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**MADIA**



MANAGING AGRICULTURAL  
DEVELOPMENT IN AFRICA

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U.S. AID TO CAMEROON  
ITS IMPACT ON AGRICULTURAL AND RURAL DEVELOPMENT

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Its Impact on Agricultural and Rural Development

by  
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## GLOSSARY

ACOSCA	African Cooperative Savings Association
AFGRAD	African Graduate Fellowship Program
AGMAP	Agricultural Management and Planning Project
AID	United States Agency for International Development (also USAID)
ASPAU	African Scholarship Program of American Universities
CamCCUL	Cameroonian Cooperative Credit Union League
CGIAR	Consultative Group for International Agricultural Research
CIMMYT	International Center for Maize and Wheat Development
CRSP	Cooperative Research Support Program
DAP	Development Assistance Program (AID document)
DEP	Departement des Etudes et Projets
DGRST	Delegation Generale a la Recherche Scientific and Technique (General Delegation for Scientific and Technical Research)
EEC	European Economic Community
ENSA	Ecole Nationale Superieur Agricole (National Agricultural School)
FAO	Food and Agriculture Organization
GRC	Government of the Republic of Cameroon
HPI	Heifer Project International
ICA	International Cooperation Agency
ICRISAT	International Crops Research Institute for the Semi- Arid Tropics
IITA	International Institute for Tropical Agriculture
INADES	Regional Agricultural Training in Africa Project
INTERAF	African Higher Education Program - Scholarships
IRA	Institut de la Recherche Agronomique (Institute for Agronomique Research)
IRRI	International Rice Research Institute
IRZ	Institut de la Recherche Zootechnique (Institute for Livestock Research)
ITA	Ingenieur Travaux Agricole
MESRES	Ministry of Higher Education and Scientific Research
MIDENO	Mission de Developpement de la Province du Nord- Ouest (North West Development Authority)
MIDEVIV	Mission de Developpement des Cultures Vivrieres, Maraicheres et Fruitières (Food Crop Development Authority)
MINAGRI	Ministere de L'Agriculture (Ministry of Agriculture)
MINEPIA	Ministere de L'Elevage, des Peches et des Industries Animales (Ministry of Livestock, Fisheries, and Animal Industries)
NCL	North Cameroon Livestock and Agricultural Development Project

NCRE	National Cereals Research and Extension
ODA	Official development assistance
PAID	Regional Rural Development Training
PROSEM	Projet Semencier (Seed Multiplication Project)
PVO	Private Voluntary Organization
RAPID	Resources for the Awareness of Population Impacts on Development (The Futures Group program)
SAFGRAD	Semi-Arid Food Grains Research and Development
SOCAPALM	Societe Camerounaise des Palmier
SODECAO	Societe de Developpement de la Cacao
SODECOTON	Societe de Developpement du Coton du Cameroon (Cotton Development Authority)
HEVECAM	Hevea-Cameroon (Cameroon Rubber Corporation)
TLU	Testing and Liaison Unit
UCCAO	Union Central des Cooperatives Agricoles de L'Ouest (Central Agricultural Cooperative Union of the Western Province)
UNDP	United Nations Development Program
WARDA	West African Rice Development Association
WHO	World Health Organization

## CHAPTER I. INTRODUCTION

This study examines the effectiveness of the US assistance program in Cameroon. Specifically, it attempts to assess the ways in which AID assistance contributed to Cameroon's agricultural and rural development, and to understand the underlying reasons for the relative success or failure of the various activities in achieving their developmental objectives. In cases where AID's effectiveness was limited, an attempt is made to understand the underlying constraints and endemic problems, and to suggest changes that could improve their performance.

AID documents consulted both in Washington and in Cameroon, as well as extensive interviews with AID personnel and relevant officials in Cameroon, form the basis of this study. Many of the interviews were conducted during a five-week stay in Cameroon in the fall of 1985, which included visits to several of AID's project sites.

The period covered by this report extends from 1961 to 1984. Because of the meager data for the earlier years, it is unavoidable -- and probably desirable -- that the more recent activities of AID weigh most heavily in the analysis. Several sections of the report will emphasize the 1975-85 period.

This is one of six country reports on AID's assistance to

Africa that, along with a six-country synthesis report (Johnston, Hoben, Dijkerman, and Jaeger, 1987), were commissioned by the World Bank in collaboration with AID.<sup>1</sup> The AID study, in turn, is one of seven donor studies being carried out as part of a larger research project entitled "Managing Agricultural Development in Africa" (MADIA), conducted by the Development Research Department of the World Bank.<sup>2</sup>

The report includes a detailed description of what AID has done in Cameroon, the reasons for AID's choices of activities, and an examination of the shifts in functional and sectoral emphasis. The impact of the program is assessed, both in terms of meeting the stated objectives of the project activities, and in terms of their contribution to fostering agricultural and rural development. The evidence on which the study is based is used to form generalizations and to suggest changes that would improve the development impact of AID's programs.

The nature of this study is inherently subjective. The benefits of many of AID's programs are not quantifiable and end-of-project evaluations are inconsistent in how they attempt to measure impact. To the extent possible, therefore, both objective information and subjective perceptions are combined in making reasonable judgments about the impact of AID's projects.

<sup>1</sup>The six countries are Cameroon, Senegal, Nigeria, Kenya, Tanzania, and Malawi.

<sup>2</sup>The other donor studies are on Danish, Swedish, West German, EEC, UK, and World Bank assistance programs.

### Conceptual Framework

The development impact of aid-supported activities will be examined within the context of how those activities contribute to agricultural and rural development. It is therefore necessary to establish an understanding of the nature and process of development, to provide a framework within which AID activities are placed. Much progress has been made in the last thirty-five years in understanding the development process. It is therefore appropriate to take from this literature a set of general propositions to guide our analysis. AID's effectiveness in furthering agricultural and rural development depends not only on how well its activities have achieved their specific goals, but also on whether the activities it chose to support constitute essential elements of a coherent, well-conceived strategy for agricultural development.

This requires postulating a reasonable and widely-held view of those crucial elements of the development process. For this purpose development is viewed as a "generalized process of capital accumulation" (following H. G. Johnson, 1969), in which capital is viewed broadly as physical capital (plant and equipment, natural resources), human capital (in the form of skills and competence), and social capital (in the form of economically useful knowledge, organizations and organizational competence). This conceptual framework is elaborated in greater detail in the companion six-country synthesis report (Johnston et al. 1987). This view of development includes the establishment of efficient social and

economic mechanisms for maintaining and increasing large stocks of capital, including policies and institutions that permit and encourage efficient use of that capital. In order to achieve this, a reasonable balance must be achieved among activities that foster growth in these various types of capital, as well as strengthening the various mechanisms that permit efficient use of those forms of capital. This approach includes recognition of the important contribution that technological change has made to agricultural growth (Hayami and Ruttan 1985, Johnston and Kilby 1975).

This view of development does not ignore the importance many give to judging development by welfare and equity criteria. Rather it incorporates the lessons learned from the "basic needs" approach popularized in the mid-1970s, which demonstrated that while investments in health, nutrition, education, and housing can contribute in important ways to increased human welfare and to economic growth, it is the growth in the economic base that makes it possible to finance these investments.

This view of the development process is now widely held among development specialists. Definitions of the essential elements of development put forth recently by Krueger (1986) and G. L. Johnson (1986) differ only slightly with the definition presented here. Johnson refers to the four driving forces of rural development as "technical change, institutional improvements, human development, and growth in the biological and physical capital base" (p. 1). Krueger stresses the importance of promoting "accumulation and efficient use of resources, the development of well-functioning

markets, efficient governmental provision of infrastructural services, and institutional development in both the private and public sectors" (p. 58) in order to achieve development goals.

#### Overview of AID's Program in Cameroon

Cameroon began receiving US foreign assistance after the signing of a bilateral agreement in May 1961. A liaison officer from the International Cooperation Agency (ICA), predecessor of USAID, was assigned to the US Embassy to assist in the negotiations of the bilateral agreement and to develop the first year's program. An AID mission was established in Yaounde in August 1961 with the arrival of the first mission director. Two years later, following completion of the director's tour of duty, the mission was dissolved and the director's duties were delegated to the Ambassador. AID personnel assigned to the Embassy under the direction of the Ambassador acted through the AID Affairs Officer. At the end of 1965 there were eleven direct-hire AID personnel and sixteen contract personnel in Cameroon.

It will be useful to divide AID's activities in Cameroon into four distinct periods. The first period, from 1963 to 1967, was characterized by low levels of aid, with no concentration of aid in any particular area. Projects were initiated on their own merits and not necessarily as components of an overall strategy for development. Individual problems of a newly independent nation were addressed: the need for roads, manpower training, cocoa disease control, and so on. Total economic assistance averaged

less than \$5 million per year during this period.

The second period, from 1968 to 1974, brought important changes in the way AID operated. These changes were largely the result of the 1966 Korry Report, an assessment of AID's work in Africa after five years of operation. The report recommended a shift toward concentrating bilateral programs on a small number of countries that had the size, resources, and performance to make good progress likely. Only ten of the thirty-three country missions and field offices survived this restructuring. The majority of the African countries, including Cameroon, fell under regional AID offices. Their country missions were dismantled as existing programs were phased out.

The Korry report also led to a shift toward multilateral assistance. Multilateral organizations were to be supported so that they could take the lead in many assistance activities.

During this period AID's bilateral mission in Cameroon was closed down. The mission staff went from twenty-two in 1967 to zero in 1971 (excluding staff for the regional office that was subsequently established in Yaounde). No new obligations were made during that period; only through regional activities was AID's work in Cameroon continued. These activities, administered from Washington and through field offices in Yaounde and elsewhere, were continued, but represented only a few projects spread over several countries.

The third period in AID's involvement in Cameroon resulted from two nearly simultaneous events; the 1973 Amendment to the

Foreign Assistance Act and the Sahel drought. The first of these, widely known as the New Directions legislation, instructed AID to redirect its efforts toward helping the poor and disadvantaged segments of the population. Bilateral programs reemerged in most of the countries from which AID had withdrawn after 1967, and aid flows grew. The needs of the rural poor (especially those in the poorest regions of the country) were addressed through programs in the areas of health and population, food, education, and human resource development. In part, the change in emphasis stemmed from the impression that foreign assistance was benefiting only the well-off. (Much of the evidence for this came from South Asia.) The conclusion drawn was that the "trickle-down" theory did not work and a new approach was needed to reach the poor. The second event, the Sahel drought, brought a great deal of attention to the plight of poor Africans and mobilized much support for alleviating their situation.

Together the legislative changes and the drought led to a program in Cameroon focusing on the northern part of the country, the poorest region, as well as the one most seriously affected by the drought. These events spawned projects such as seed multiplication and cereals research, livestock management, rural water supplies, and "young farmer training centers."

The fourth period was ushered in by a change in the leadership of the AID Mission in Cameroon, as well as by a "stock-taking" of the experience of the late 1970s. From 1980 to the present the AID program has been consolidated and focused. The overall number of

projects was greatly reduced, to be replaced by fewer, larger projects with a strong emphasis on agriculture -- especially in the areas of research, management, and human resource development. Obligations for project and program assistance grew from \$6.3 million in 1980 to \$22.5 million in 1984. And the share of AID assistance going to the agricultural sector grew from 25 percent in 1977 to 80 percent in 1982.

Most of the changes which occurred during the early 1980s came as the result not of beginning new projects, but of phasing out some activities and enlarging others. Of the projects begun in the New Directions/Sahel drought period most had been evaluated at least once by 1980. These midterm and end-of-project evaluations were often the basis for decisions to continue, expand, or abandon a particular activity. Some projects were abandoned, some were renewed for a second phase before being terminated, and others are still being supported by AID. The process by which these decisions were made, in light of the evidence provided in the early evaluations makes the 1980s perhaps the most interesting period to examine for insights into how AID works in Cameroon.

#### Organization of the Report

The paper is organized as follows. Chapter II provides a detailed breakdown of the AID program in Cameroon since 1961. The level of assistance is examined in terms of volume, content, and sectoral breakdown. Chapter III seeks to explain why AID chose to do what it did in Cameroon. In Chapter IV six AID projects are

analyzed for specific information both on the appropriateness of what AID chose to do and on how well it was implemented. The impact of AID's program is assessed in Chapter V. In Chapter VI the results of the analysis are summarized and recommendations made for improving AID's effectiveness. Since this is one of three country studies being done by the author, some explicit and implicit comparisons with the experience in the other two countries, Senegal and Nigeria, are incorporated in the last section.

## Chapter II. VOLUME AND COMPOSITION OF AID'S CAMEROON PROGRAM

The AID program in Cameroon has been small in relative terms, especially prior to 1978. Total US assistance from 1963 to 1984 amounted to \$168 million, of which \$128 million was AID project and program obligations. Table 1 reveals that in the 1960s Cameroon received about 1.5 percent of total US assistance to Africa. This share dropped off in the early 1970s. Since that time it has ranged from 1 to 3 percent. Annual obligations have grown from levels of \$1-3 million in the 1960s to \$10-20 million since 1978. Between 1969 and 1975 the AID mission was closed and only minor amounts of assistance appear. The importance of regional programs during this period is discussed below. Totals for US assistance are presented in current and constant dollars in Figures 1 and 2.

The United States has played a relatively minor role among donors involved in Cameroon. The former French colony has received the largest amounts of aid from France, Germany, and the World Bank. The US share of total aid receipts in the country was about 0.2 percent prior to 1975, increasing to 3-5 percent in the late 1970s and 1980s (Table 1). These aid flows average 0.6 percent of GDP in the 1960s and between 0.1 and 0.4 percent after 1976.



Figure 1  
Total US Assistance to Cameroon, 1963-84, in Current Dollars

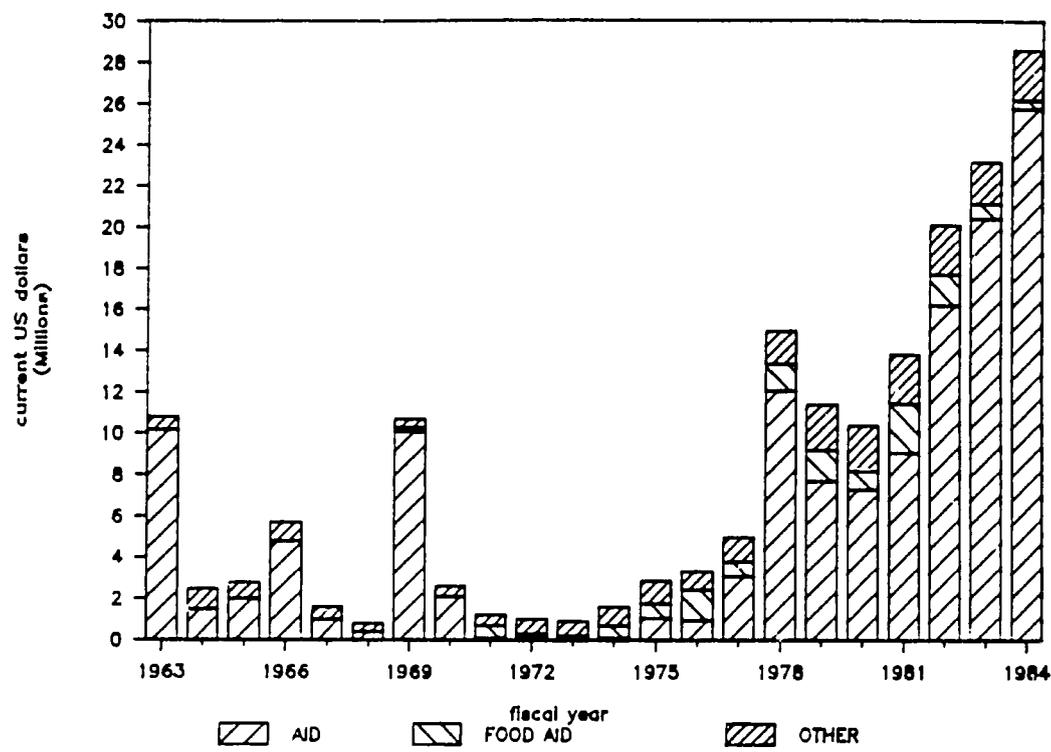
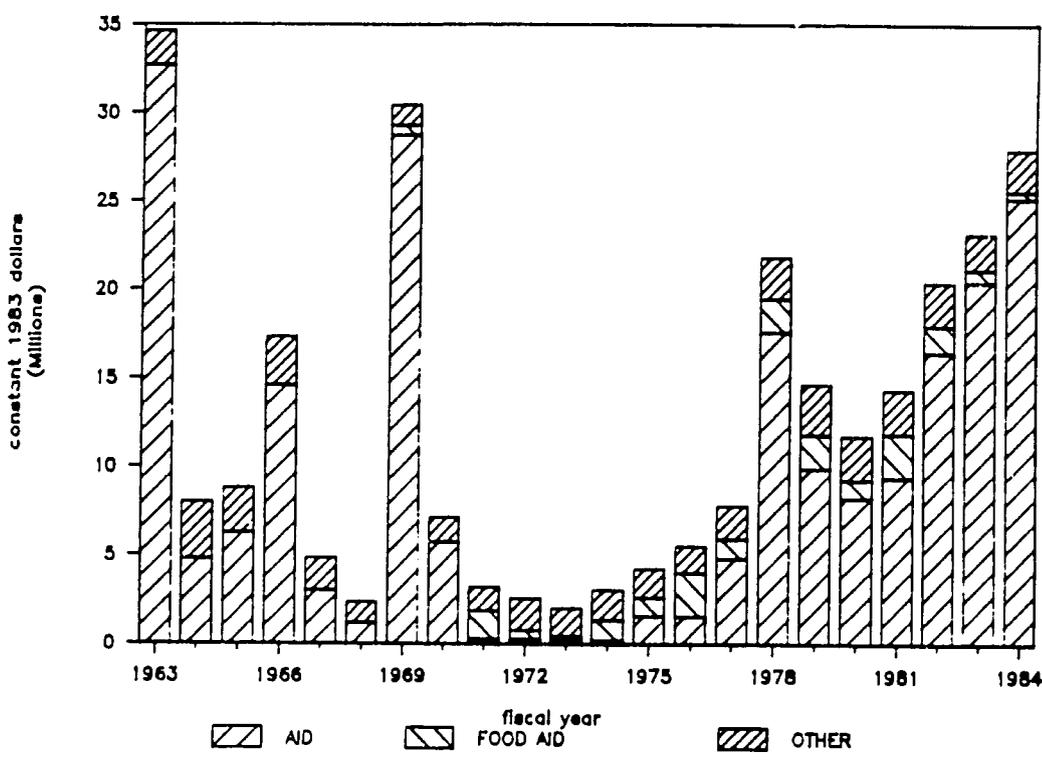


Figure 2  
Total US Assistance to Cameroon, 1963-84, in Constant 1983 Dollars



### Sectoral Distribution

US aid flows to Cameroon are broken down by sector and subsector in several tables and figures presented below. The categories were chosen with the view to the focus of this study and to consistency with the other MADIA donor studies. Funds for individual projects are divided among several sub-sectors when they contain several components. These shares are estimated from end-of-project financial data or project papers, and are invariant between years.<sup>1</sup>

Tables 2 and 3 reveal wide swings in the level and distribution of the US assistance program, in current and constant dollars respectively. Project and program aid drops from \$5.4 million in 1965 to nearly zero by 1969. From 1970 to 1975, when the mission was closed, levels stay near zero. This is misleading, however, since there was a simultaneous increase in regional projects, as discussed below. Later, after maintaining low levels of under \$1 million in the mid-1970s, the level jumps to \$12.1 million in 1978.<sup>2</sup> Figures 3 and 4 breakdown AID obligations to show agriculture and rural development.

