

# Market Reforms, Research Policies And SADCC Food Security



*Edited by*

*Mandivamba Rukuni & J.B.Wyckoff*

*University of Zimbabwe UZIMSU Food Security Research in Southern Africa Project*

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University of Zimbabwe  
P.O. Box MP 167  
Mount Pleasant, Harare, Zimbabwe  
Telex 26580 UNIVZ ZW  
Fax 263-4-732828  
Telephone 303211 Ext.1516

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## Regional Level Priority Setting In Agricultural Research And The Evolution Of SACCAR<sup>1</sup> Of SADCC<sup>2</sup>

*M.L. Kyomo*<sup>3</sup>

### SYNOPSIS

In 1980, the majority ruled independent states of Southern Africa, *i.e.*, Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe decided to forge an economic union. This was done through a declaration, "Southern Africa: Toward Economic Liberation". The new entity was named the Southern African Development Coordination Conference (SADCC). The sectors identified for cooperation included the productive sectors of agriculture, mining, industry and trade, and tourism. They included the key service sectors of human resources development, transport and communication. The agricultural sector was subdivided into the subsectors of agricultural research and training; livestock production and animal disease control; forestry; fisheries, wildlife, food security; and soil and water conservation.

The agricultural research and training subsector is coordinated by Botswana using a centre which was established by Charter. It has a Board of Governors comprised of Directors of research, some Deans of Faculties of Agriculture, Forestry and Veterinary Medicine, and some Directors of Agricultural Extension. Agricultural research and training priorities are set by either heads of state and government (top to bottom approach) or through studies on problems affecting farmers

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<sup>1</sup>Southern African Centre for Cooperation in Agricultural Research and Training.

<sup>2</sup>Southern African Development Coordination Conference.

<sup>3</sup>The author is currently the Director of the Southern African Centre for Cooperation in Agricultural Research and Training (SACCAR) of SADCC, Private Bag 00108, Gaborone, Botswana.

recommending priorities to higher organs of SADCC (a bottom to top approach). Through these approaches, SADCC has identified and is implementing projects and programmes which are bringing benefits to farmers and to the region generally.

### **Background**

The decision to launch the Southern African Development Coordination Conference (SADCC) on April, 1980 was made by Heads of States in Southern Africa. These, at the time included Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe. Namibia, which gained independence on March 21, 1990, joined SADCC on April 1, 1990 -- the day the organisation was celebrating its tenth Anniversary. Before 1980, the SADCC member states had been assisting each other in fighting for political independence. In the declaration, "Southern Africa: Toward Economic Liberation", these states declared their commitment to pursue policies aimed at economic liberation and the integrated development of their national economies. They identified areas in which, working in harmony, they could guide national development toward providing goods and services presently obtained from outside the region and thus weave a fabric of self-sufficiency through regional cooperation. The identified areas were the productive sectors of food, agriculture and natural resources; energy, industry and trade; mining and tourism. They also identified the key service sectors, human resource development and transport and communication. The main objective was to improve the welfare of member state citizens through creation of jobs, services, improved food security and allowing them to participate in intra-regional trade.

The Heads of State and Government also adopted a decentralised structure and small but efficient institutions established to manage the programme of action. In other words, they wanted all member states to participate in the development and management of projects and programmes while avoiding the creation of large bureaucracies.

They allocated the coordination responsibilities as follows:

COUNTRY	SECTOR
Angola:	Energy
Botswana:	(a) Agricultural Research and Training (b) Livestock Production and Animal Disease Control.
Lesotho:	(a) Tourism (b) Soil and water conservation
Malawi:	(a) Forestry (b) Fisheries (c) Wildlife
Mozambique:	Transport and Communication
Namibia:	To be allocated a sector by January 1991.
Swaziland:	Human Resource Development
Tanzania:	Industry and Trade
Zambia:	Mining
Zimbabwe:	(a) Food Security (b) Overall coordination of the large sector of food, agriculture and natural resources.

