research, technology generation, agricultural extension, market development for agricultural inputs and outputs, and the promotion of collective action among farmers.



Ethiopia, when he opened Workshop '97, held in Addis Ababa in September last year.

Meles noted that the CASIN/SG2000 workshop, entitled "Agricultural Intensification in sub-Saharan Africa: Securing the Production Base", intended to address these issues.

The workshop was attended by more than 100 decision makers, including former US President Jimmy Carter,

"Let us be specific about the agriculture of tomorrow. The goals must be intensification and investment"

*Michel Koutaba,
Minister of Agriculture and
Animal Resources, Burkina Faso*



Agriculture in sub-Saharan Africa: Urgent donor support needed concludes report

A survey team, commissioned by The Carter Center and the US Agency for International Development (USAID), has concluded that “the application of high-yielding agricultural science and technology – along with market reforms, trade liberalisation, and sound macroeconomic policies – will lead Africa to greater prosperity. Without agricultural improvement, there can be no sustained reduction in poverty. Yet we often forget that the agricultural base in sub-Saharan Africa has not been secured. These nations must get back to the basics and improve agricultural productivity and output. There is urgent need for greater donor support for these efforts.”

The team, led by Dr E T York, Chancellor Emeritus of the State University System of Florida, and including Dr Balu Bumb, Senior Economist at

the International Fertiliser Development Centre, Alabama; Dr John Coulter, an agronomist and soil scientist formerly with the World Bank; Dr Ralph Cummings, Senior Economist with USAID; and Dr Michael Weber, Professor, Agricultural Economics Department at Michigan State University, spent over three weeks visiting three countries in which SG 2000 has been involved – Ghana, Uganda and Ethiopia.

In each country the team met with government officials, private sector leaders, NGOs, bilateral and multilateral donors, farmers and other groups, as well as visiting SG 2000 projects.

A primary objective of the mission was to identify opportunities for the international donor community, including USAID, to contribute to efforts aimed at achieving sustainable agricultural intensification in the region.

INCREASED PRODUCTION

In its recently published report, “an assessment of strategic opportunities for sustainable agricultural intensification in sub-Saharan Africa”, the team commented that “various efforts, especially those of the SG 2000 agricultural programme, have demonstrated the potential for a marked increase in food crop production resulting from use of inorganic fertilisers, improved seed varieties, timely weed control. Yet many problems or constraints may keep the average farmer from benefiting from these technologies.”

The report summarises the extensive array of problems “that severely limit progress. While some advancement is taking place, it is not great enough or rapid enough to confront poverty and human misery so pervasive throughout the region.”

The report focuses on key sectors where significant improvements should be made, such as macro-economic and sector policies; agricultural extension; agricultural input supply; physical infrastructure; agricultural research; rural credit; and agricultural marketing systems.

It is important, states the report, “to understand the impact high-yielding food crop technologies can have on poverty reduction and human progress in Africa. More plentiful and efficiently-produced foods can lower real prices, which effectively means increased income for all consumers. In these cases, the

poor benefit more, since they spend a larger percentage of their income for food. Higher wages increase consumer purchasing power which, in turn, leads to increased economic growth throughout the economy. Improvements in the agricultural sector can become, and must become, the engine to drive economic development.”

The report points out that a major constraint associated with macroeconomic and microeconomic factors at the farm level is the unavailability of fertilisers at affordable prices. “Most countries in sub-Saharan Africa do not have market demand and raw materials to justify primary production of fertilisers, where economies of scale are fundamental to efficient production. Therefore, in the near and intermediate-term, most of these countries will depend on imports to satisfy fertiliser needs.”