Agriculture did not become the major focus for AID until 1979. Aid flows to that sector have kept growing since that time,

<sup>1</sup> In attributing project totals to subsectors for the period 1978-84, extensive use was made of "Agricultural and Rural Development: Functional Review FY 1978-1984" prepared by AID's Africa Bureau.

<sup>2</sup> These figures are for annual obligations which, as explained in a later section, tend to exhibit more variability than expenditure data.

Table 2. Sectoral Breakdown of AID Assistance to Cameroon, 1963-84, in Current Dollars

Sector/subsector	Total	1963-66	1967-70	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
----- in thousands of US dollars -----																	
AID PROJECT AND PROGRAM ASSISTANCE	136,185	18,495	13,600	100	100	100	100	1,070	940	3,100	12,100	7,700	7,300	9,092	16,282	20,500	25,806
AGRICULTURE	77,760	1,694	360	0	0	0	0	0	937	1,351	1,624	5,237	6,193	8,092	15,335	18,768	18,709
of which:																	
Crop production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage & processing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Input supply	11,792	500	0	0	0	0	0	465	269	352	19	140	130	2,068	5,585	2,264	
Credit	1,600	0	0	0	0	0	0	0	0	0	0	302	0	500	798	0	
Research	5,683	0	0	0	0	0	0	0	205	52	92	749	715	899	421	1,060	1,490
Extension	4,478	168	138	0	0	0	0	0	205	52	92	547	509	539	364	820	1,044
Education & training	34,771	258	84	0	0	0	0	61	979	38	121	110	279	10,482	9,208	13,151	
Planning & management	4,986	168	138	0	0	0	0	0	0	0	1,052	372	2,570	0	(73)	760	
Irrigation	6,469	0	0	0	0	0	0	0	0	0	1,875	1,309	3,225	0	0	0	
Marketing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Livestock	7,224	0	0	0	0	0	0	0	0	0	1,050	875	2,286	300	1,500	1,213	
Forestry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fisheries	757	0	0	0	0	0	0	0	0	0	0	450	150	0	157	0	
RURAL DEVELOPMENT	37,419	13,540	12,000	0	0	0	0	982	0	142	1,007	1,439	1,042	1,000	947	1,500	3,820
of which:																	
Infrastructure	26,310	13,540	12,000	0	0	0	0	770	0	0	0	0	0	0	0	0	0
Health & population	4,241	0	0	0	0	0	0	212	0	0	257	230	42	0	0	1,500	2,000
Education	5,700	0	0	0	0	0	0	0	0	0	750	1,000	1,000	1,000	950	0	1,000
Water supply	820	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	820
Community development	348	0	0	0	0	0	0	0	0	142	0	209	0	0	(13)	0	0
OTHER	21,266	3,861	1,240	100	100	100	100	88	3	1,607	9,469	1,024	65	0	0	232	3,277
FOOD AID	13,650	200	350	600	200	100	600	700	1,500	700	1,300	1,500	900	2,400	1,500	700	400
OTHER ECONOMIC ASSISTANCE	26,400	3,300	1,900	500	700	700	900	1,100	900	1,200	1,600	2,200	2,200	2,400	2,400	2,000	2,400
GRAND TOTAL	176,435	21,995	15,850	1,200	1,000	900	1,600	2,870	3,340	5,000	15,000	11,400	10,400	13,892	20,182	23,200	28,606

Source: USAID W-235 and COMG-R-0105 reports and project files.

Table 3. Sectoral Breakdown of AID Assistance to Cameroon, 1963-84, in Constant 1983 Dollars

Sector/subsector	Total	1963-66	1967-70	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
----- in thousands of US dollars -----																	
USAID PROJECT AND PROGRAM ASSISTANCE	213,839	58,165	39,326	266	255	225	189	1,581	1,557	4,839	17,641	9,910	8,240	9,407	16,496	20,500	25,241
AGRICULTURE	85,218	3,441	1,041	0	0	0	0	0	1,552	2,109	2,368	6,740	6,991	8,372	15,537	18,768	18,299
of which:																	
Crop production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage & processing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Input supply	13,488	1,572	0	0	0	0	0	0	770	420	514	24	157	135	2,055	5,585	2,215
Credit	1,645	0	0	0	0	0	0	0	0	0	0	0	341	0	507	798	0
Research	6,199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extension	5,528	528	399	0	0	0	0	0	340	81	134	964	807	930	426	1,060	1,457
Education & training	35,999	811	243	0	0	0	0	0	340	81	134	704	575	558	369	820	1,021
Planning & management	6,030	528	399	0	0	0	0	0	101	1,528	56	156	125	289	10,620	9,208	12,862
Irrigation	7,228	0	0	0	0	0	0	0	0	0	0	1,353	420	2,659	0	(73)	743
Marketing	0	0	0	0	0	0	0	0	0	0	0	2,413	1,478	3,337	0	0	0
Livestock	8,281	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forestry	0	0	0	0	0	0	0	0	0	0	1,531	1,126	2,580	310	1,520	1,213	0
Fisheries	820	0	0	0	0	0	0	0	0	0	0	0	508	155	0	157	0
RURAL DEVELOPMENT	90,681	42,582	34,700	0	0	0	0	1,451	0	222	1,468	1,852	1,176	1,035	959	1,500	3,736
of which:																	
Infrastructure	78,419	42,582	34,700	0	0	0	0	1,138	0	0	0	0	0	0	0	0	0
Health & population	4,487	0	0	0	0	0	0	313	0	0	375	296	47	0	0	1,500	1,956
Education	6,485	0	0	0	0	0	0	0	0	0	1,093	1,287	1,129	1,035	963	0	978
Water supply	802	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	802
Community development	488	0	0	0	0	0	0	0	0	222	0	269	0	0	131	0	0
OTHER	37,940	12,142	3,586	266	255	225	189	130	5	2,509	13,805	1,318	73	0	0	232	3,205
-----																	
FOOD AID	19,655	629	1,012	1,596	509	225	1,136	1,034	2,485	1,093	1,895	1,931	1,016	2,483	1,520	700	391
OTHER ECONOMIC ASSISTANCE	44,163	10,378	5,494	1,330	1,782	1,576	1,704	1,625	1,491	1,873	2,333	2,831	2,483	2,483	2,432	2,000	2,347
GRAND TOTAL	277,657	69,172	45,832	3,191	2,546	2,026	3,030	4,240	5,533	7,805	21,869	14,672	11,739	14,374	20,448	23,200	27,979

Source: USAID W-235 and CONG-R-0105 reports and project files.

Figure 3  
AID Assistance Levels to Cameroon, 1963-84, in Current Dollars

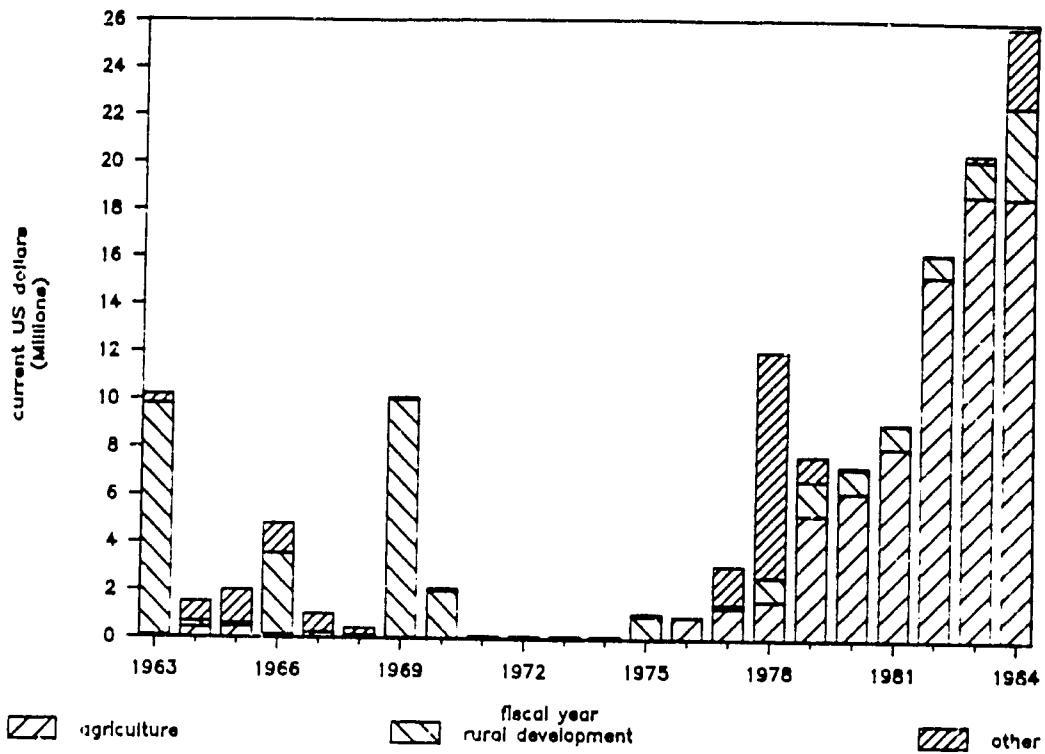
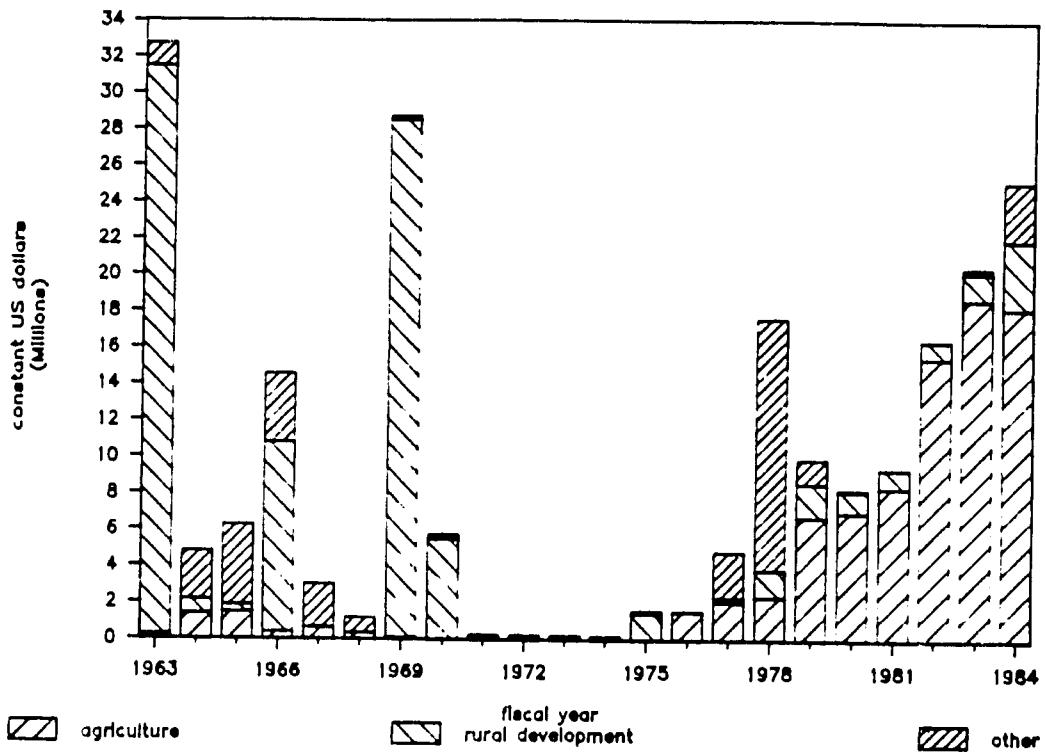


Figure 4  
AID Assistance Levels to Cameroon, 1963-84, in Constant Dollars



reaching a level of \$18 million in 1984, or nearly three quarters of total US assistance to Cameroon. US involvement in rural development has been small, except for sporadic funding of transportation infrastructure. The percentage shares of AID obligations going to these subsectors are given in Table 4.

Food aid has been a relatively unimportant part of US assistance to Cameroon, exceeding \$1.5 million in only one year. Since 1978, these levels were on the order of one-tenth as large as the food aid programs in Senegal or Tanzania. "Other economic assistance" is essentially the Peace Corps. In real terms (Table 3) this has been the most stable funding category, maintaining levels between \$1.5 million and \$2.5 million a year. Although the majority of AID's program has been in agriculture and rural development -- when transportation infrastructure is included as part of rural development -- significant funding has gone to other sectors. These have mainly been primary and technical education, urban development and health education.

Within agriculture, education and training, irrigation, inputs, and livestock have been dominant, although there have been large fluctuations in resource flows to each. Figures 5 and 6 present this further breakdown for the principal subsectors within agriculture. Generally, subsectoral flows have been diverse and variable within the agriculture sector. The small amounts for research, extension, and credit are noteworthy.

Because of the small size of the AID program and the "lumpiness" of many of the project activities, a detailed

Table 4. Sectoral Breakdown of AID Assistance to Cameroon, 1963-84, in Percent

Sector/subsector	Total	1963-66	1967-70	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
----- in thousands of US dollars -----																	
USAID PROJECT AND PROGRAM ASSISTANCE	77	84	86	8	10	11	5	37	28	62	81	68	70	65	81	88	90
AGRICULTURE	31	5	2	0	0	0	0	0	28	27	11	46	60	58	76	81	65
of which:																	
Crop production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage & processing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Input supply	5	2	0	0	0	0	0	0	14	5	2	0	1	1	10	24	8
Credit	1	0	0	0	0	0	0	0	0	0	0	0	3	0	2	3	0
Research	2	0	0	0	0	0	0	0	6	1	1	7	7	6	2	5	5
Extension	2	1	1	0	0	0	0	0	6	1	1	5	5	4	2	4	4
Education & training	13	1	1	0	0	0	0	0	2	20	0	1	1	2	52	40	46
Planning & management	2	1	0	0	0	0	0	0	0	0	0	9	4	18	0	-0	3
Irrigation	3	0	0	0	0	0	0	0	0	0	0	16	13	23	0	0	0
Marketing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Livestock	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forestry	0	0	0	0	0	0	0	0	0	0	7	8	22	2	7	5	0
Fisheries	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	1	0
RURAL DEVELOPMENT	33	62	76	0	0	0	0	34	0	3	7	13	10	7	5	6	13
of which:																	
Infrastructure	28	62	76	0	0	0	0	27	0	0	0	0	0	0	0	0	0
Health & population	2	0	0	0	0	0	0	7	0	0	2	2	0	0	0	6	7
Education	2	0	0	0	0	0	0	0	0	0	5	9	10	7	5	0	3
Water supply	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Community development	0	0	0	0	0	0	0	0	0	3	0	2	0	0	-0	0	0
OTHER	14	18	8	8	10	11	6	3	0	32	63	9	1	0	0	1	11
-----																	
FOOD AID	7	1	2	50	20	11	38	24	45	14	9	13	9	17	7	3	1
OTHER ECONOMIC ASSISTANCE	16	15	12	42	70	78	56	38	27	24	11	19	21	17	12	9	8
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: USAID W-235 and CONG-R-0105 reports and project files.