The coordination mechanisms were to be left to member states to develop using their own personnel and budgetary allocations. However, for transport and communication and agricultural research and training, it was to be the responsibility of all member states to contribute to their establishment and operational costs. The coordinating units established for these sectors were: The Southern African Transport and Communication Commission (SATCC) and the Southern African Centre for Cooperation in Agricultural Research and Training (SACCAR), respectively. Each unit, including the SADCC Secretariat which is located in Botswana, has their own charter defining their objectives, powers and functions.

## SETTING RESEARCH PRIORITIES

Priority areas in agricultural research are identified through a participatory approach, and set up through top-down and bottom-up approaches. The summit of SADCC, comprised of the Heads of State and Government, make, from time to time, broad policy directives. The agricultural researchers, through the Ministers of Agriculture and Natural Resources, translate these directives into concrete projects and programmes (see Figure 1 for organizational relationship). When SADCC was established, for example, the Summit directed that agricultural research should give attention to previously neglected rural communities in semi-arid areas. Hence the Sorghum and Millet Improvement Programme and the Land and Water Management Research Programme were developed and now are at various stages of implementation. These projects were followed by the Grain Legume Improvement Programme. This latter programme is developing improved germplasm in beans, groundnuts and cowpeas, the principal sources of protein for the resource poor, rural communities. The summit later directed agricultural research to develop projects and programmes to enhance farmers' food security. They identified horticulture and the related field of irrigation. The agricultural research and training sector has developed a project on vegetable research and will soon develop one on fruit and nuts. Projects on irrigation will be developed later. These are examples of the top-down approach in setting priorities in agricultural research and related training.

The bottom-up approach in setting research priorities also has been used. A consultancy firm, Devres Inc., was commissioned, after consultations between SADCC, through a Committee of Directors of Agricultural Research and CDA<sup>4</sup>. This firm was to conduct an inventory and assessment of country specific agricultural research, training and extension (Agricultural Research Resource Assessments -- ARRA), and do a regional analysis of existing agricultural research, extension and training resources to determine the medium to long-term needs and opportunities for agricultural research to increase agricultural productivity. They used local and international consultants from July 1983 through August 1984 to collect and analyse data and produce reports. The regional analysis and data are stored at SACCAR for reproduction and up-dating. Devres Inc. was commissioned by the same donors to work in the Sahel and produce similar reports for the Institute du Sahel (INSAH). For SADCC, it carried out an analysis of existing resources for each country, Table 1, and for the region, and developed a 20 year strategy to strengthen existing national and regional activities. The constraints identified are show in Table 2.

<sup>4</sup>CDA is defined in Appendix II, list of acronyms.