WORK TOGETHER

At the macro level, states the report, three areas should receive priority: policies, programmes and actions. “First, national governments and donors should work together to ensure adequate and timely supply of foreign exchange for fertiliser imports and technical know-how... the donor community can help ensure and sustain the supply of fertilisers and other modern inputs by providing foreign exchange, preferably in untied form and without unnecessary conditions. Second, donors, especially the World Bank and IMF, and national governments should work together to stabilise the exchange rate in countries

Survey team in the field during the three country tour.
Second from right, E Travis York, team leader and Chancellor Emeritus of the State University System of Florida.



where the continuous depreciation of domestic currency value discourages fertiliser import and private sector investment. Failing this, national governments should guarantee the exchange rate for a period of at least six months on foreign exchange needed for importing fertilisers and associated inputs. A guarantee can easily reduce the local price of fertilisers by 20 to 30 percent and promote their use by small farmers. Third, increasing liquidity with commercial banks is important to augment the supply of loan funds for the import and domestic sale of inputs and to reduce and stabilise real interest rates.

"Targeted assistance from the international donor community could make fertiliser use more profitable – as it is in more developed regions – by increasing the efficiency of use, reducing the cost to the farmer, and increasing market prices for farm products."

For copies of the report contact Raitt Orr & Associates in London (details on back page).

ABOUT SASAKAWA-GLOBAL 2000

Agricultural projects of Sasakawa-Global 2000 are operated as joint ventures of two organisations – Sasakawa Africa Association (SAA) and the Global 2000 programme of the Carter Center in Atlanta. SAA, whose president is Dr Norman E Borlaug, serves as the lead management organisation for the SG 2000 projects in Africa. Working through Carter Center's Global 2000 programme, former US President Jimmy Carter and his advisors provide policy advice to national political leaders in support of programme objectives. Funding for SG 2000 projects comes from the Nippon Foundation whose president is Yohei Sasakawa.

Victoria Sekitoleko joins SAA Board

Victoria Sekitoleko, the FAO's Sub-Regional Representative for Southern and Eastern Africa, has accepted an invitation to join the SAA board of directors.

Uganda's Minister of Agriculture, Livestock and Fisheries from 1988 to 1995, she was previously Deputy Minister for Agriculture and Forestry from 1986 to 1988. She joined FAO in her present post in 1995, based in Harare.



Photo: Robert Grossman

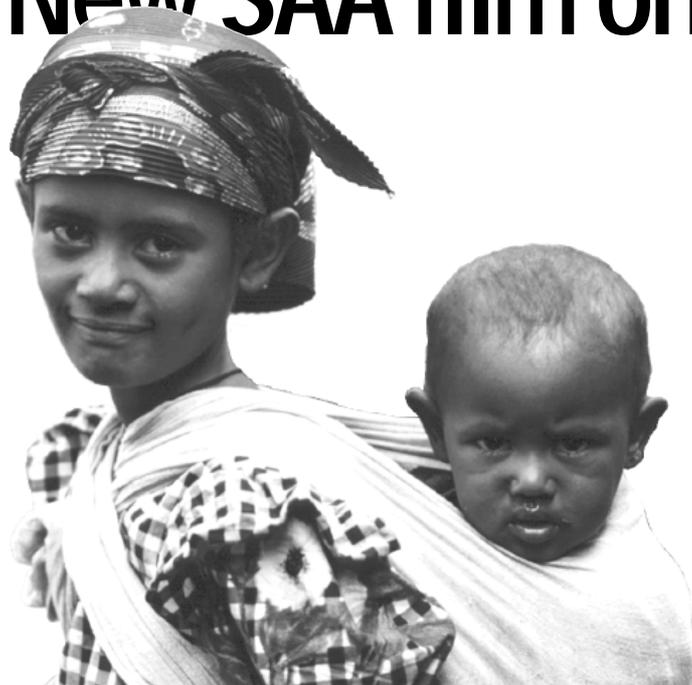
Prior to entering politics, Victoria Sekitoleko was chairperson of the Women's Non-Governmental Organisation of Uganda. She holds a BSc in agriculture from Makerere University and worked, for thirteen years, in

the Uganda Development Bank.