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Figure 5  
Breakdown of AID Agricultural Assistance to Cameroon, 1963-84,  
in Current Dollars

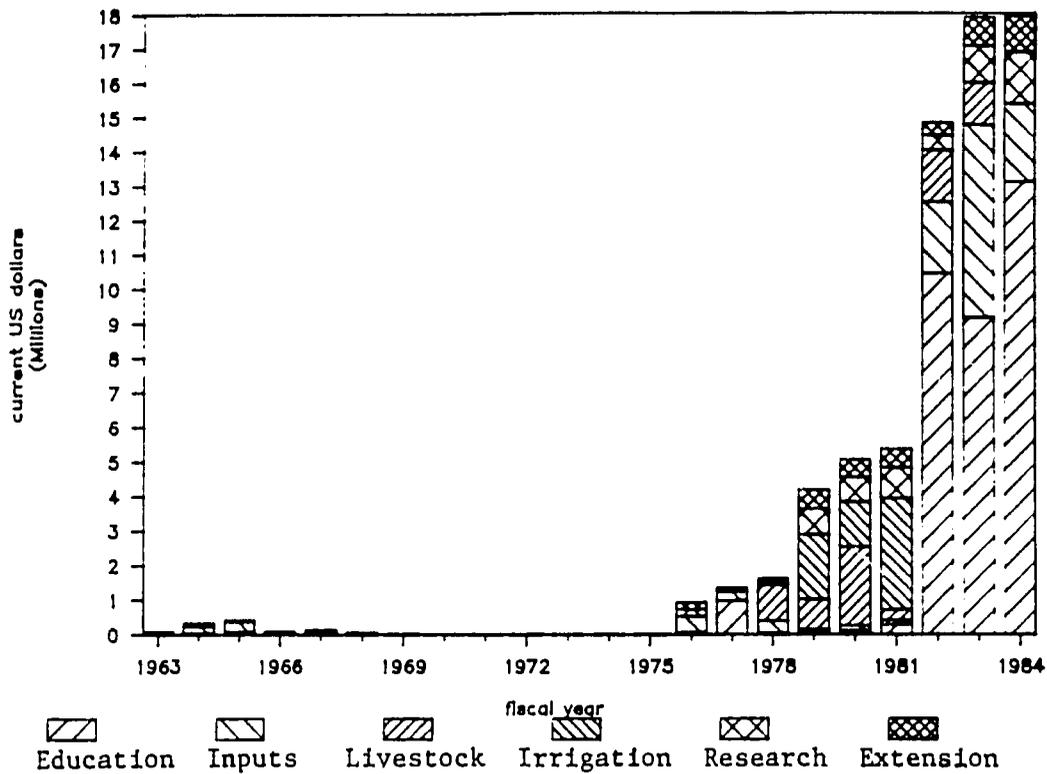
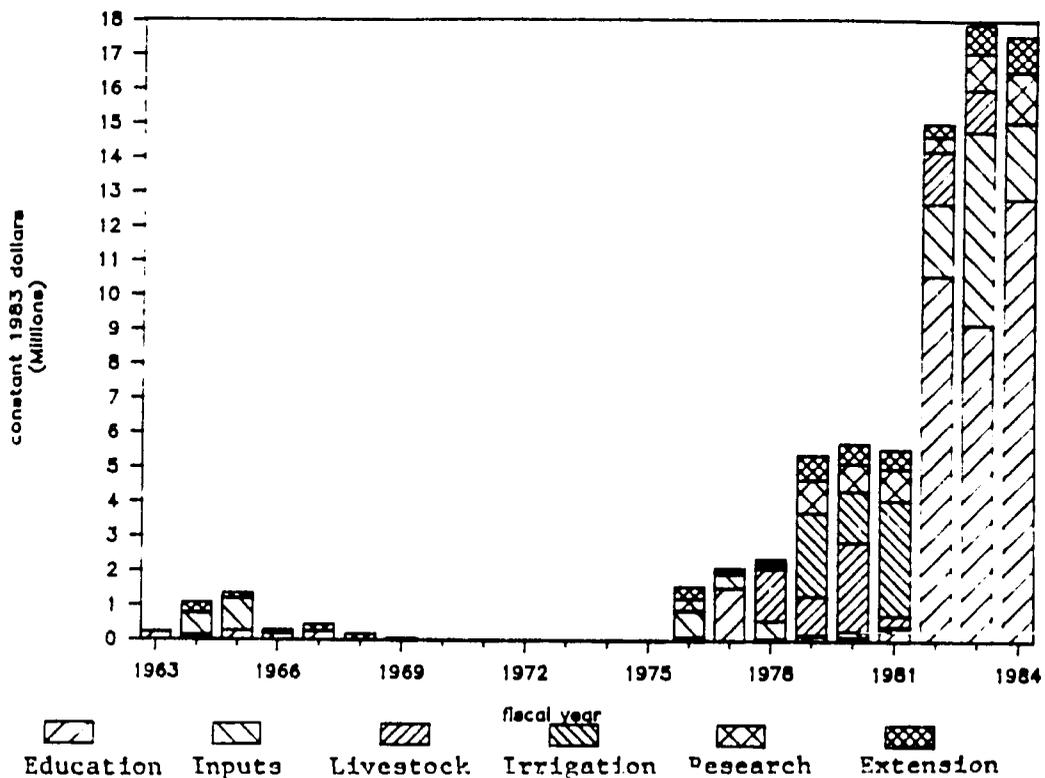


Figure 6  
Breakdown of AID Agricultural Assistance to Cameroon,  
1963-84, in Constant 1983 Dollars



intersectoral analysis of these data with respect to defining some notion of optimal distribution or making comparisons with other donors will bear little fruit. The discussion below will show that specific projects, initiated by individuals, account for major shifts in intersectoral allocation. The emergence (and subsequent disappearance) of water development or livestock activities is the result of a single project's initiation and termination rather than subtle shifts in emphasis.

When expressed in constant dollar terms (Table 3 and Figure 4) the resource flows for the 1960s become more prominent. This is largely due to the 1963 loan of \$9.2 million for the Transcameroon Railroad. When the adjustment to constant dollars is made, the AID program in the early 1960s is similar in size to that of the late 1970s.

#### Obligations versus Expenditures

The preceding analysis uses "obligations" of project funds rather than "expenditures" because they more accurately depict the timing of the initiation of specific activities. For some projects, funds are obligated regularly over the life of the project; for others, the entire project cost is obligated in the first year.

Obligations are incurred when grant or loan agreements (or amendments to them) are signed with a recipient government, university, private voluntary organizations (PVOs), or cooperative development organization. Purchase orders, contracts, and other

documents specifically target funds to be spent from obligated amounts. The term expenditure is used when funds are actually disbursed against a commitment for goods and services. Accruals occur when goods and services have been delivered but payment has not yet been made. Negative obligations can occur when funds are "de-obligated" as the result of excess funds which the AID mission wishes either to return to AID/Washington or transfer to another project, or when a project is terminated. Negative expenditures can be recorded when adjustments to accruals are made. The differences between obligations and expenditures for Cameroon are shown in Figures 7, 8 and 9 at the sector, subsector and project levels, respectively.

#### Regional Funding for Africa

Important amounts of AID's development assistance are routed through centrally funded and regional accounts. In addition to the centrally funded activities of the Bureau for Science and Technology, there are eight separate regional accounts that serve Africa. The largest of these accounts, "Africa Regional," obligated funds as far back as 1963. The accounts for Central and West Africa (later combined with the Sahel regional account), Southern Africa, and East Africa were all created after release of the 1966 Korry Report.

These regional accounts were intended to take the place of the phased-out bilateral activities. Expenditures from them totaled \$945 million through FY 1984, as Table 5 reports. Several of these

Figure 7  
Obligations versus Expenditures by AID on Agricultural Assistance, 1963-84

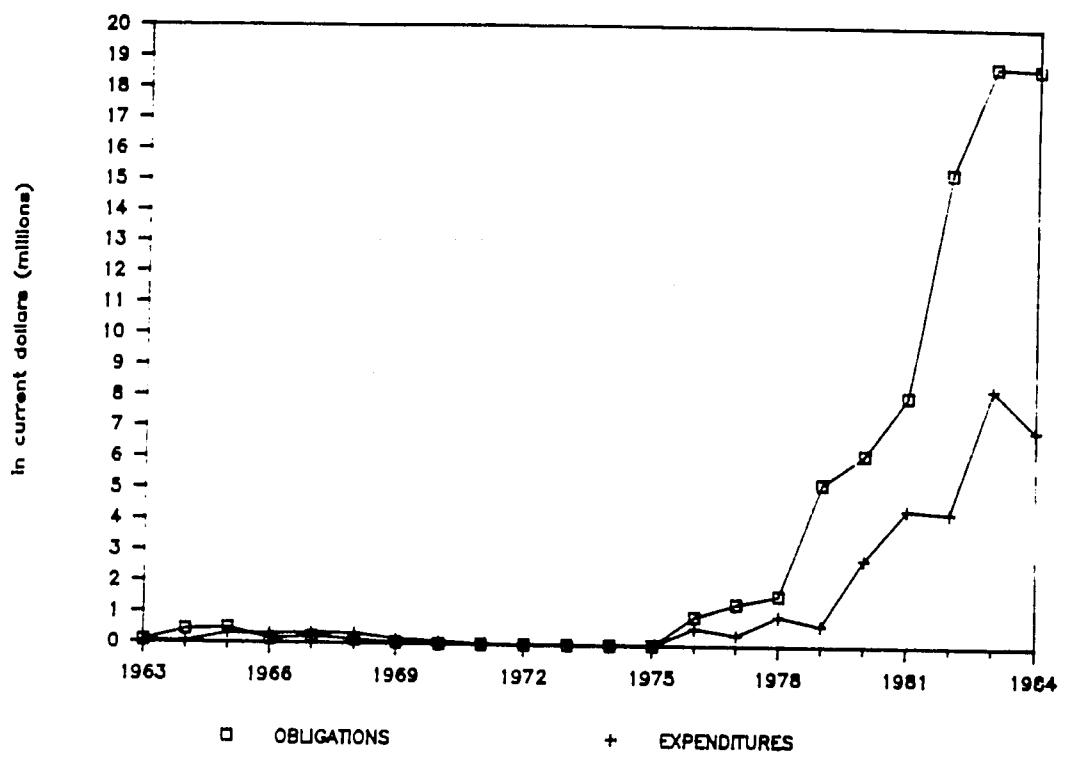
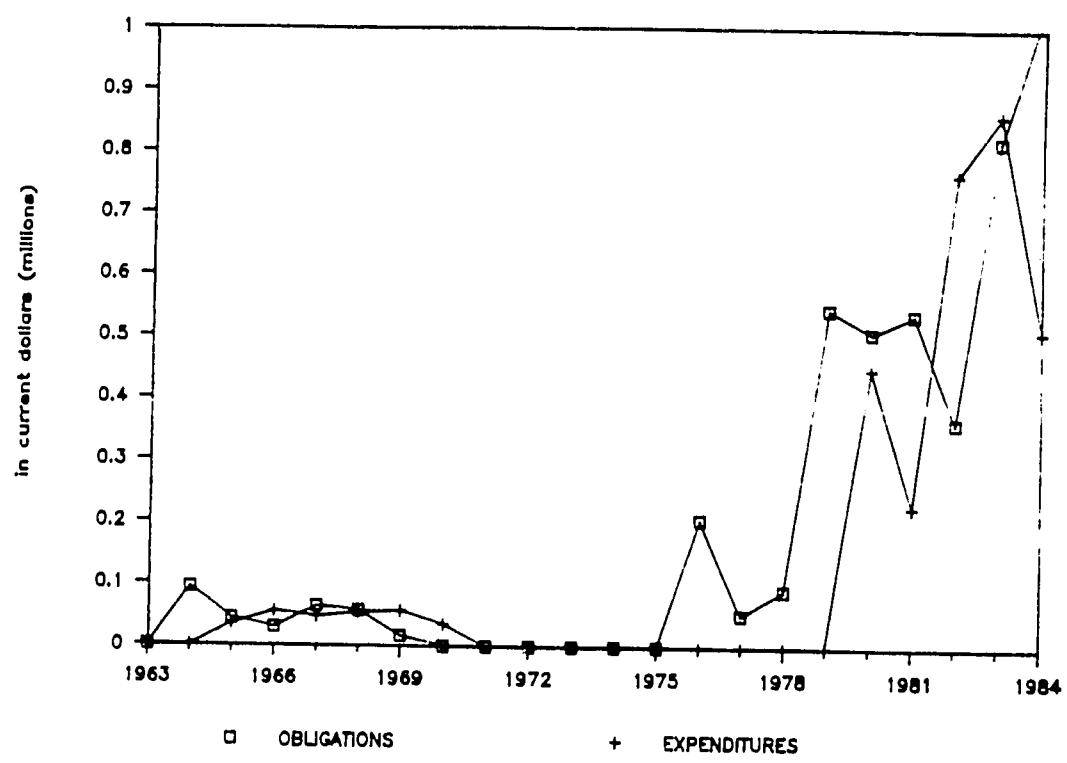


Figure 8  
Obligations versus Expenditures by AID on Agricultural Extension, 1963-84



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Figure 9  
Obligations versus Expenditures by AID on the North Cameroon  
Livestock and Agricultural Project

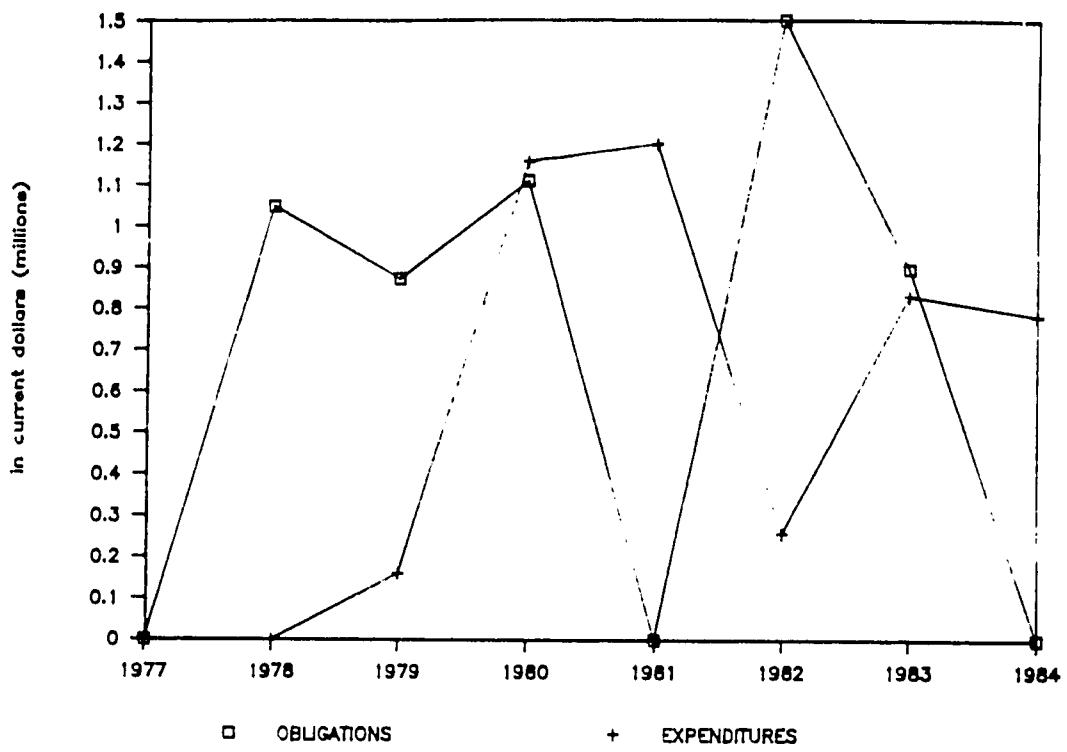
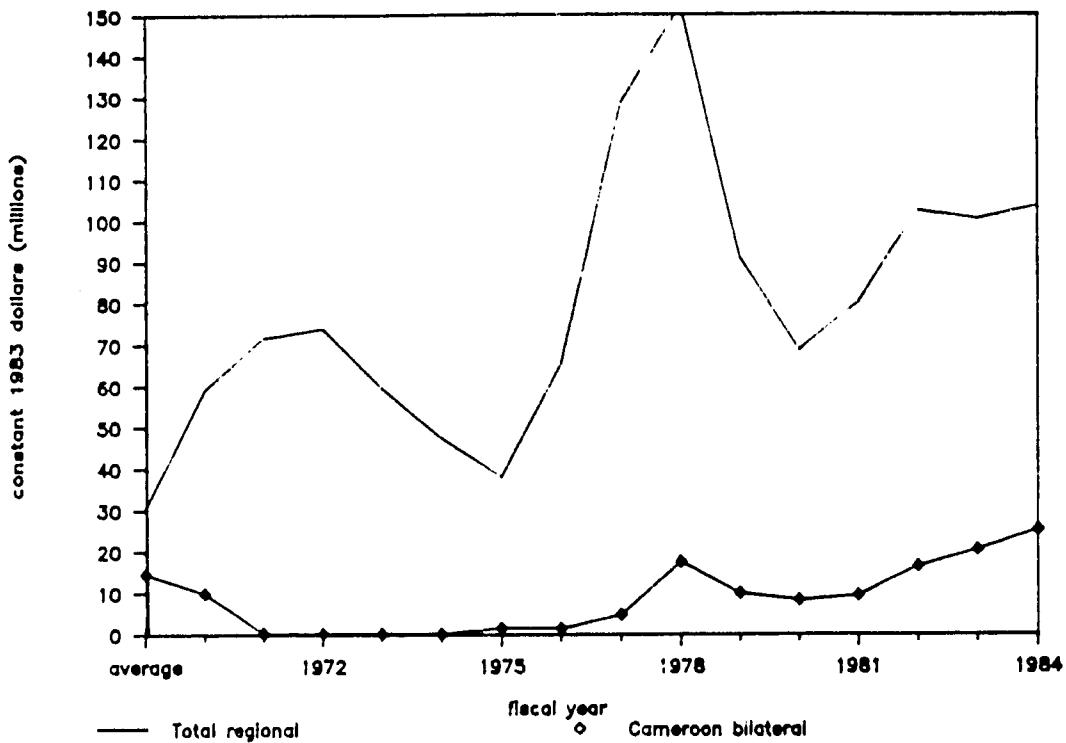


Figure 10  
AID Regional Funding for Africa



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Table 5. AID Regional Funding for Africa: Total Expenditures through 1984

Acct. No.	Name	Total Expenditure
698	Africa Regional	399,746
625	Central & West Africa (Sahel)	235,403
690	Southern Africa Regional	243,932
618	East Africa Regional	34,300
626	Area Development Office, Niamey	21,825
628	Area Development Office, Dakar	3,037
689	Entente States	12
697	Regional USAID/Africa	6,703
	total	<u>\$944,958</u>

Source: AID Project History Lists, various years.

accounts administered only minor amounts, and several have been abandoned as shown in Table 6.