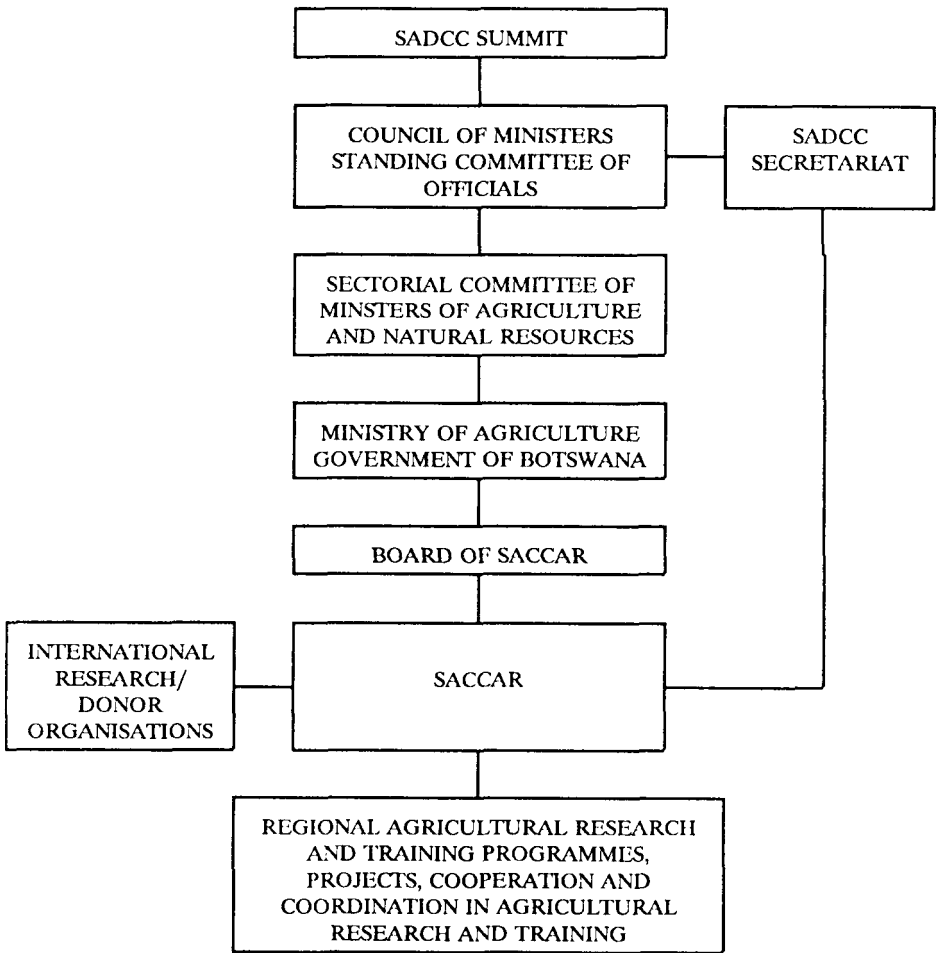


Fig. 1: Organisational relationships of SACCAR and SADCC

**Table 1**  
**Some basic resources for agricultural research and production in the SADCC<sup>1</sup>**

Country	Population 1 000	Labour force in Agriculture %	Agriculture contribution to GDP %	Total Land Area 1 000 ha	Land in Arable Agriculture %	Number of Graduates in Agric Research <sup>2</sup>	Hectares or Arable land per Grad	Additional hectares of potential	Hectares of total arable + pot. per grad
Angola	7 452	n.a	n.a	124 670	2,0	n.a	n.a	n.a	n.a
Botswana	940	83,0	12	60 037	2,0	46	29 565	n.a	n.a
Lesotho	1 640	87,0	31	3 300	13,0	18	23 889	0	0
Malawi	6 400	84,0	43	9 410	17,6	127	13 070	3 450 000	40 236
Mozambique	11 052	n.a	n.a	80 159	4,0	83	34 337	n.a	n.a
Swaziland	605	75,0	24	1 736	12,4	24	8 333	0	0
Tanzania	21 000	80,4	52	88 360	5,0	321	13 763	48 700 000	165 476
Zambia	5 679	67,0	13	75 000	2,0	197	7 309	9 000 000	52 995
Zimbabwe	7 546	n.a	15	39 024	6,0	222	10 547	15 609 800	80 861

<sup>1</sup> Data compiled from the Devres Agricultural Research Resources Assessment and the FAO document Trained Agricultural Manpower Assessment in Africa, Harare Conference, July 1984.

<sup>2</sup> In some cases this includes professionals in forestry, fisheries and wildlife.

Note: Namibia data not shown.

Source: SADCC Devres, 1984.

**Table 2**  
**Constraints being faced by national agricultural research systems**  
**in SADCC-DEVRES, 1984.**

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**DIRECT CONSTRAINTS -- PHYSICAL AND BIOLOGICAL**

- (a) Climate and ecological limitations
- (b) Losses due to pests, weeds and diseases and post-harvest losses.
- (c) Lack of adapted crop varieties and livestock species
- (d) Seasonal shortage of human labour and farm power

**INDIRECT CONSTRAINTS**

- (a) Economic constraints
  - (b) Constraints related to rural traditions
    - Land holding patterns
    - Livestock holding patterns
    - Low farmer status
  - (c) Constraints related to the role of women
  - (d) Constraints related to agricultural research, extension and training institutions and policies.
    - Lack of trained and experienced national professionals
    - Inadequate capacity and orientation of training
    - Lack of institutional collaboration and linkage into smallholders.
    - Institutional focus upon the commercial rather than smallholder sector.
    - Inadequate national and institutional budget and staffing policies.
-

The SADCC-Devres (1984) study also developed an agricultural research strategy for the region. The research objectives, strategy objectives and elements to implement the regional research strategy are shown below:

...Quote:

**"...A Regional Agricultural Research Strategy**

Objective:

The principal objective of the 20 year strategy for agricultural research is to achieve a significant increase in *per capita* agricultural output, thus increasing the well-being of the citizens of the region and promoting national food security in the SADCC countries.