Commenting on the SG 2000 programme she says, "a good thing about the SG 2000 programme is that it is a people's programme – it encourages people's participation. Secondly, it becomes part of the extension system of a country and does not upset what is already existing. And, lastly, it involves women among the beneficiaries. I'm particularly happy with that."

SAA President Dr Norman Borlaug comments that her "energies, abilities and unswerving support for gender issues in women's agriculture will make a big contribution to our work on the Board."

New SAA film on Ethiopia



The Sasakawa Africa Association has another film on African agriculture, "Ethiopia: My Hope, My Future," which has recently been made by the London documentary filmmaker, Tony Freeth, of Images First Ltd. Previous films in the series include: "Fulfilling the Promise – Quality Protein Maize" (1997), "Breaking the Mould – Bringing Africa's Universities into Development" (1997), "You Can't Eat Potential" (1996), Facing the

Future (1996) and "Feeding the Future" (1988).

"Ethiopia: My Hope, My Future", looks at the transformation of Ethiopian agriculture from the appalling famine which killed a million people in the mid-1980s to a doubling in cereal production from 1993 to 1996. In fact, in 1996, the country was self-sufficient in food for the first time in 20 years (and even exported maize to neighbouring Kenya in 1997).

The film surveys the rapid transformation in agricultural methods of several farm families in the Shashemene area in the southern highlands. How are their lives changing? What is needed to promote and sustain the transformation of their agriculture?

The film looks at the current strategy of the government headed by Meles Zenawi to intensify production in the more favoured agricultural areas. It examines the difficulties in switching from a centrally controlled command economy to a decentralised market economy, especially the crippling lack of infrastructure and market information systems.

The film also includes contributions and analysis from Prime Minister Meles Zenawi, President Jimmy Carter, Dr Norman Borlaug, and Edward Jaycox (former World Bank Vice-President for Africa).

For information on the availability of the film, in English and French, contact Raitt Orr & Associates in London

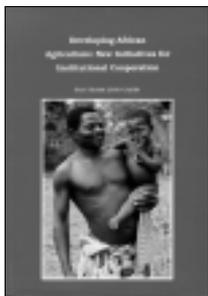
SG 2000 PUBLICATIONS AND VIDEOS

For copies please contact Raitt Orr & Associates Ltd in London.

Publications



Proceedings of Workshop 1992: Policy Options for Agricultural Development in Sub-Saharan Africa.



Proceedings of Workshop 1993: Developing African Agriculture: New Initiatives for Institutional Cooperation.



Proceedings of Workshop 1994: Strengthening National Extension Services in Sub-Saharan Africa.



Proceedings of Workshop 1995: Achieving Greater Impact from Research Investments in Africa.



Proceedings of Workshop 1996: Overcoming Rural Poverty in Africa.



Proceedings of the 1996 Workshop on Women, Agricultural Intensification, and Household Food Security.



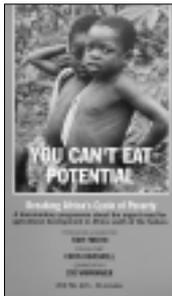
This is SAA: An Introduction to the Work of the Sasakawa Africa Association.

VIDEO JUST RELEASED



Ethiopia, My Hope... My Future... - The 'Green Revolution' in Ethiopia (see page 15). 1998.

Videos



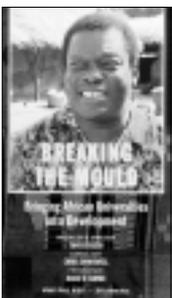
You Can't Eat Potential - Breaking Africa's Cycle of Poverty, 1996.*



Facing the Future - The SG 2000 Programme for Agricultural Development in Africa, 1996.*



Fulfilling the Promise - How Nutritionally-improved Maize can Alleviate Malnutrition in Maize-dependent Countries, 1997.



Breaking the Mould - Bringing African Universities into Development, 1997.

All videos are available in English and French. Video formats are PAL, Secam and NTSC.

* Also available in Japanese.

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