Between 1975 and 1984, regional projects obligated at the mission level included Regional Food Crop Protection, Health Constraints to Rural Production, and several training programs, and self-help. These activities totaled \$11.5 million for that period. Regional projects which are centrally funded (not obligated through the mission) included Semi-Arid Food Grains Research And Development (SAFGRAD), Regional Rural Development Training (PAID), Bean/Cowpea Cooperative Research Support Program (CRSP), Regional Agriculture Training in Africa (INADES), and Strengthening Health Delivery Systems. Funds for these projects which are traceable through the Cameroon mission totaled \$12.4 million for the 1975-84 period.

The extent to which these expenditures can be attributed to a particular country varies. In the case of Cameroon the regionally funded Phase II of the Transcameroon Railroad is clearly attributable to Cameroon. Similarly, regional projects for which monies are administered by the country mission can be attributed for that amount -- as in the case of in-country activities of the SAFGRAD project in northern Cameroon. But for the majority of these activities no adequate means of allocation exists. For that reason these data are presented separately to allow the reader to interpret their importance for a particular country. Figure 10 compares AID's bilateral program in Cameroon with the total African Regional Accounts.

Table 6. Annual Levels of AID Regional Funding for Africa, 1963-84, in Constant 1983 Dollars

Account	Total	a		1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
		1963-66 average	1967-70 average														
Africa Regional (698)	677,428	19,691	33,181	41,782	39,613	27,551	21,182	14,237	27,381	38,932	51,289	53,358	41,309	41,087	53,392	54,244	48,255
Central and West Africa Regional/ Sahel (625)	336,915	0	7,921	22,532	25,150	21,947	20,727	17,298	21,420	14,433	19,952	22,976	22,179	20,978	32,507	29,990	36,906
Southern Africa Regional (690)	238,742	0	951	3,646	6,034	8,064	4,348	3,785	8,784	66,631	54,022	6,037	5,295	17,168	16,792	16,522	18,661
East Africa Regional (616)	37,336	9,677	12,770	3,838	3,256	2,165	1,348	839	1,748	1,517	360	(106)	0	0	0	(77)	0
"Regional USAID/Africa" (697)	5,400	1,021	4,378	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Area Development Office, Nairobi (626)	33,598	0	0	0	0	0	0	0	6,279	0	25,062	1,223	0	1,035	0	0	0
Area Development Office, Dakar (628)	16,841	0	0	0	0	0	0	0	0	7,337	1,750	7,754	0	0	0	0	0
<b>Total</b>	<b>1,346,266</b>	<b>30,389</b>	<b>59,201</b>	<b>71,798</b>	<b>74,053</b>	<b>59,728</b>	<b>47,605</b>	<b>38,159</b>	<b>65,611</b>	<b>128,851</b>	<b>152,435</b>	<b>91,242</b>	<b>68,783</b>	<b>80,268</b>	<b>102,691</b>	<b>100,679</b>	<b>103,822</b>

a. Annual averages for each four-year period.

Source: USAID, "Project Assistance and Activities by Country and Technical Field; AID Dollar Financed Costs" (various years).

Terms of Assistance

The terms under which AID obligates funds varies by project, country, and period. In Cameroon, the loan component of AID's obligations has varied considerably since 1963. From 1963 to 1969 the loan component was the highest, with 78 percent of obligations in that form. During the 1970s most projects were in grant form. As a result the share of assistance which involved loans dropped to 26 percent. From 1980 to 1984 bilateral loans rose to 45 percent. Over the full 1963 to 1984 period these loans totaled \$66.2 million. More than 90 percent is accounted for by three projects: the Transcameroon Railroad, Dschang Agricultural University, and North Cameroon Seed Multiplication. In the 1960s and 1970s there were three phases of support for the Transcameroon Railroad, amounting to \$28.7 million loaned on terms ranging from 0.75 percent to 3 percent over 30 years. More recently, the Dschang Agricultural University Project and the North Cameroon Seed Multiplication Project had combined loan components for 1982-84 of \$32 million. These carry terms of 30 years and 3 percent.

Cameroon is exceptional in this regard when compared to AID's portfolio for all of Africa, where loans as a percentage of total assistance have declined from 21 percent in 1978 to less than 6 percent in 1984.

Sources of Funds

AID's program in Cameroon has been almost exclusively funded through the Development Assistance account provided by Congress.

These include subaccounts for "Agriculture, Rural Development and Nutrition" and for "Education and Human Resources." Although the program in Cameroon grew after the Sahel drought, Cameroon was not one of the countries eligible for Sahel Development Program monies. Smaller amounts have been used from accounts such as Foreign Disaster Assistance and African Refugee Assistance.

#### Food Aid

Food aid has been provided to Cameroon under PL 480, the US Agricultural Trade Development and Assistance Act adopted in 1954 and amended by the Food For Peace Act in 1966. The amount of food aid distributed in Cameroon has generally been small, but it has increased since about 1974 with large year-to-year fluctuations (Table 2). Cameroon's PL 480 assistance has all been under "Title II" as donations for humanitarian purposes. Since the mid-1970s, however, this has been intended primarily to support the non-Cameroonian refugee population in the north which had fled the war and drought in neighboring Chad.

When compared with the rest of Africa, the relative size of Cameroon's food aid program versus AID's project and program assistance has been small. Since 1974 the value of food aid distribution in Cameroon amounted to less than one-sixth of AID obligations, while the value of food aid distributions for Africa as a whole is nearly two-thirds of the AID budget.

### CHAPTER III. AID'S PROGRAM EXPLAINED

#### The First Five Years

AID's early program in Cameroon emerged from the work of its predecessor agency, the International Cooperation Agency (ICA). Many African nations that were becoming independent had a great need for external assistance. The ICA's role was "designed to supplement efforts of the UK and France to increase the number of Africans qualified to fill positions of national responsibility" (US Mutual Security Program 1960). Initially, vocational training was stressed in Cameroon.

The stated interest of the US in these early years was the long-range process of nation building. The complexities of both the political and economic aspects of this process were acknowledged. The allocation of resources to different African nations rested on a number of considerations. Those most often mentioned included the availability of local resources, the organization and leadership of the government, the amount and type of resources being made available by other donors, the compatibility of the country's long-term aims with those of the free world, and the ability of the US to provide the type of technical assistance and administrative supervision needed to ensure effective use of aid funds.

In the early 1960s, AID grouped African countries into three

categories based on an assessment of their short-term development potential. It was recognized that for the third group of countries -- those not likely to reach the point of being self-sustaining for some years -- the lack of trained manpower and infrastructure, such as roads, communication, and power would severely limit their capacity to absorb external assistance. Cameroon was included in this third group.

AID also recognized the difficulty of recruiting technicians to work in Africa who have an adequate command of the language and are willing to accept the hardships involved. It believed, therefore, that the activities suitable for funding would have to be ones that did not require a large administrative or technical assistance component.

AID's major effort in Cameroon during the first years of the bilateral program was financing one-third of the cost of extending the Transcameroon Railroad northward a distance of 177 miles, in conjunction with France and the EEC. This railroad enabled integration of the mineral-rich and agriculturally productive northern part of the country with the more developed coastal areas.

AID also concentrated on roads, generally in the western (anglophone) part of the country. The roads projects included constructing roads and bridges (Farm-to-Market Roads; Mile 47 - Mamfe Road), as well as developing the capabilities of the Cameroon Department of Public Works to carry out more effective maintenance. During the years 1962 to 1965, roads projects

accounted for \$7.3 million, or 40 percent of total AID obligations. The Transcameroon railroad (\$9.2 million in loans) accounted for one-half of the total. Together, the two transportation projects - - roads and railroads -- accounted for more than 90 percent of the AID program.

Support was also given to education. AID helped to finance the development of a technical college in west Cameroon as well as both short- and long-term training in the US under the Manpower Training Project and other projects. Cameroon was also assisted through several regionally funded projects such as ASPAU, INTERAF, AFGRAD, and the Njala agricultural university in Sierra Leone, which received a number of Cameroonian students.

In 1964 two agricultural projects were initiated. In East Cameroon (francophone), AID assisted the government to improve production of Cameroon's principal export crop, cocoa, through more effective disease control. In West Cameroon, an agricultural extension project (1964-70, \$0.6 million) assisted the Government in establishing a farm extension organization with the ambitious goal of reaching "as much of the estimated 90 percent of the population employed in agriculture as possible." In 1965 the latter project's scope was broadened to include agricultural planning in east Cameroon. The project included setting up a poultry center that, as of 1985, was still functioning with much of the original equipment. Also included in the project was long-term training for four candidates in agricultural science and short-term training for fifteen others.

The Korry Report and 1966 Foreign Assistance Act Amendments

In 1966, after five years of development assistance in Africa, Ambassador Edward Korry was commissioned by President Johnson to undertake a comprehensive review of US development policies and programs in Africa. The report concluded that: (1) the task was too vast and the resources were too limited to permit a effort on all fronts at once; (2) Africa's own resources, as well as those of external aid donors, must be concentrated on priority areas; and (3) effective results could be expected in countries whose size, resources, and performance permitted good development progress on a national scale. For other areas of Africa, the Korry Report proposed that US assistance be channeled into regional and multilateral rather than bilateral national development efforts and programs. Since the bulk of assistance could continue to come from sources other than the US, it was argued that effective use of US assistance depended on policy agreement and coordination among the external donors.

The Korry Report proposed that US aid put a "substantive emphasis" on agriculture and rural development; education, health, and population; the private sector and infrastructure in the fields of transportation, power, and communications. To increase the effectiveness of US aid, procedural improvements were needed. It was recommended that the amount of US aid to Africa not be changed sharply, rather it should increase gradually as the development of African institutions and the application of the Report's other recommendations provide growing opportunities for more effective

use of US aid.

The shift to a regional framework meant the phasing out of Cameroon's bilateral program. Ongoing projects were to be completed where curtailing them would be wasteful or harmful to US interests. A small self-help fund would be continued in all the countries that would lose their bilateral programs. The regional approach included support for African regional institutions such as the African Development Bank and the Entente of five former French West African territories. Regional projects were expanded in areas such as transportation, communications, river valley development, agricultural research, education and training, communicable diseases and other health problems, and livestock. The largest single regional project was a campaign to control measles and eradicate smallpox in nineteen West and Central African countries. This was part of the worldwide WHO effort that was successful in eliminating smallpox as a significant health problem.

Cameroon benefited from the Regional Organizations Development Project which gave assistance to such organizations as the African Cooperative Savings Association (ACOSCA), supported direct agricultural production credit programs, and offered technical assistance to the Lake Chad Basin Commission.

Agricultural research was supported through several activities. A regional project was responsible for setting up the West African Rice Development Association (WARDA) in coordination with UNDP/FAO to develop improved rice varieties and agronomic practices and to disseminate the results of this research to the

region. In 1970 AID began supporting the International Institute for Tropical Agriculture (IITA) located in Ibadan, Nigeria. AID also supports the Consultative Group for International Agricultural Research (CGIAR), which allocates budgetary support to IITA, ICRISAT, and other international agricultural centers.

The Transcameroon Railroad received additional funding under the auspices of a regional, multidonor project. Loans amounted to \$12 million in 1968-70.

After 1967 only the Highway Development project and the Agricultural Extension and Planning Project were given additional obligations to meet cost increases for activities partially completed. No additional obligations were made after 1969, although expenditures were recorded as late as 1971.

During this period the Cameroon projects were administered through the Regional Development Office of AID in Yaounde, which also had responsibility for Chad, the Central African Republic, and other countries.

#### New Directions and the Sahel Drought

The Sahel drought had an enormous impact on AID's activities in Central and West Africa. Program funding for the region went from \$15.4 million in 1973 to \$84.5 million in 1975, of which \$63.5 million was for the Sahel Drought Program. The drought brought a sense of urgency to the efforts to improve agricultural practices and health services in the region. Previously, AID's agricultural programs in the region had concentrated on the cereal and livestock

subsectors, with emphasis on the smallholder or herder. It was believed that traditional farmers could become far more efficient if they were assured of higher and more stable prices and access to new technology. Assistance went, therefore, to price stabilization efforts and to the creation of national grain marketing organizations. There was also an emphasis on reestablishing the livestock herds that had been decimated by the drought, while at the same time promoting more efficient use of pastures to permit increasing their carrying capacity.

Although Cameroon was not one of the six Sahelian countries most affected by the drought (these were Senegal, Mauritania, Mali, Burkina, Niger, and Chad), northern Cameroon did suffer the effects. Moreover, AID saw a potential for developing the capacity of countries like Cameroon which bordered the Sahel. It was believed that there were "good opportunities for increased food production in the neighboring countries south of the Sahel. These countries, despite great needs of their own, may develop into food suppliers for the Sahel in times of drought." (USAID Congressional Presentation FY 1976)

By 1975 bilateral assistance to Cameroon had reemerged with a North Cameroon Rural Health Project, a \$0.5 million project (1975-82) which was a grant to the Catholic Relief Services to strengthen and expand the Catholic mission's health services and health education system in northern Cameroon. The next projects to receive funds were the North Cameroon Seed Multiplication Project in 1976, the Young Farm Family Training Centers, and the Pilot

Community Development Project in 1977.

The reestablishment of bilateral programs in Cameroon and elsewhere was due to the large flow of funds to the Sahel region and to the unsatisfactory performance of some of the regional activities, where coordination among countries posed serious difficulties. Following the DAP (Development Assistance Program) analysis in 1976, AID concluded that bilateral programs were a necessary complement to regional activities "since nearly all on-the-ground improvements in agriculture, health, and education/training depend to some degree on national policies and field staff" (AID Congressional Presentation FY 1977, p.147).

Cameroon was viewed as a country with relatively good potential for growth in agriculture and one which "was making a determined effort to achieve self-sustaining growth." Three major principles of the Cameroonian Development Plan coincided with AID's strategy in the region: reducing regional income disparities, developing human resources by adapting the education system to national realities, and assuring medical services to all Cameroonians.

The strategic impetus of the 1973 Amendment to the Foreign Assistance Act, along with the effects of the Sahel drought, made the northern region of Cameroon an ideal focal point for AID's renewed bilateral program. It was the only part of Cameroon affected by the drought, and it was the poorest region of the country. The first three agricultural projects reflected nearly perfectly the long-term strategy resulting from the Sahel drought,

as well as the mandate of the New Directions Legislation: the North Cameroon Seed Multiplication Project would reestablish and strengthen the cereals production system in the north; the North Cameroon Livestock and Agricultural Development Project would reestablish the herds of the pre-drought era and institute a more efficient system for livestock production; and the Young Farm Family Training Centers would increase incomes and make agriculture more productive for the most needy group, the small rural farm-household.

In addition, Phase III of the Transcameroon Railroad Project was funded in 1978 with a \$7.5 million loan. This phase was to finance improvements of the Douala-Yaounde link, which was not only important for development and integration within Cameroon but also formed part of the trunk line servicing Chad and the Central African Republic.

In spite of the growth of the AID program in the mid- to late-1970s, AID was still a minor player in the Cameroonian donor community, ranking ninth among all foreign donors in 1975. With an in-country, direct hire staff of 21 by 1977, such a minor role was probably unsatisfactory to AID. In the Congressional Presentations at that time it was pointed out, however, that within the agricultural and health sectors, the US was the second largest donor after France. The other major donors were concentrating their efforts in education, transportation, and communications. The World Bank was involved to a great extent in rural development at the time, with several projects focused on export crop

production.

The extent to which the activities of other donors affected the direction of AID's own program is difficult to judge. It seems clear, however, that the opportunity to become a more important and influential participant among donors was one factor -- along with the mandate of the New Directions legislation -- leading AID to concentrate its program in agriculture and health.

A second "wave" of projects received initial obligations in 1979. They included National Cereals Research and Extension (\$7.7 million), Agricultural Management and Planning (\$4.6 million), and the Mandara Mountains Water Project (\$4.9 million). The first two fit clearly into the plan to concentrate on the agriculture sector. The rationale for them was the need to develop the capacity of the Cameroonian Government and research services to promote agricultural development more effectively. The National Cereals Research and Extension Project (NCRE) would further AID's focus on agriculture -- specifically on food crops, which were not receiving as much attention from other major donors. Clearly, this was an area where AID believed it had a comparative advantage, stemming from the model "land-grant" research system in the US and the productivity of US agriculture.

The third major project begun in this period, the Mandara Mountains Water Project, was a response to the New Directions mandate to reach the poorest of the poor. A series of 47 dams in the Mandara Mountains would provide this densely populated area with a year-round supply of potable water. Because they would need

to spend less time walking long distances for water, the farmers in the area would be able to allocate more time to agricultural production. The World Bank had agreed to finance ten dams, and the Swiss Association for Technical Assistance was interested in complementary community development activities.

In 1980 four additional projects were funded. Three of these were PVO contracts: The Small Farmer Livestock and Poultry Development was signed with Heifer Project International; The Marqui-Wandala Water Project was implemented by CARE; and the Credit Union Development Project was awarded to the Credit Union National Association to strengthen and develop the Cameroonian Cooperative Credit Union League (CamCCUL). The fourth project, Small Farmer Fish Production, provided technical assistance and construction of facilities for the existing Inland Fisheries Program.