Another important objective of the strategy was to ensure that, in the long-term, the means of attaining *per capita* increase in agricultural production are developed, adapted and implemented by African institutions.

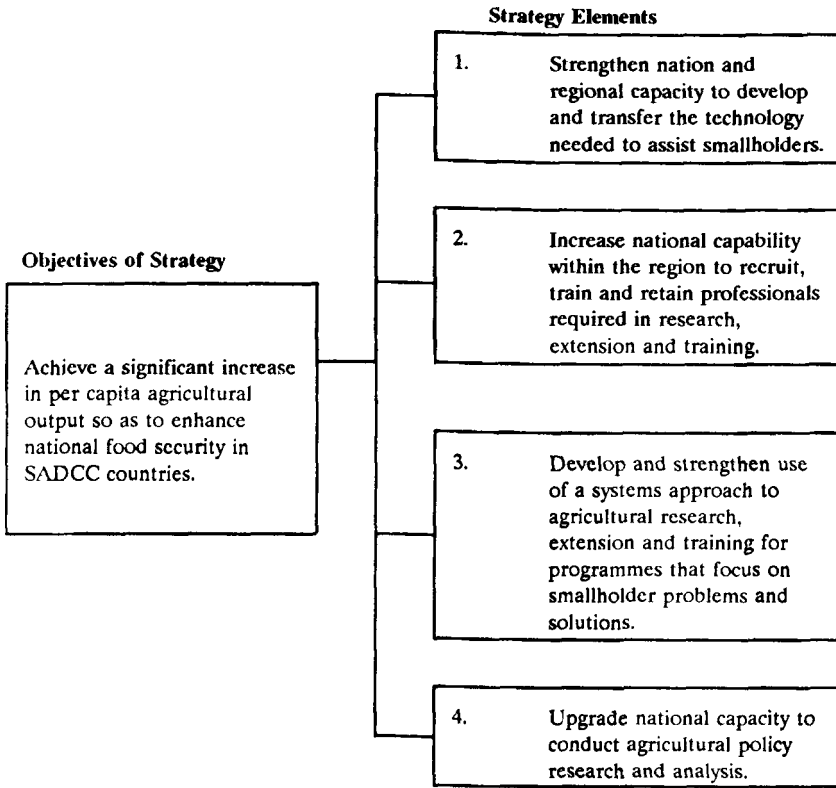
Both objectives are consistent with the proposals of the Lagos Plan of Action of the Organisation of African Unity (OAU) members, the UN and the World Bank.

SADCC and CDA donors have agreed that an essential element in achieving these objectives is agricultural research capability in the region. It has been recognised since 1983-84 that the means must be found to increase agricultural productivity to more than offset the region's rapid population growth while sustaining its fragile natural resource base. Further it has been recognised that these means must be rooted in African Institutions and implemented by SADCC at national and/or regional levels if food security goals are to be reached and sustained in the long term.

The proposed strategy supports national development goals which emphasize increased food production in the rural areas. When this is realised, it will contribute to:

- The welfare of rural population;
- Marketable surpluses of food crops, which can be available for the urban population at lower prices, and export crops;
- Increased *per capita* GNP;
- Increased foreign exchange earnings and savings;
- Lessened imports of food requirements and;
- Increased employment in rural areas.

(SADCC-DEVRES, 1984)



Source: SADCC Agricultural Research Resource Assessment (ARRA), DEVRES, 1984."

... Unquote.

A second example is the SACCAR organised workshops on constraints to agricultural production, extension or training in the majority of SADCC member states. The recommendations emerging therefrom are sent to the higher organs of SADCC for approval before the projects or programmes are formulated. Yet another example is where SACCAR is directed by its Board to commission studies by consultants in specific fields of agriculture. If the recommendations are to establish regional research projects or programmes, and if these meet the SADCC criteria for regional projects or programmes, SACCAR proceeds to develop them. The projects and programmes developed through these mechanisms during the first decade of SADCC are shown in Table 3.