#### 1980-84: Consolidation and New Leadership

In the same way that Ambassador Korry, in 1966, looked back on five years of AID experience in Africa to assess and take stock of what AID had been doing, the Cameroon AID mission in 1980, under a new Mission Director, assessed the experience of the first five years of AID's renewed bilateral program, and on that basis set the course that the program would take into the late 1980s. No doubt this reassessment took into account AID's experience in other African countries, as many Sahelian country programs were taking stock at that time.

Viewing the projects undertaken in the late 1970s as an "initial start of small, pilot and institutional development activities," the mission concluded that AID's Cameroon program was now "in a position to begin to consolidate its efforts into larger-scale projects of major impact in food production, health and education." (Congressional Presentation 1982, Annex I)

Many of the projects were started before the change of Mission Director. But his role in deciding which of these activities would be renewed, expanded, or terminated was crucial. The major initiative after his arrival -- and by far the largest project in the country with over \$30 million obligated as of 1984 -- was the Agricultural Education Project to develop an agricultural university at Dschang, a Title XII project implemented by the University of Florida. This project alone accounted for over 60 percent of AID obligations for the period 1982-84, with a planned budget of \$43 million by 1988. As recently as 1981, agricultural education and training accounted for only 2 percent of total US assistance to Cameroon; in 1984 it accounted for half.

Many of the changes in the program resulted from phasing out smaller projects and enlarging others. Phase II of the North Cameroon Seed Multiplication Project, started in 1982, transformed a \$1.5 million project into a \$10.5 million project (including a \$5.6 million loan) with an additional GRC commitment of \$5.1 million. Large additional obligations were also added to NCRE and North Cameroon Livestock.

The emphasis during this period was on reducing the number of

projects administered by the AID mission and to focus on a small number of larger projects which together formed a cohesive and complementary set of activities. The set of agricultural projects fit this scheme extremely well: At the macro-level the Agricultural Management and Planning Project would strengthen the GRC's capacity to make policy choices and to manage the agricultural development program, while the NCRE project would develop the national agricultural research system with an emphasis on food crops which had become a priority in the Ahidjo Government. Two production projects aimed at rehabilitating major sectors in the north; the Seed Multiplication Project and the North Cameroon Livestock. Most of these activities were initiated in response to the Sahel drought.

Two projects concerned with providing potable water were clearly a response to the New Directions legislation. They were the Mandara Mountains Water Project and the Margui-Wandala Water Project. The Mandara Mountains Project was terminated due to extraordinarily high costs and technical problems. The Margui-Wandala Water Project was completed but was not extended due to technical problems. In addition to these, the Young Farmer Training Centers Project was not renewed when it was shown that there were few measurable benefits associated with the training provided.

Three major new projects were proposed in 1980 and 1981, only one of which was eventually funded -- the Dschang Agricultural University. One of those that did not materialize was an effort by

the mission to greatly increase AID's role in the health sector with a \$30 million Medical Systems Project (MEDCAM). After a large investment by AID in the planning and design stages of the project, it was turned down by the GRC on the grounds that the recurrent costs were beyond what it could support. Also, certain GRC officials believed that the Ministry of Health lacked the management capacity to implement such a complicated project. The other proposal that did not materialize -- an integrated rural development effort in the Mandara Mountains -- was studied with the intention of leading to a project, but it was abandoned by the mission as being too complicated and difficult to execute.

Since 1975 there has been a steady increase in the share of AID assistance to the agricultural sector. Within this sector, however, the pattern is less systematic. Water supply and irrigation became a sizable component of the program with the two rural water projects, but then fell to zero after three years of obligation when these projects were terminated. Livestock has had a similar, although somewhat more lengthy, rise and decline.

#### Determinants of the Mission's Program

This section attempts to summarize the important forces which have shaped and reshaped the portfolio of projects -- and the overall country strategy -- of the AID mission in Cameroon, especially in the last ten years. Many of these motivating forces have been described above. They form a disparate set of factors which contribute to the shaping of the program, ranging from

directives from Washington and congressional pressure, requests from the Cameroonian Government, the prior experience and biases of the Mission Director and of particular design teams, and the quality and focus of responses to project evaluations.

Many of AID's principal activities in Cameroon since the mid-1970s have been direct responses to specific motivating forces of the period. These include:

1. Response to the Sahel Drought:

- North Cameroon Seed Multiplication
- North Cameroon Livestock and Agricultural Development
- Regional, and National, Food Crop Protection Projects

2. Response to the New Directions FAA Amendment:

- Young Farm Family Training Centers
- Mandara Mountains Water
- Margui-Wandala Water

3. Desire to concentrate on agriculture where the US was believed to have a comparative advantage and where the US could assume a role as a more influential donor:

- National Cereals Research and Extension
- Agricultural Management and Planning
- Agricultural University at Dschang

4. Response to legislation to fund PVOs:

- Small Farmer Livestock and Poultry
- Credit Union Development
- Margui-Wandala Water
- Young Farm Family Training Centers

#### Cameroon's Agricultural Economy

In recent years the Cameroonian economy has experienced the most rapid structural transformation in its history. Agriculture, which has traditionally been the largest export earner, is being

replaced by petroleum, which now contributes about half as much as agriculture to GDP. Careful and conservative government policy has contained the potentially destructive "oil boom" and reduced the "Dutch disease" that occurred in neighboring Nigeria.

Nevertheless, growth in investment in nonagricultural sectors has led to rising urban wages and increased urban migration; as a result the agricultural labor force has been reduced.

The diversity of Cameroon's agroclimatic zones has permitted Cameroon to export a wide variety of export crops, and to be largely self-sufficient in food crop production. Before 1978, agriculture accounted for 71 percent of total export earnings and 32 percent of GDP. As of 1983 however, with the rise of oil revenues, agriculture's share fell to 25 percent of exports and 24 percent of GDP. This should not be interpreted as an absolute decline in agricultural production; rather, export crop production has leveled off relative to the growth rates of the 1960s and 1970s.

Cameroon's population is concentrated in certain regions of the country, leaving other large areas almost empty. Only about 16 percent of the land area is cultivated, and from it 60 percent of the population derive their living. Smallholders account for 93 percent of agricultural output, mainly food crops and livestock for local markets and their own consumption, but also coffee, cocoa, and rubber for export. Government and private plantations account for the remaining 7 percent of agricultural output, mainly in rubber, oil palm, tobacco, sugar, and bananas. The GRC relies on

regional development agencies to provide the institutional framework and agricultural services for crop production among smallholders (SODECOTON), and to serve as the producing parastatals for plantations (SOCAPALM, HEVECAM).

Because of an extremely weak data base it is difficult to assess the performance of the food crop sector. Food imports increased during the 1978-82 period, but the lack of a significant increase in food prices suggests that overall food production has risen along with population in recent years. In fact, maize prices in the densely populated northwest provinces have fallen in the past three years.

The stated objectives of the GRC include maintaining the country's food self-sufficiency and improving the local diet. In addition, it wants to consolidate, modernize, and expand the agricultural export subsector. Stemming the growing exodus of rural-to-urban migrants is also an important objective of the GRC. The government hopes to do this by expanding opportunities for rural employment. Preliminary results from the 1984 census of agriculture indicate that in some areas more than half the farm families indicated that their principal source of income was from off-farm activities.

Because of the diverse ethnic and linguistic balance of the country, government policies have been designed to maintain the support of the major regions. As a result, they have not attempted to impose a single organizational system on the country, but have used the regional agencies, which are parastatal and

somewhat independent of the government bureaucracy. Because of the decentralized tradition, policy formulation is a slow process. The tendency is toward consensual decisionmaking, and ministries are unwilling to encroach on each others domain. Many issues, therefore, go unresolved until they are taken up by the President.

### Policy Issues

The major current policy issues in Cameroon include the need for stronger sectoral planning functions at the national level, agricultural incentives policies, agricultural extension and other supportive services, and for technology development; and the future role of the parastatals. AID has been involved in developing the national planning capabilities with the Agricultural Management and Planning project (discussed in the next chapter), which has conducted the first national agricultural census since 1972. In addition, AID is involved in a dialogue with the GRC in the areas of extension, input pricing, and research.

AID regards the extension issue as critical to the success of its program strategy -- especially the Agricultural Education project, which aims to create a land-grant style university linking teaching, research, and extension. Negotiations with the GRC on reorganizing and funding a national extension system have involved AID, the World Bank, and FAO. Although difference exist among these donors, they have collaborated to draft a recommended plan for extension reorganization. There is general agreement that the existing system is not sufficiently client-oriented and does not

adequately attempt to understand why the technologies being offered to farmers are not adopted. The field staff of the existing system is excessive and unevenly distributed, and it lacks on-the-job training. There is substantial duplication of services in some regions.

The timing and extent of the reorganization is at issue. AID prefers a complete overhaul, creating a nationwide system controlled by the Ministry of Agriculture (MINAGRI). But this would require replacing many existing decentralized parastatals with a centrally controlled extension service. Given political considerations as well as the considerable expertise developed by existing parastatals such as SODECOTON and SODECAO, the transition from a regional approach to a centralized system (if it occurs) will have to be gradual. The World Bank's advocates a gradual and selective transformation of the extension system based on a number of criteria including the agricultural potential of the region, and evidence of existing technologies that can be extended to farmers.

A seminar on extension was held in September 1985, organized by MINAGRI, AID, the World Bank, and FAO. This resulted in a plan to field a team and implement a national extension system. The plan was submitted by the donors to MINAGRI. The terms of reference subsequently presented by MINAGRI to the donors differed substantially from the original proposal and has not been accepted by the donors. Continued negotiations are underway to arrive at an acceptable plan. AID's original goal of tying extension services directly to the Agricultural University at Dschang now seems

remote. However, there has been considerable interest by the World Bank in the kind of link between research and extension that is currently being provided by the Testing and Liaison Units (on-farm testing of research results) as part of the National Cereals Research and Extension project (see chapter 4).

The GRC has had a more flexible and effective input supply system than many other governments. In the case of fertilizer, however, government subsidization (from 40 to 65 percent, and unsubsidized in some regions) has resulted in inefficient delivery systems and uneven distribution. The extent of subsidization differs greatly by region. Private sales of unsubsidized imported fertilizer go to palm, sugar, and banana plantations as well as smallholders. Both AID and the World Bank have engaged in a dialogue with the GRC to urge them to eliminate these subsidies.

AID recently commissioned a study by the International Fertilizer Development Center (1986) to make recommendations about changes that would improve efficiency and reduce costs, including the possibility of importing components of high analysis fertilizer to be blended in Cameroon. The results of that study found fertilizer production options to be uneconomic given current price projections and production costs. Bulk blending was considered to be an option only after "the economics of bulk imports and local bagging are clearly demonstrated and a market for bulk blends is established." As a result, the study's recommendations were limited to modest costs savings that could be obtained from more efficient procurement and bulk importation of fertilizer with local

bagging. It is pointed out, however, that the gains from both of these options would be dependent on an efficient and effective marketing system to 1) provide reliable forecasts, 2) minimize the number of required grades, and 3) smooth the flow of material from the port to the farmer through an effective distribution and retailing network.

#### CHAPTER IV. CASE STUDIES OF AID ACTIVITIES

This chapter examines in detail selected AID projects in Cameroon from the 1975-85 period. This case study approach provides a reasonable amount of detail on a sample of AID's project activities, as it would be impossible to examine all of AID's projects in Cameroon.

The purpose here is to illustrate with concrete examples some of the generalizations and conclusions derived, in part, from these case studies, and presented more generally in the two chapters that follow. Each account will give a concise description of the project, followed by an analysis of the achievements and major problems encountered and an assessment of the development impact.

The choice of projects was guided by several criteria. First, the sample includes the most important projects in AID's portfolio based both on the size of the project in financial terms and the length of time over which it received attention. Second, it covers a broad range of the agricultural activities with which AID has been involved. And third, it represents a diverse set of activities in terms of the impact, the problems encountered, and the way they were handled.

Six activities will be examined: North Cameroon Livestock (\$5.4 million), the North Cameroon Seed Multiplication (\$15.1

million, phases I and II), the National Cereals Research and Extension (\$7.7 million for Phase I and \$39 million for Phase II),<sup>1</sup> Agricultural Management and Planning (\$8.8 million), agricultural education and training including the Dschang University project (\$43 million), and Small Farmer Livestock and Poultry Development (\$1.3 million). The combined obligations for these six projects between 1976 and 1984 account for three-fourths of the AID program in Cameroon.

#### North Cameroon Livestock and Agricultural Development Project

The North Cameroon Livestock and Agricultural Development Project (NCL) was a \$5.4 million grant to the Government of Cameroon. As originally stated, the goal was to "intensify and integrate livestock and agricultural production in the central plains of the North while at the same time halting and eventually reversing the current degradation of range and agricultural lands." The six-year grant, approved in 1977, was essentially a pilot effort aimed at demonstrating the feasibility of using improved management and technology to accomplish this goal. The project activities included establishing a range management system such as deferred grazing, constructing a system of water points for cattle, introducing supplemental range feeding, studying the range, livestock, and farming systems, and improving animal health

<sup>1</sup> In 1985 Phase II of the National Cereals Research and Extension Project was approved for a planned obligation of \$39 million over 8 years.

services.<sup>2</sup>

NCL grew out of a request from the Government of Cameroon to the US and France for help in developing a plan for modernizing the livestock sector in the northern part of the country. The objectives laid out by the GRC were 1) to define a long-term water program, 2) to improve livestock disease control, 3) to study land use to better delineate livestock and crop production zones, 4) to make better use of agroindustrial by-products and harvest wastes, and 5) to control the tse-tse fly south of Benoue.

Following a series of studies involving US, French, and Cameroonian specialists, a strategy was presented to the GRC; a compromise plan was drawn up, and a project paper was prepared in February 1977.

Over the life of the project (1978-85) some important changes were made in the Project Grant Agreement with respect to the scope, funding, and organization of the project, changes that reflected the many problems encountered. In May 1984 the Mission Director rejected a proposed extension of the project based on its lack of success, the complexity of the sector, the lack of commitment on the part of the GRC, and the difficulty in recruiting the necessary technical assistance. In 1985 the project was terminated, and remaining funds were diverted to the mission's African Manpower Development Project to be used for training individuals in the

<sup>2</sup> Other donors involved in the livestock sector included the World Bank and the Federal Republic of Germany. The World Bank had a \$11.6 million project for establishing large government ranches from 1974-81. This was followed by a Second Livestock Development Project (including Germany funding) for a total cost of \$36 million.

Ministry of Livestock who would be associated with activities begun under the project.

The most serious problems limiting the success of this project, according to project documents, evaluations, and interviews were an attempt to do too much in too short a time; long delays in getting the project started; difficulty in recruiting, and keeping, a full technical assistance team; divergent objectives on the part of AID and the GRC; and a failure to understand and take account of the complex, pluralistic, transhumant livestock systems in the region of intervention. The evaluation also pointed out that the project design incorrectly assumed sufficient rainfall would ensure forage growth.

The 1984 midterm evaluation of NCL -- which led to the project's being phased out -- concluded that the project lacked an overall program context, that it had limited geographical scope since it concentrated on only one portion of one transhumant system, and that it had a timing problem:

The original design and subsequent reorganization plan for the project were flawed by misjudgments about the time needed to "prove" and then demonstrate the planned livestock and agricultural interventions...In northern Cameroon, one is almost certainly talking about a minimum 15 to 20 year period of continuous hard work to make a creditable start on [either developing a fully articulated range management system or a new crop rotation scheme] -- much less to do both jobs (Ithaca International Limited 1984, p.2).

A further conclusion is that the project "took place in an atmosphere which was deficient in its basic understanding of the variety of livestock production sub-systems which exist in northern Cameroon." The Evaluation Team notes their impression that the

project, given its image of local society, was incapable of recognizing the real complexity of local social organization. They found that neither the social relations within the system of production, nor the land tenure system, seemed to have come to the attention of any of the project technicians (Ibid p.42-43). The implicit assumption of the project, as they saw it, was "that pastoral practices in northern Cameroon are not rational and that they are the principal cause of environmental deterioration" (Ibid p.46).

In August 1982 conflicts between the project staff and the nomadic herders coming south from the Lake Chad Basin became serious. The herders had not been informed about the deferred grazing blocks which involved lands they were accustomed to using for grazing during their seasonal migration. After much negotiation the herders concluded that they could not respect the deferred grazing blocks and were therefore excluded from the zones by local officials. The potential for problems from the "interference of migratory herders" was identified in the project paper (USAID 1977b, p.34) where it was recognized that "provisions would have to be made to accommodate these herds." The project paper claimed that the passage of the migratory herders could be regulated and controlled so as not to interfere with regulated use of the range area. This finding was based on the assumption that new regulation would "not seriously compromise the interests of the migratory herders since these merely pass through Cameroonian territory in movements between Nigeria and Chad and vice versa."

Apparently provisions were not made for these herds, and the attempts to control their movements did seriously compromise the interests of the herders. At the time of the evaluation -- six years after the project paper was signed -- the team "found it impossible to observe anything that could be clearly identified as a long-term, planned effect of the Project..." (Ithaca International 1984, p.131).

From the outset the objectives of the Cameroonian Government and AID diverged. The Government was mostly interested in the water points and the veterinary services; it believed that the geographically specific actions would be difficult to implement because they involved substantial changes in the traditional livestock practices. AID wanted to institute a grazing management scheme, the details of which would be decided by a project range specialist. The design that resulted attempted to combine the interest of both the GRC and AID. Conflicts arose as Government officials pressed AID to acquire heavy equipment and dig the water points, a component of the project that AID hoped to eliminate. The project paper called for appropriate data to be collected before decisions were made about water point design and placement. In response to pressure from the GRC, water point construction began based only on estimates. In addition, AID was unhappy with the lack of attention given the deferred grazing scheme by the ministry and local officials. And the GRC had not fulfilled its training and counterpart responsibilities, according to the Inspector General's audit (Inspector General/USAID 1984).

Delays in getting started and discontinuities in staffing the technical assistance team had serious consequences. The first technician did not arrive until September 1979. In August 1980 -- at the same time that the project was amended for the fourth time -- two technicians were finally able to move to the project site. Not until 1982 did a long-term range management specialist arrive, charged with the task of proving the applicability of the deferred grazing system. Several members of the technical assistance team stayed only one year.

But even more fundamental problems appear to have underlain these imposing implementation difficulties. The entire project became focused on two specific technological innovations -- deferred grazing and water points. Each is controversial and offers questionable benefits at best.<sup>3</sup> Deferred grazing is a technique that is supposed to increase the total amount of grass available for grazing while at the same time arresting the degradation of the resource base. And water points are intended to make water more easily accessible to cattle and therefore to increase the carrying capacity and off-take of cattle by reducing the necessity of moving the animals long distances. One striking feature of the project-related documents is the almost complete absence of any discussion about these techniques -- whether they

<sup>3</sup> The type of range management system was not specified in the project paper, but rather was left to be developed by the project advisors. Not until November 1982 was there a long-term specialist in the field, which meant that they had two and one-half years to design, set-up, and demonstrate the potential of the chosen system, and prove its applicability.

offer significant productivity gains, and whether these gains are sufficiently important to warrant the complex and costly managerial inputs of AID and the GRC. These assumptions and design elements characterize similar projects undertaken by the World Bank and others, and have had similarly disappointing results.

The use of water points in Africa has often caused extensive overgrazing and degradation to the areas surrounding these points. Many specialists -- including the range management specialist in the Cameroon AID mission -- point out that the constraint on increased cattle production is not limited water but limited food. In addition to this, project documents appear to have overlooked the fact that for most African pastoralists, off-take for meat production is a secondary concern. Cattle serve as a store of wealth, a symbol of status, and an "insurance substitute" for farmers, who often entrust their cattle with pastoralists (Binswanger and McIntire 1986; Shapiro 1979).

Livestock experts disagree on the usefulness of deferred grazing as a means to increase total off-take. There is no empirical evidence that this technique results in a net gain in the amount of grass available for grazing. Furthermore, the likelihood that the value of this increased supply of grass, when converted to meat, compares favorably with the costs of the planned management scheme seems remote.

To summarize, the NCL project appears to have suffered from both design and implementation problems, as well as lack of full GRC support. The project was conceived during a period when a

sense of urgency existed following the Sahel drought. This probably had a lot to do with the Mission's adopting an unrealistic time-frame for the project and overlooking the apparently insurmountable design problems, especially the lack of an appropriate technological innovation suitable for Africa.

#### North Cameroon Seed Multiplication Project

The North Cameroon Seed Multiplication Project (PROSEM for Projet Semencier) began under a Phase I, \$1.5 million grant in 1975 to develop a system for production, distribution, and use of improved seeds in northern Cameroon. At the request of the GRC, AID designed a project that involved the testing and multiplying of sorghum and peanut seed at three sites in the north of Cameroon. The impetus was the Sahel drought and concern for rural people's ability to feed themselves. The project paper alleges that due to low production and skyrocketing prices many farmers sold their seed and were then forced to resort to using floor sweepings and relief grain as seed when planting time came.

According to AID, the goals of Phase I were not achieved because the project tried to undertake too many activities at the same time with limited resources. Phase I was in fact a relatively minor project disbursing only \$1.5 million over seven years. A serious effort to address the seed requirements of northern Cameroon was not begun until the second phase of the project, which was authorized in February 1982 for \$13.6 million, including an \$8 million grant and a \$5.6 million loan. The new design was to help

the Government of Cameroon develop the capacity to produce improved seed for peanut, corn, sorghum, and millet, and to distribute it to farmers. Ultimately the goal was to increase the productivity and incomes of the 163,000 farmers in the region. AID provided support for research, institutional development, technology transfer, training, and farmer extension. The new project focused on quality control by including two seed processing plants, seed storage units, and a seed testing laboratory.

In November 1985, ten years after the authorization of Phase I and three years after the start of Phase II, the Inspector General's Audit found that "only limited progress had been made in achieving the project's goal, purpose, and end-of-project objectives because of slow implementation in most project activities" (Inspector General/USAID 1985a, p.6). The report calls into question the "project viability and economic feasibility." It was found that coordination among government agencies participating in the project was poor and that critical economic analysis of production costs and selling prices had not been made. The Audit served as a focus for the mission's subsequent efforts to force improvements in performance by the GRC and the technical assistance contractor.

The findings of the evaluations and audits point to numerous design and implementation problems. There is general agreement that the project tried to do too much in too short a time, and that there were costly delays in major project activities. Project progress was limited due to poor management and poor contractor

performance according to the Inspector General's Audit. No adequate system for monitoring or evaluation was installed, nor were the project activities sufficiently prioritized. The lack of an AID evaluation program limited management information on the progress, impact, and validity of the assumptions on which the project was based.<sup>4</sup>

The evaluators found that several optimistic assumptions had been made in the design, and that some constraints to the project's long-term objectives were not properly considered. These constraints included poor farm site selection, lack of research results, inadequate marketing systems, lack of quality control, and uncertainty over the capability of the private sector.

The most critical assumption of the design was that agronomic research would provide improved varieties of breeder seed that would become the basis for the successful production of seeds. Research of this type is a long-term process that is difficult to predict; even recent statements by AID officials that it takes a minimum of six years to develop one new variety are suppositional. Clearly, the assumptions underlying the project design were unrealistic in expecting improved seeds for five crops to be developed, multiplied, and extended to farmers within five years.

(Misperceptions about this sequencing problem persist. In 1985

<sup>4</sup> The midterm evaluation of Phase II was delayed one year to allow completion of a management systems analysis of the project aimed at correcting existing management problems. Annual GRC/AID progress evaluations were not done, in part because the mission believed that there were already numerous "troubleshooters" being sent to the project site at that time and the mission felt that an additional team would be excessive.

AID personnel in Cameroon believed that the Institute for Agricultural Research (IRA) would release new varieties of sorghum and peanut seed for multiplication in 1986, according to the Inspector General's Audit -- a statement quite similar to those made in the original 1975 project paper.)

Support for the project from the Government appears weak. Coordination problems have arisen among the government agencies participating in the project, the Government's procedural requirements have caused delays, and the training component has fallen behind schedule. The quality control system provided for in Phase II has not been established, in part because of the failure of the GRC to formulate and enact appropriate legislation to establish standards of quality.

Successful operation of PROSEM required coordinated effort by a number of agencies, including the Institute for Agronomic Research (IRA), the Food Development Authority (MIDEVIV), and the Cotton Development Authority (SODECOTON), charged with distribution of improved seed in the project area. The required agreements between these agencies were either established late or not established at all. The World Bank's Center-North Project is in the same region and is being implemented by SODECOTON. Both SODECOTON and the Center-North Project were integral entities of the AID-funded project, but until improvements in the PROSEM operation were made, neither SODECOTON nor the Center-North Project looked upon ties with PROSEM as a resource; therefore, they were reluctant to engage in any formal agreements.

Poor site selection is the cause of continuing problems for PROSEM. Originally two 400-hectare farms were designated in accordance with the project design. GRC officials report that the site selection was made for political reasons rather than considerations of land quality, rainfall, access, and so on. The severity of these problems led to the elimination of one of the two farms. No alternative site was developed because the costs for site development were much higher than the design estimates. The remaining farm has not come close to meeting production targets. It is plagued by poor management, lack of equipment, and increasingly serious erosion problems. Instead of obtaining seed from PROSEM, SODECOTON has been producing its own seed for distribution after it became clear that the quantity that PROSEM could provide was unsatisfactory.

Continuing management problems, lack of financial records, apparent financial irregularities, and lack of basic cost data for the farm led AID to contract a US accounting firm in 1985 to design and implement a financial management system for the project. Even with this task completed the obstacles appear formidable. Some sources close to the project feel that it is still in a precarious position given the severe soil erosion problems, tension between some people in the government agencies, and continued poor performance by the project contractor. Even more fundamental, there is no analysis, and little evidence, that shows the farm to be economic or the seed being produced to be superior to what farmers are able to provide for themselves.

During Phase I of the project two evaluations were done within a year of each other (no explanation for this has been uncovered). The first of these found that the seed farms had met only 12 percent of the project's production targets, that the goals for seed availability were not feasible within the time specified in the project paper, and that the so-called improved seed going to the majority of the farmers "would not realize any significant increase in yield" (DAI 1979). Even with the use of fertilizer and pesticides, only marginally significant yield increases could be expected. The evaluation concluded that "few meaningful benefits will accrue to small farmers from pushing forward with the goals originally envisioned."

Curiously, within a year, another evaluation was done by the Seed Technology Laboratory of Mississippi State University, subtitled "analysis and recommendations for Phase II." (This leads one to believe that Phase II was a fait accompli at this stage, which is puzzling given the findings of the first evaluation.) The second evaluation -- made by seed specialists -- concentrated on how the quality and uniformity of the seed could be improved. These specialists undertook no economic analysis, and they arrived at quite different recommendations than the DAI study did. The unquestioned premise for this second evaluation was that a seed farm was essential and that it must be done under strictly controlled conditions. The existence of improved, superior varieties was not questioned. The specialists assert that even without improved varieties a seed multiplication system is

effective because

when unimproved varieties are processed through the system for merely cleaning and treating the seed, and providing seed of good quality, it can be expected to increase (the seed's) value by 10-15 percent over grain held by subsistence farmers as seed (Seed Technology Laboratory 1980).

Alternative and less costly methods for cleaning seeds were not considered. And the authors ignore whether or not the seed system they envision is economic given the existing improved varieties. (A recent study commissioned by AID found evidence that farmers do not distinguish between the improved varieties and local varieties, and that they buy the improved varieties primarily because they are sold at subsidized prices that make them cheaper than buying local seed; local market prices for seed are 50 to 100 percent higher than the PROSEM prices.) The evaluation team, and many other AID staff, do not allow for the fact that farmers are capable of multiplying seed and maintaining its quality themselves. Yet there are many instances of farmers selecting and storing seed to maintain seed quality from one year to the next -- going so far as to cover sorghum heads to enforce self-pollination, as the author observed in Senegal.

The conclusion that this evaluation formed the basis of AID's decision to fund Phase II is quite troubling given the quality of the analyses, which appear to be neither thorough nor sound. The economic analyses of both production and marketing were unsatisfactory. Apparently it was believed by some that the problems being encountered by the project would be overcome once a

large-scale, fully mechanized seed farm was operating.

The project paper includes assumptions that are unrealistic and even admittedly fabricated. In a table on yield assumptions, peanut yields are assumed to double with use of nitrogen fertilizer, but with a footnote explaining "[nitrogen fertilizer] used for peanuts if subsequent tests prove it to be worthwhile" (USAID 1981, p. 28). Estimates of yield increases are taken from experiment station results which have a long history of grossly exaggerating what is attainable under farmers' conditions. Furthermore, although two-thirds of all farmers in the region are expected to adopt the improved techniques by year ten, over half of those 163,000 farmers are expected to adopt only cotton seed, which is a result of the World Bank project and not PROSEM.

The recently completed Mid-term Evaluation (SECID 1986) demonstrates that very little has been achieved after 11 years of operation. Only one seed farm is in operation and they recommend reducing its size to 200 hectares. The project's position on the controversial use of contract farmers as part of a multiple step seed production strategy is once again reversed: the evaluation recommends producing only foundation seed and relying on farmers for final multiplication. The Mid-term Evaluation proposes that the project objectives be redefined to reflect more realistic assumptions about the scale of operation. The range of their recommendations suggest a "new start" for the project: they include development of a training plan; new technical assistance in seed processing engineering, seed management specialists, soil

conservation, and agricultural economics; development of a seed distribution system and reduction of seed subsidies; and construction and use of the seed testing laboratory and processing plant. The processing plant at the Sanguere farm has not yet been constructed, nor has the seed testing laboratory, planned as a result of the Mississippi State evaluation. They point out, too, that the assumption of a financially self sustaining foundation seed farm is a serious flaw in the project design, and that private sector investment could be expected only with the introduction of hybrid varieties of crops which must be purchased by farmers each year.

No significant benefits from this project are apparent. And its sustainability is in doubt. At this time AID intends to continue through 1988. The GRC is committed to the remainder of its \$5.1 million contribution, as well as repayment of its \$5.6 million loan. In spite of the lack of success, AID/Cameroon sees this project as an essential component of their current and future strategy. They believe that without the ability to multiply the (as yet undeveloped) improved seed for the Cameroonian farmers, both the overall objectives of the AID program to increase food production, and the Government's objective to remain self-sufficient in food are futile.

The issue is a controversial one. The view expressed by the mission is at odds with the evidence from other countries in Africa where, except in the case of hybrids, government seed farms do not function effectively. Moreover, with open-pollinated varieties

farmers are quite able to maintain their own seed supplies and, in fact, will multiply seeds for sale when the varietal improvements command a premium in the marketplace.

#### The National Cereals Research and Extension Project

The National Cereals Research and Extension Project (NCRE) began as a five-year, \$7.7 million grant to the GRC with five major objectives: 1) to develop Cameroonian institutional capacity to perform cereals research; 2) to develop and implement research programs for maize, rice, sorghum and millet; 3) to create a Testing and Liaison Unit (TLU) to facilitate communication and feedback between researchers, the extension service, and farmers; 4) to establish and maintain an exchange of information with international, African, and Cameroonian institutions conducting relevant research; and 5) to provide adequate facilities for carrying out the research program.

Although Cameroon does not have an overall food deficit, concern over potential future shortfalls in food production per capita, both among Cameroonian policymakers and outside observers, provided the major motivation for this project. Many observers believe that population growth and urban migration will lead to a situation where food production becomes inadequate as growing demand must be met by the production of a shrinking share of the population. Thus access to improved technology will be essential to ensure food self-sufficiency.

The project began in 1979 with a planned completion date of

1985. In 1984 a Phase II follow-on project was approved, based largely on the favorable recommendations of the project's midterm evaluation. This evaluation was conducted in the fall of 1983 by a former Dean of the College of Agriculture at the University of Nebraska and a former Director of the Cooperative Extension Services at the University of California, Berkeley.

Recognizing the long gestation period between investment in research and increases in production, the evaluation team strongly recommended continued support over a longer period of time. In response to this, a ten-year extension, or second phase, was approved for \$39 million, including a loan of \$3.6 million. The GRC will contribute an additional \$25.4 million over the life of the project.

Current evidence suggests that the NCRE Project has made progress toward achieving its objectives. The contractor for this project is IITA. It has fielded a team of well-qualified scientists that appear to be motivated and sensitive to farmers conditions and objectives when carrying out their research programs. The team consists of researchers from many parts of the world, including a number of African scientists, who appear to be committed to the long-term objectives of the project.

A major component of NCRE is the training of Cameroonian scientists. While the IITA team develops the research programs in conjunction with the Cameroonian national agricultural research institute, IRA, thirteen Cameroonians are being trained in the US for advanced degrees in areas such as agronomy, plant breeding, and

entomology. As of March 1984 two Cameroonians had already finished their training and had returned to begin working as counterparts with the appropriate IITA researchers. Provisions have been made to extend the amount of overlap between the IITA scientists and their returning Cameroonian counterparts (either between their MS and Ph.D, or after their Ph.D) to enhance the capabilities of the Cameroonians to carry out the research programs being developed.

Given the complexity and importance of relationships with numerous other agencies and organizations, NCRE has had surprisingly few difficulties. In addition to the trilateral arrangement between AID, GRC, and IITA, the project has successfully developed links with other international research institutes such as ICRISAT, CIMMYT, and IRRI.

In north Cameroon, NCRE researchers are collaborating successfully with the Cooperative Research Support Program (CRSP) for cowpeas, and with the SAFGRAD Accelerated Crops Production Officer, who has done on-farm testing of NCRE varieties and has also brought varieties from SAFGRAD headquarters in Burkina to the attention of the NCRE team. The head of the NCRE sorghum program says they get "100 percent technical feedback" from ICRISAT.

The cowpea CRSP program in north Cameroon -- with strong ties to the NCRE project -- is led here by a Togolese cowpea specialist representing the University of Georgia. He has a Ph.D from IITA (in conjunction with the University of Ibadan). His interaction with NCRE researchers has resulted in a healthy debate on the tradeoffs and priorities for their continued research efforts. He

received plant materials from IITA and SAFGRAD. With his strong sense of farmers' objectives and constraints, he has developed a research program with these considerations in mind.

Cooperation among IRA, NCRE/IITA and AID has been outstanding. The caliber of Cameroonian staff assigned to the project reflects their interest in it. IITA has been equally conscientious about staffing the project. During its early stages, when objections were raised by AID about a senior team member, IITA -- having also become dissatisfied -- assessed the situation and replaced the person in question.

The impact of a project such as this one is difficult to assess until a long time has elapsed. Moreover, comparison with similar projects -- even over an extended period -- is difficult because similar projects can have very different results since differences in the agroclimatic environment can give rise to differences in the potential for varietal or agronomic improvements.

Those qualifications notwithstanding, there is evidence that the NCRE Project has made progress, and has the potential for making important contributions to agricultural development in Cameroon:

1. In northwest Cameroon at the IRA/Bambui Research Station, extensive research programs have been developed for maize, wheat, beans, and other crops with on-farm testing and feedback activities being carried out by the TLU and by the North West Development Authority (MIDENO) which has been distributing seed to farmers.