**Table 3**  
**Identified regional research and training projects and programmes**  
**in SADCC during 1980 to 1990<sup>5</sup>**

Project/Programme	Location and Major SADCC Cooperating Partner and Executing Agencies <sup>5</sup>	Status in Implementation
Land & Water Management Research Programme (L&WMRP)	Botswana ODA EEC	First phase got underway in January 1987. The second phase in January 1989.
Sorghum & Millet Improvement Programme	Zimbabwe USAID, CIDA & GTZ (ICRISAT)	It is in its second five year implementation phase.
Utilisation of Sorghum & Millet for food, beverages.	Zimbabwe USAID, CIDA & GTZ (ICRISAT)	It is in the first phase of implementation.
Grain Legume Improvement Programme (GLIP): Groundnuts	Malawi GTZ (ICRISAT)	The components are at various stages of implementation.
Cowpeas	Mozambique EEC (IITA)	
Beans (Phaseolus)	Tanzania CIDA (CIAT)	
Agroforestry for the Savannah Woodland Grassland Ecology	Malawi Tanzania Zambia Zimbabwe CIDA (ICRAF)	Under implementation
Establishment of SACCAR	Botswana CIDA Norway ODA SAREC SADCC USAID (SACCAR)	First Phase of five years 1985 to 1990 was extended to 1992
In-service Training in Research Management	CIDA ODA USAID (ISNAR)	Under implementation
Crops & Forest Seeds Gene Bank (SRGB)	NORDIC countries Nordic Gene Bank (NGB) & SIDA	Under implementation

**Table 3 continued**  
**Identified regional research and training projects and programmes**  
**in SADCC during 1980 to 1990<sup>5</sup>**

Project/Programme	Location and Major SADCC Cooperating Partner and Executing Agencies <sup>6</sup>	Status in Implementation
Maize & Wheat Research Network	UNDP funded consultancy work	Consultancy report being analysed
Development for 4 M.Sc Programmes M.Sc in Animal Science M.Sc in Agricultural Economics M.Sc in Agricultural Engineering M.Sc in Agronomy	Malawi Zimbabwe Tanzania Zambia (GTZ)	Under implementation
Livestock Improvement Small-holder Dairy Small Ruminants Forages		Being developed with International Livestock Centre for Africa (ILCA)
Regional Vegetable Research Programme	(AVRDC)	Feasibility study completed. Project document developed and funding being sought.
Biological control of introduced pests of Maize and Cassava.	(IITA)	Project document finalised. Donor funding being sought.
Wool & Mohair Improvement Project	(Winrock International worked with SACCAR to develop project)	Donor funding being sought.
Management of vertisols (Black cotton soils in SADCC).	Botswana (-)	Donor funding being sought.
Network on draught animal power and mechanisation	(-)	Feasibility study under preparation and UNDP agreed to finance it.

### SOME IMPORTANT LESSONS ON COOPERATION IN AGRICULTURAL RESEARCH AND TRAINING

In addition to setting limits on staff numbers at SACCAR to avoid the creation of a top-heavy bureaucracy, SADCC has also encouraged SACCAR to aim for the maximum dispersion of programmes and projects around the region within the limits of ecological suitability. This ensures the maximum spread of benefits to national agricultural research systems.

SADCC itself is a relatively new initiative as a framework for promoting cooperation in different economic sectors of the region and has wider interests, not the least of

<sup>5</sup>For clarification of acronyms see Appendix II.

<sup>6</sup>Names of executing agencies are shown in parentheses.

which is its decentralised mode of operation. SACCAR, in turn, is evidence of the strong political commitment of the member states of SADCC to regional collaboration as a major route to serving both their individual and collective interests in developing strong and efficient agricultural research capabilities. The roles and functions of SACCAR, in this context, have been defined. The Centre, which has moved into its own purpose built accommodation, is now through its formative phase and into its fully functional mode.

It has been accepted by member states and donors alike that, if lasting benefits at regional and national levels are to accrue from regional programmes, the commitment to such initiatives must be long term. The task for SACCAR in discharging its leadership role in promoting cooperation, in ensuring that it remains well informed about both regional and national developments and needs, and in maintaining its service functions, is an arduous one. This activity would have been simpler if all the national agricultural research systems had been well developed. However, there are still some problems confronting National Agricultural Research Systems (See Appendix I).