Both TLU and MIDENO report increased interest on the part of local farmers in the improved maize varieties after two years of tests through "contact farmers" (20 tons of seed were distributed in 1985). Several varieties appear to have potential.<sup>5</sup> Although the on-farm trials have not shown statistically significant yield increases, MIDENO officials in charge of monitoring observe favorable reactions by farmers, a market price differential in favor of the improved varieties, and a drop in local maize prices since improved varieties began to be distributed (a 30 percent drop from 1981 to 1985).

Clear evidence of an acceptable, improved maize variety is still not available, but the results obtained thus far in such a "young" program are encouraging. As with many research programs in Africa, too much attention is being paid to yield increases in an area where labor, not land, appears to be the binding production constraint, and where yields are already quite good. Feedback from farmers is, however, getting attention. For example, the extension agronomist at Bambui responded to farmers' contention that burning their fields after harvest results in better yields the following year. He set up a trial to test this for intercropped maize and cocoyams. The results proved the farmers right, at least in the short run.

2. The sorghum program in north Cameroon has recently shown

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<sup>5</sup> Of these varieties -- COCA, BACOA, and TZPB -- none were produced in Cameroon, but IRA and NCRE are working on adaptive research to improve them. For example, COCA is too tall, resulting in lodging (the stalks fall or are blown over before harvest) and the shading of intercrops.

some impressive preliminary results from trials of S35, an ICRISAT variety that was received via ICRISAT's association with the Institute for Agricultural Research at Ahmadu Bello University, Nigeria. On-farm testing by the SAFGRAD team in 1984 showed 80-90 percent increases in yield over local varieties. Analysis of on-farm trial data from 1984 and 1985 (SAFGRAD 1986) showed significant yield difference between S35 and the local variety. However, when using analysis of variance techniques the explanatory power of the variety alone was not significant. And trials with late and early seeding revealed no statistically significant yield difference between S35 and the local variety. Unfortunately all the trials have been performed with 100 kg/ha of fertilizer so that no results or comparisons between the two with zero-fertilizer are available. This is important since fertilizer is often unavailable to farmers, and nearly all evidence from the semiarid zones of West Africa indicate that use of fertilizer on sorghum is not economic.

Also, these varieties of white sorghum can suffer extensive bird damage, which is much less a problem with red sorghums. The S34 variety being tested in slightly higher rainfall zones (greater than 800mm) has problems with mold due to its early maturity.

3. The maize agronomy program in north Cameroon works closely with SODECOTON, which is charged with supporting food crop production in this zone. Maize production has increased significantly in this area in the last five years, according to the NCRE cereals agronomist based in Garoua. An IITA variety, TZPB, is widely used with on-farm yields up to 7 tons. The maize agronomy

program has observed "a relatively rapid adoption by the farmers" of their maize production package. This is partly because SODECOTON supports and promotes this package in conjunction with its cotton program. SODECOTON estimates average maize yields to be around 4 tons per hectare in 1985. More systematic evidence from on-farm tests are needed for both the sorghum (S35) and maize (TZPB) varieties before drawing any conclusions about their success and adoption potential, but the evidence is encouraging.

4. A large amount of data is being generated from on-farm testing, socioeconomic surveys, and feedback from contact farmers that is extremely useful in increasing knowledge about farmers objectives and constraints. This knowledge allows research to be tailored toward appropriate innovations. Such data are very poor in most of Africa, and the information already gathered by the TLU, MIDENO, and SAFGRAD in cooperation with NCRE is invaluable. Phase II of the project will extend the number of TLU's from one to four to cover the major agro-climatic zones.

All components of the project described in the five objectives are functioning as planned. Phase II will extend the project and make improvements recommended by the evaluation team. In addition to the addition of three TLU's, fifteen more Cameroonian scientists will be trained. In Phase II all counterparts will work with the technical assistance team for a year both prior to, and after, their M.Sc. training, and then for three years under guidance after obtaining their Ph.D. The Cameroonian government is currently negotiating a five-year, \$46 million project with the World Bank

for agricultural research that will strengthen areas not included in the NCRE Project (such as export crop research). Rather than duplicate the TLU activities for their own project, the World Bank requested that AID expand their TLU activities. This collaborative agreement has been written into the World Bank's loan agreement with the Government of Cameroon.

#### The Agriculture Management and Planning Project

The Agriculture Management and Planning Project (AGMAP) is an \$8.8 million grant to the GRC with the (revised) purpose of institutionalizing a fully functioning planning and statistical unit within the Ministry of Agriculture. Initiated in 1978, the project was a response to the lack of adequate or appropriately trained personnel in newly created technical ministries that were charged with making important policy decisions but lacked the tools to do so effectively. The emphasis was particularly on the Ministry of Agriculture. The original Project Agreement was signed in December 1978 for \$3.25 million. A series of amendments have raised the grant total to \$8.8 and extended the life of the project.

The project components include training, preparing reference materials, and preparing a new subsector study. By the end of this project the new planning unit will consist of a cadre of planners and statisticians capable of regularly producing agricultural statistics, agricultural sector analyses, policy papers, feasibility studies, and annual reports.

A major activity of AGMAP, which was completed in 1985, was an agricultural census for the entire country. This was the first census since 1972 and has made data of good quality available to the Agriculture and Planning Ministries. Even before the census was taken, it was widely recognized that this body of data would form the basis of the Sixth Five-Year Plan. There was a wide recognition, too, that the annual statistics used for planning purposes prior to the census had little factual basis.

AGMAP began slowly with several delays caused primarily by the difficulty of finding qualified staff for the senior statistician position and the Statistics Division. Also, there were delays in the decision to conduct the agricultural census instead annual surveys. The economics side of the project started more rapidly, and a number of economic studies were completed early in the project. The design of and training for the census were completed in 1983, but inadequate data processing capability threatened to stall the tabulation and subsequent analysis.

The midterm evaluation carried out early in 1984 determined that the project had a high probability of success in achieving the project goals if certain recommendations were followed. These included extension of the project to June 1987, continuation of technical assistance, development of in-house data processing capabilities, training, increased funding on the part of both AID and the GRC, stabilization of counterpart staff within the Departement des Etudes et Projets (DEP), and strong planning and organizational support from both AID and DEP.

The project was extended to 1987 and most of the other recommendations were adopted. The 1984 Agricultural Census received exceptional support and cooperation from national, regional, and local government. Some of the analysis of the census data was done in the US, but future data processing will be done in Cameroon.

A number of studies have been completed as a direct result of the project. They include a National Food Plan, which was used in preparing the Fifth Five-Year Plan, and an Analysis of the Food Problems in the Littoral Sud. All the studies have been used in the decisions that make up the planning responsibilities of the DEF.

The evaluation team determined that the long-term training provided for in the project paper was "grossly inadequate" and recommended additional long-term training for two economists as well as additional short-term and in-country training. As of September 1985 five long-term trainees had been sent to the US; three more were to be sent. Their fields of study include economics, statistics, and data processing.

The value and impact of this project is difficult to measure but undeniable. Developing the Government's ability to plan and monitor Cameroon's own agricultural development is essential for a country as dependent on agriculture as is Cameroon. And it has certainly been a costly omission that the GRC has been making policy decisions and planning agricultural development based on inaccurate data. The following table compares data provided

recently by the Ministry of Agriculture with preliminary results of the census:

Table 7 Cameroon Food Crop Production Data

<u>Crop</u>	<u>Ministry of Agriculture(1981-82)</u>		<u>1984 Agricultural Census</u>	
	(metric tons in thousands)	(hectares)	(metric tons in thousands)	(hectares)
Plantain	2,388	592	63.6 a	43.3 b
Cocoyams	775	529	191.8	98.1
Bananas	603	531	49.9 a	27.3 b
Cassava	625	401	1385.3	115.3
Maize	410	495	408.7	205.7
Yams	421	274	109.4	23.1
Sorghum/millet	441	512	207.7	373.5
Peanuts	84	363	99.2	134.1

a. Measured in bunches x 1,000.

b. Includes field area only.

Although some of the preliminary census data above are not entirely comparable with the Ministry of Agriculture's data, large differences are clearly apparent. According to the census sorghum/millet and maize have the largest cultivated acreage, but are fourth and sixth according to the Ministry's data. Acreage figures for plantain and bananas are more than ten times as high in the Ministry data. And the census shows cassava production being twice as large in weight, but one-fourth as large in acreage, as the Ministry data.

#### Participant Training and Agricultural Education

Every year since 1961 AID has provided funds for Cameroonians to pursue higher education in the US and in Africa. Of the 575 AID

participants trained in the US and Africa, between 1961 and 1982, many have pursued graduate studies at US universities, while 195 have received short-term training. (Since 1982 an additional 200 Cameroonians have completed training.) The funds for these studies come from many sources ranging from centrally funded scholarship programs to project budget items. The major programs include the African Graduate Fellowship Program (AFGRAD), the African Manpower Development Project (AMDP), the African Scholarship Program for American Universities (ASPAU), the Inter-African Fellowship Program (INTERAF), and the International Training for Health (INTRAH).

The majority of the long-term training is through regionally and centrally funded programs, AFGRAD and ASPAU. However, in recent years an increasing number of agricultural science degrees have been made possible through project funds from NCRE, North Cameroon Livestock, North Cameroon Seed Multiplication, and the Lake Chad Basin Commission.

The range of fields of study is impressive (and difficult to summarize). Advanced training has been completed in areas including agronomy, plant pathology, hatchery management, agricultural engineering, statistics and computer science, range management, business administration, entomology, animal nutrition, economics, public health, agricultural biochemistry, civil engineering, and veterinary medicine. Receiving training does not automatically imply putting that expertise to productive use, but in Cameroon the record in this respect seems to be quite good. A

very high percentage of those receiving advanced training have returned to Cameroon and are functioning in responsible capacities in both the public and private sectors. Evidence from other African countries shows similarly good results.

Table 8 shows what important contributions a few of the many

Table 8. Current Employment of Selected Cameroonian AID Trainees

<u>Field of Study</u>	<u>Present location</u>
Biology	Vice-Minister of Education
Animal science	Director, Regional agriculture School
Economics	Minister of Commerce and Industry
Economics	Director General, National Council of Transporters
Agriculture	Provincial Chief of Services for Agricultural Statistics, MIDENO
Poultry husbandry	Director, Institute for Animal Research
Education	Secretary General of Faculty of Sciences, University of Yaounde
Government	Minister of Transport
Agriculture	Station chief, Institute for Agricultural Research
Business administration	National Investment Corporation
Agricultural economics	Ministry of Planning and Industry
Agriculture	Manager, Cameroon Development Corporation
Educational administration	Vice Minister of Agriculture
Business administration	Director of the National Railway Corporation
Mathematics	Data Office, Presidency
Agricultural economics	Director of ENSA, Ecole Nationale Superior Agronomique
Agricultural economics	Professor, University of Yaounde
Agricultural economics	Director of Agricultural Education, Ministry of Agriculture
Biochemistry	DGRST (Delegation Generale a la Recherche Scientific and Technique)
Business administration	Director of Finance, National Investment Corporation

Source: AID/Cameroon's own directory of past and current participants. The difficulties in tracking these people are formidable. Therefore, they are likely to be incomplete or in some cases out of date.

AID participants are making to Cameroon's development. The magnitude of that contribution is impossible to quantify, but its existence is unquestionable. While not all participant trainees eventually follow careers that utilize the training, the success rate is high.

A qualitative assessment of the development impact of this training is necessarily subjective, but visiting many of the institutions and programs important to Cameroon's agricultural development -- as the author did -- leaves no doubt of the contribution being made. Within the Ministry of Agriculture and especially within the Institute for Agronomic Research (IRA), the number of senior positions held by people with advanced training in the US under the auspices of AID was remarkable. Equally impressive was the caliber and professionalism of many of these individuals.

From several perspectives the impact of this type of assistance seems to have clear advantages over many of AID's other activities. First, investment in human capital is an essential part of the development process. Second, for Africa in general which, unlike south Asia, lacks an historical tradition of education and literacy, the scarcity of people with advanced training is a glaring constraint to furthering the development process. Third, the US has institutions of higher learning that are among the best in the world, especially in the agricultural sciences. Fourth, investments in human capital are a much more "durable" investment than many other activities that are fragile

and vulnerable to changes in government policy, international prices, US government priorities, or individual bureaucrats with conflicting personal interests. And fifth, such training is something that AID can do relatively easily, since it requires little in the way of staffing or of supervising, monitoring and enforcing contract requirements. The choice of candidates is critical, as are the fields of study. But the evidence suggests that AID has some proficiency in this.

AID's largest project in Cameroon is the Agricultural Education Project, a \$43 million effort (1982-88) to assist the Government in creating an agricultural university at Dschang capable of training agriculturalists to work for the government, parastatals, and the private sector. The project is a multidonor effort involving both the World Bank and France.

As of 1984, \$31 million had already been obligated, including the entire loan component of \$26 million. The contractor, the University of Florida, has provided a team of seven faculty that has developed and reorganized the structure of the university, developed a curriculum, and begun instruction while 28 Cameroonians are pursuing graduate training in the US, 10 at the Ph.D. level, in preparation for faculty positions at Dschang when they return. In their absence American graduate students are fulfilling their teaching responsibilities. The existing national system with two instructional programs at ENSA (Ecole Nationale Superior Agricole) and ITA (Ingenieur Travaux Agricole) have been reorganized and relocated to fit into the new Dschang system (with two- and four-

year programs instead of the existing three- and five-year degrees).

The project is still in the early stages of implementation and, therefore, any discussion of impact would be premature. Progress to date has been reasonably satisfactory, although delays in construction would have made it impossible to begin teaching had it not been for the completion of the World Bank's construction component.

There are, however, several issues which raise questions about the long-term prospects for establishing a productive university. These include the planned size of the university and expected enrollment, its location and the fact that it is only an agricultural university, the length of time over which support is planned, and the dynamics of the technical assistance team.

There are insightful comparisons and contrasts to be drawn with the AID support for Ahmadu Bello University (ABU) in Nigeria, which was developed quite successfully over a fifteen-year period (Jaeger 1986a). Among the factors responsible for the success of that project were the length of time during which Kansas State University (KSU) was involved. In fact, many observers felt that, even after fifteen years, KSU left a couple of years too soon. Also, much of the credit for the enduring contribution of their efforts goes to the presence, both before and after the KSU effort, of a sizable number of expatriate faculty that provided continuity when insufficient numbers of qualified Nigerians were available. In contrast, at Dschang the anticipated time frame is only seven

years and there is little existing institutional capacity on which to build.

In addition to the continuity provided at ABU by the existing expatriate staff, the success of the AID effort was significantly affected by dynamic interaction, dialogue, and compromise -- a process leading to the evolution of a university structure that appears to be more appropriate for Nigeria than either the American or British system would have been. At Dschang, however, the University of Florida team is relatively free to decide on the system to be introduced. Few members of the team have previous experience in Africa however, and they are quite naturally somewhat uncertain what is likely to work best. Most want to base the new university on the US land-grant model. Given the Nigeria case, that model may need some important modifications.

In Nigeria, widespread recognition of the importance of agricultural training greatly helped to create high demand, full enrollment, and many jobs. In Cameroon, the strength of the demand, and the capacity to absorb all graduates into productive employment is cause for concern. Currently there is a shortage of agriculturalists for government jobs, but the number of positions is small compared to the number of students expected to graduate each year from Dschang. The government traditionally pays the tuition of most students, but it is unlikely to continue offering as many scholarships after the current manpower shortages are remedied. Again, in Nigeria, after twenty years of developing agricultural universities, the 12 Faculties of Agricultural have a

total enrollment of approximately 2,400 students nationwide. The University of Dschang is designed to have 800 students (excluding the two-year program). When these enrollment levels are compared in terms of students per 1 million population, Cameroon is planning to maintain an enrollment three times as high as the current levels in Nigeria. Since the two countries have similarly diverse agricultural economies, one would expect the demand for agriculturalists to be more comparable on a per capita basis. The tabulation below indicates the large differences between planned enrollment at Dschang versus current capacity in Nigeria and in Kenya:

<u>Country</u>	<u>Agricultural enrollment per 1 million population</u>
Nigeria	26
Kenya	39
Cameroon (planned) <sup>6</sup>	80

Furthermore, ABU's Faculty of Agriculture is an integral part of a general University offering non-agricultural disciplines including law. Dschang, however, is exclusively an agricultural university in a somewhat isolated location. Considerable doubt has

<sup>6</sup> The analysis of manpower needs in the Project Paper was conducted in 1979 by Cornell University's Rural Development Committee. It focused on short-term manpower needs through 1985. They conclude, however, that Cameroon will need about 70 graduates per year, or an enrollment of 280, which, in terms of the tabulation above, would be very close to the levels for Nigeria, about 28 students per 1 million population. This is substantially lower than the actual planned enrollment of the university according to University of Florida staff.

been raised (by the University of Florida team and others) about the ability to attract students to Dschang with no alternative course of study except agriculture. Those doubts seem justified: agriculture is not a desired area for most young African students, and by enrolling at Dschang they are left with no other options. Conversely, a student at the University of Yaounde, who develops an interest in agriculture, lacks the option of taking a course or two in an agricultural field to test that interest.

#### Small Farmer Livestock and Poultry Development

The Small Farmer Livestock and Poultry Development Project has as its purpose to increase the availability of improved breeds of livestock and poultry adaptable to the Cameroonian small farmer's environment. A \$1.285 million Operational Program Grant (1980-85) was provided to Heifer Project International (HPI) for technical assistance, training, commodities, and construction, to breed and distribute improved varieties of livestock, and to train farmers in their care. Implementation was to be carried out through the Institute of Livestock Research (IRZ) in the Ministry of Higher Education and Scientific Research (MESRES), and the Ministry of Livestock, Fisheries and Animal Industries (MINEPIA).