It is too early to assess the impact of SACCAR in the region. It is anticipated that support for SACCAR at the political level in SADCC and through funding by donors and SADCC member states will continue for the next 15-20 years. This will provide ample time for its impact to become apparent.

There are many issues relating to the development of agricultural research capacity which should be featured in future action agendas. It is certain that the performance of SACCAR as a coordinating and activating centre will be closely observed both from within and outside the region. In common with SADCC, it represents a new and potentially very productive model for collaboration between countries on the world stage.



## APPENDIX I

### PROBLEMS BEING FACED BY AGRICULTURAL RESEARCH SYSTEMS IN SADCC

#### For Member States

1. Need to strengthen the education sector so that it produces an adequate number of well qualified students to enter higher education and, eventually, agricultural research, training and extension.
2. The shortage of human capital in scientific fields in Africa continues to be the greatest among developing continents. More investment in higher agricultural training is needed.
3. Scientific equipment is inadequate, needs repair and, in many cases, is obsolete.
4. Library services in Research Systems and Faculties of Agriculture, Forestry and Veterinary Medicine require urgent improvement in terms of text books, periodicals, documentation and reproduction.
5. There is a lack of adequate venues for publication of agricultural research findings. There is a low budgetary allocation to journals and other related literature.
6. Lack of incentives result in a very high turnover of staff in the research, training and extension systems.
7. Lack of adequate resources. Low budgetary allocations exist for agriculture in general and agricultural research training and extension systems in particular. Funds suffice only for salaries and are inadequate for carrying out activities.
8. Too little training for laboratory technicians and research assistants.
9. Shortage of manpower causes Directors of Research not to release staff to go for further training. This leads to frustration and resignations.
10. Universities lack development funds. Money is needed for hostels to house students from the region, visiting professor accommodations and for reading space in libraries.

#### For Donors

1. Some donors take too long to recognize regional research institutions as channels of addressing regional research issues and continue to prefer bi-lateral approaches. This leads to weakening regional organizations.
2. Executing Agencies have their own Boards of Trustees, as has SACCAR. Which one should prevail when it comes to implementing regional research and training projects and programmes still remains an issue! The region prefers that it be permitted to have its chosen goals respected.
3. Some Executing Agencies under CGIAR systems do not wish to be told that the Regional Body has given priority to some and not all commodities under their mandate. They attempt to add to regionally identified commodities. They claim that they are expected to promote all commodities under their mandate.
4. Some donors do not wish to involve National Research Systems in identifying problems and designing projects for solving them. The region has some experienced manpower who should be working with outside consultants in identifying problems and designing projects.
5. In conclusion, priorities defined by countries and regional institutions alert donors to indigenous requirements.

**APPENDIX II**

**LIST OF ACRONYMS AND ABBREVIATIONS**

AVRDC	Asian Vegetable Research Development Centre, Taiwan.
CDA	Cooperation for Development in Africa
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Centre for Tropical Agriculture, Columbia
CIDA	Canadian International Development Agency
CIMMYT	International Maize and Wheat Improvement Centre
CIP	International Potato Centre, Peru
CTC	Consultative Technical Committee of SADCC
EEC	European Economic Commission
IARC	International Agricultural Research Centre
IBPGR	International Board for Plant Genetic Resources
ICRAF	International Council for Research in Agroforestry
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics, India
IDRC	International Development Research Centre, Canada
IITA	International Institute of Tropical Agriculture, Nigeria
ILCA	International Livestock Centre for Africa, Ethiopia
ISNAR	Institute Service for National Agricultural Research, The Netherlands
NARS	National Agricultural Research Systems
NORAD	Norwegian Agency for International Development
ODA	Overseas Development Administration, United Kingdom Government.
SACCAR	Southern African Centre for Cooperation in Agricultural Research
SADCC	Southern African Development Coordination Conference
SAREC	Swedish Agency for Research Cooperation in Developing Countries
SATCC	Southern African Transport and Communication Commission
SIDA	Swedish International Development Agency
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
USDA	United States Department of Agriculture



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