The end-of-project evaluation (1985) concluded that although HPI and the participating Cameroonian entities made valid efforts to achieve the project objectives, the objective of transferring technology was not achieved due largely to differences in the implementation approaches of HPI (extension) and IRZ (research).

The evaluation faulted project design for not recognizing the implications and potential conflicts that would arise from these differences. In addition, it pointed out that an earlier, midterm evaluation had focused on these critical areas of concern, but that implementation continued with these key constraints intensifying rather than diminishing.

According to its design, the project was intended to establish livestock and poultry industries in Cameroon, including a research unit, a distribution system to provide improved livestock to small farmers, and a service system to provide feed, breeding services, and so on, and increased availability of meat, eggs, and dairy products for sale. The project included both short- and long-term training.

According to the end-of-project evaluation, the adaptive research components for cattle, swine, and milk technology were established, and IRZ had hired competent technical advisory staff. But inadequate management, high animal mortality rates, poor experimental design, and inadequate record keeping were cited as constraints on progress toward fulfilling the adaptive research agenda. The training component was seen as a success within the framework of the project design targets. This involved about 180 farmers, more than 200 staff and students, and six people receiving graduate training in the US.

Distribution targets for the project, however, were not met, as Table 9 shows. After five years HPI's efforts to distribute dairy cows to farmers had resulted in the participation of only 23

farmers, with a total of 60 mature milking cows. HPI's efforts have been frustrated by a number of factors in addition to IRZ's desire to retain the animals for research purposes.

Table 9. Actual and Planned Distribution of Livestock

<u>Livestock</u>	<u>Planned</u>	<u>Actual</u>	<u>Actual as percentage of planned</u>
Cattle	360	119	33
Goats	210	16	8
Sheep	110	2	0.02
Swine	2,200	758	34
Poultry	350,000	254,533	13
Rabbits	3,400	366	11

Source: End-of-Project Evaluation (USAID 1985e).

The system of production and distribution of milk that HPI chose to promote appears to be too costly, too complex, and it requires the day-to-day supervision of the HPI advisors. The project provides a van for picking up raw milk from the 23 participating farmers. Until recently the milk was then pasteurized at IRZ before being distributed to a small number of customers in Bamenda, including schools and hotels, that provided a dependable market. The pasteurization has been discontinued after a number of contamination incidents and now raw milk is distributed -- after testing -- to a small number of customers. The vans that are depended upon for this "are constantly breaking down" according to the EOP Evaluation. The farmers lack adequate cooling facilities for milk storage so that evening milk is consumed by the farm family or fed to calves. The van cannot reach a large number of farmers because of their limited range given the poor roads, and

due to the high costs.

Both the production and distribution of milk is heavily subsidized by the project (new farmers receive calves at half their cost). Without these subsidies, and the enthusiastic efforts of the HPI advisor who provides technical expertise, maintains the marketing contacts, and resolves numerous problems, it is unlikely that even the small number of farmers who do participate would be able to continue this activity.

According to the HPI advisor, each farmer (with one to three dairy cows) must spend three hours a day attending to the needs of these animals. In discussing the low milk production he added that if the farmers would "cut and carry" grass for these cows their milk production would be higher, advice which overlooks the competing demands on these farmers' time.

In order to convince farmers of the profitability of the activity, the HPI advisor had calculated the expected costs and returns of the operation over a six-and one-half year period. He went over the figures with a group of farmers, who pointed out to him that the net returns were less than the cost of hiring someone to care for the cows for them. In fact, when the figures used by the advisor are adjusted to correct for incorrect discounting of future income, the net returns to labor are on the order of 90 CFAF/hour, which is significantly below the local casual wage rate of 120 to 140 CFAF. Given the additional risks of animal illness or death, the potential loss of market when the van breaks down, and the complexity of the activity, it is understandable that few

farmers are willing to invest in the HPI operation.

The HPI advisor is well-trained, enthusiastic, and hard-working. But in effect, he is trying to do American-style dairying in Cameroon with the help of 23 heavily subsidized trainees. The market for their product appears to be quite thin, and includes many expatriates willing to pay a premium for fresh milk. The advisor was unaware of the availability of local fresh milk produced by Fulani herders. His attention was concentrated on the possibility of importing grass from Australia as a test, and of building a silage machine to make hay out of one of the local grasses.

A preliminary study done by AID to investigate the feasibility of developing a domestic dairy industry (Kelso and Gagne-Gervais 1983) determined that such a project was possible. Their premise is that this production would provide a substitute for imported milk costing as much as 4 billion CFAF per year. However, the limited substitutability of fresh milk for imported powdered and canned milk -- which are imported in part because of the convenience and lack of perishability -- is not discussed except to point out that imports of fresh milk are not significant, and that domestically produced powdered or evaporated milk would be prohibitively expensive.

When viewed as a pilot activity to test the feasibility of modern dairy production, the HPI project has provided some important and convincing evidence that, at least for now, the technology is inappropriate and the demand is insufficient to

warrant further efforts along these lines. After five years and \$1.28 million only 23 farmers and 60 cows are producing milk.

In 1985 HPI had requested AID funding for a \$3.2 million extension that, according to their own estimates, would result in a 3 percent increase in farm income nationwide. In spite of considerable doubts among most AID/Yaounde staff that further funding was warranted, some of them conceded that the extension might be approved (it was included in the FY 1987 Congressional Presentation as a planned \$3.5 million project). The reasoning for this was related to AID "set asides" requiring that missions target private voluntary organizations (PVO's), like HPI, for more than 10 percent of their project aid. In addition, HPI has strong links with certain effective lobby groups in the US; given the humanitarian appeal of the kinds of things HPI does, it was believed that pressures from those constituencies would prevail. In 1986, however, the proposed extension was rejected, in part due to the concerns expressed above, and in part due to the project being a low priority during a period of budget cutting within AID.<sup>7</sup>

#### Other AID Activities in Cameroon

In addition to the six projects discussed, AID's Cameroon program has included support for primary education, family health,

<sup>7</sup> Pressures of this type, however, have prevailed elsewhere in the Cameroon program. In direct response to pressures from Washington, in addition to the set-aside programs for historically black colleges and universities, the Mission has recently committed itself to a \$5.8 million Roots and Tubors Research Project contracted with a small university in eastern Maryland with limited capacity and experience relevant to this kind of undertaking.

and urban housing. Other agricultural projects include rural water supply, small farmer training, and food crop protection.

AID's role in the areas of health and population have included efforts to encourage the GRC to adopt policies to limit population growth. In this part of Africa, where pronatal policies persist, the sensitivity of the issue makes it a difficult one to address overtly. By linking population control to a health services project, AID has been able to avoid any strong negative reaction, while at the same time expanding the availability of contraceptives throughout the country.

Through dialogue with the GRC, and by including a presentation of the Futures Group program called RAPID (Resources for the Awareness of Population Impacts on Development) which projects population growth, demand, and costs under different assumptions about the fertility rate, AID seems to have contributed to a shift in policy toward population control. President Biya recently created a Population Commission to develop a national population policy. The current Secretary of State for Health has publicly encouraged child spacing on the grounds of children's survivability and the mothers health, rather than on the grounds of population planning.

AID has also funded several projects in the area of rural and maternal health. As a result of the Rural Health Education project implemented by Catholic Relief Services, rural health services were augmented, resulting in significant, observed reductions in child illness and malnutrition. The impact of the project was limited,

however, because not enough qualified candidates could be found to meet the training targets set by the project.

Both of the AID projects to provide rural water supplies encountered technical problems and were discontinued. The Mandara Mountains project was terminated when it was found that the costs of building the dams made the project unjustifiable. Technical problems with pumps resulted in nonrenewal of the Margui-Wandala Water project.

The Young Farmer Training Centers project was established with the belief that by teaching improved agronomic practices to farmers during a one-year program that they would be able to return to their villages and increase their incomes by 50 percent. Monitoring of the returnees revealed that they had some problems being accepted back into their communities. The anticipated benefits were not achieved because the technologies being promoted were not adopted by the farmers. As a result, significant increases in income did not occur.

## CHAPTER V. EVIDENCE OF AID'S IMPACT IN CAMEROON

This chapter attempts to assess the development impact of AID's activities in Cameroon. A number of difficulties arise in attempting to do this. First and most obvious, "impact" is extremely difficult to measure and even more difficult to compare for very different types of activities such as rural health, farmer credit, or participant training. The lack of sufficient data or consistent end-of-project evaluations prohibits a comparison of economic rates of return, as is the practice at the World Bank and elsewhere -- a practice that is itself controversial and has been shown to rest on very rough estimations and subjective assumptions (Jones 1985). Nevertheless, in many cases sufficient evidence exists upon which informed judgement can be made about impact. So that the approach of this study is to present those judgments, along with supporting evidence.

Because of the small share of total ODA contributed by AID and the relatively short time during which the program has been sizable, it is impossible to use any national statistics, such as changes in income or production, as indicators of results from AID assistance.

The reader should keep in mind that the focus of this study is on the development impact of agricultural aid, and not on other

objectives of aid. The importance of political and humanitarian objectives is made clear in the AID Congressional Presentations and elsewhere. Since these other objectives are not considered explicitly in this study, the judgments will tend to understate the effectiveness with which AID attains all its objectives.

### Conceptual Framework

In order to assess the effectiveness of AID assistance in promoting agricultural and rural development, a framework is necessary to guide the analysis. As described in chapter 1, we take as a basis for analysis a framework derived from the substantial progress that has been made in the last 35 years toward understanding the development process and the critical elements of a development strategy. A set of general propositions guide the analysis, since AID's effectiveness in furthering agricultural and rural development depends not only on how well they achieved their specific goals, but whether the activities they chose to support constitute essential elements of a coherent, well-conceived strategy for agricultural development.

Thus we postulate a reasonable and widely-held view of the crucial elements of the development process, beginning by viewing development as a "generalized process of capital accumulation" (following H. Johnson, 1969), in which capital is viewed broadly as physical capital (plant and equipment, natural resources), human capital (skills and competence), and social capital in the form of economically useful knowledge, organizations and organizational

competence. This definition includes the establishment of efficient social and economic mechanisms for maintaining and increasing large stocks of capital, including policies and institutions which permit and encourage efficient utilization of that capital. And emphasizing that a reasonable balance must be achieved among activities that foster growth in these various types of capital, as well as the various mechanisms that permit their efficient use, and recognition of the important contribution that technological change has made to agricultural growth (Hayami and Ruttan 1985, Johnston and Kilby 1975).

As stated earlier, this view of development does not ignore the importance placed by many on judging development on the basis of welfare and equity criteria, but rather it incorporates the lessons learned from the "basic needs" approach popularized in the mid-1970s which demonstrated that while investments in health, nutrition, education, and housing can contribute importantly to human welfare and to economic growth, it is the growth in the economic base that is needed in order to finance these investments.

#### Efficiency in Implementation

AID projects are implemented in various ways ranging from close supervision by direct-hire personnel, to reliance on contractors or PVO's, to vesting primary responsibility in an agency of the recipient country. Projects in Cameroon have experienced implementation problems, which in turn have hampered achieving the intended goals. It is often difficult, however, to

separate implementation problems from structural or design problems that have direct consequences for implementation.

For example, project designs have frequently been unrealistic in estimating costs or the length of time required to accomplish specific activities. Implementation of the Mandara Mountains Water Project was stopped when the cost of constructing the dams was determined to be six times as high as originally estimated. The evaluation of the North Cameroon Livestock Project recognized that the accomplishments expected in the five-year project would require twenty years even in the US.

A poorly defined division of responsibility between AID, the contractor, and the GRC have caused delays and poor management of project implementation. Similarly, conflicts between AID priorities and GRC interests have caused critical implementation problems in cases where AID and the GRC each had different reasons for wanting the project to go through. PROSEM has had continual difficulties stemming, in part, from a blurred division of responsibility between GRC agencies and the project contractor. Both the Small Farmer Livestock Project and the North Cameroon Livestock project have experienced severe implementation problems because of divergent objectives between AID (or the contractor) and the Cameroonian agency.

Discontinuities in project staffing, and delays in recruiting staff, have hindered various AID's activities. Both North Cameroon Livestock and PROSEM had very slow starts due to difficulties recruiting technical assistance teams. North Cameroon Livestock

managed to assemble a complete technical assistance team in the field quite late in the project cycle and for only a short time. PROSEM continues to have problems with contractor staffing and performance, as well as difficulties from the Government's side. Political allegiances and self-interest, as well as changes in the power structure, have exacerbated these implementation problems.

In many cases AID staff have referred to lack of cooperation, competency, or commitment on the part of the GRC implementing agencies. Problems of this sort have in several cases had serious consequences for attaining specific goals. But in the projects examined for this study, there seems to be a high correlation between cases where GRC commitment was questionable and cases where the economic viability of the project itself was suspect.

Although the Government may officially support a particular project, doubts about the appropriateness or sustainability of the activity may manifest themselves in the Government's reluctance to fulfill their commitment. In some cases this may become apparent only after the project is well underway, as doubts about it grow. There does appear to be evidence that for activities where the GRC is wholeheartedly convinced of the value of the activity, problems of cooperation, continuity, or competency have been largely absent; NCRE and AGMAP are examples. In contrast, both PROSEM and North Cameroon Livestock have experienced problems of this kind, and both are based on presumed technological innovations that have unverified, and highly questionable, economic justification.

Infrastructure projects have experienced fewer implementation

problems. The Transcameroon Railroad and Farm-to-Market Roads, for example, seem to be relatively straightforward kinds of activities for which cost and time are more easily estimated, and responsibility for implementation requires less complex arrangements. By contrast, recent construction of facilities for the Agricultural University at Dschang has been seriously delayed due to the complexity of the contractor bidding requirements. This delay could have interrupted implementation of the new curriculum had it not been for the timely completion of university buildings constructed by the World Bank.

#### Impact on Agricultural Development

The available evidence demonstrates that AID's efforts in Cameroon have contributed to the accumulation of physical capital, especially during the earlier years of the program when it was heavily focused on infrastructure development. The Transcameroon Railroad Project has provided Cameroon with an important transportation link between the port of Douala, the population center of Yaounde, and agricultural areas as far as Ngaoundere. Many of the roads projects such as Farm-to-Market Roads represented investments that were appropriate and relatively durable types of capital formation.

More recently, the loan components of the Agricultural Education Project and the NCRE Project have provided for construction of public facilities -- for agricultural education and research -- that represent important investments with a high

probability of contributing to the process of development.

In contrast, the physical capital components of several other projects are unlikely to function as productive assets in the development process, in part because the activities they support are not clearly essential elements of a coherent, well-conceived strategy for agricultural development, and in part because of implementation problems discussed below. These include the partial construction of buildings and water-point development in the North Cameroon Livestock Project, the investments made for the PROSEM seed farms, the facilities and equipment of the Food Crop Protection Project, and the aborted Mandara Mountains Water Project dams.

The contribution of US assistance to the formation of human capital is striking, although less easily observable than for physical capital. Since 1961 the participant training programs described in the previous chapter have provided Cameroon with a large number of well-trained, able, and highly motivated individuals. Many of them are now in positions which afford them the opportunity to contribute to the process of agricultural and rural development. The establishment of the Agricultural University at Dschang has the potential for an even more lasting contribution to this end, by building the capacity within Cameroon to generate the appropriate human capital necessary for agricultural development.

Other activities have also contributed to the formation of human and social capital. These include the training components of

the NCRE Project and AGMAP. But providing long-term training does not automatically result in productive human capital. The trainees did not always return to Cameroon or pursue a career in the area for which they were trained. In cases when training was provided for performing a specific project-related activity, the success of the project itself was usually essential to the productive use of that investment. In the North Cameroon Livestock and PROSEM projects it is not clear that the trainees will make full use of their knowledge since the activities for which they were trained have not been shown to be beneficial in the Cameroon environment.<sup>1</sup>

The formation of social capital, or economically useful knowledge, can be generated through transfers of knowledge, as in the case of the Cocoa Disease Control Project, or through augmenting the recipient's own capacity to extract that knowledge. The Agriculture Management and Planning Project combines both of these approaches. The methodology and data processing system represent knowledge transferred for productive use. In addition, the output from the resulting census, and subsequent surveys, will create economically useful knowledge, or social capital, that should prove extremely valuable in agricultural planning and policymaking. In the context of striving for a balance among the various types of activities (and equating the return on these

<sup>1</sup> In the case of the terminated North Cameroon Livestock Project, remaining funds in 1985 were transferred to training activities in related fields such as range management. Given the experience of the project, and the near-term prospects for attempting to "manage" the ranges of north Cameroon, this seems to be a dubious allocation.

different types of investments), one need only compare the scarcity of this kind of data on agricultural resources and their productivities in Africa with data available in middle-income countries to conclude that it should be a priority in Africa.

The NCRE Project is clearly a case where knowledge transfers, human capital investment, and development of the capacity to create economically useful knowledge are combined in an activity that has been proven to have a high payoff in developing countries in other parts of the world. Moreover, agricultural research in Africa has received relatively little investment, and so lags behind research in much of the rest of the developing world.

It is too early to exhibit much concrete evidence of the impact of this program on agricultural production, given the long time lags between investment and payoff associated with agricultural research. But the quality and appropriateness of the research programs developed thus far, as well as the promising results already attracting the attention of farmers, are extremely encouraging indicators of the potential developmental impact.

Policy dialogue and conditional aid have become a popular and widely used tool by donors in recent years. Cases can be cited in which policy reforms (for example, removal of price controls or privatization) induced by conditional donor assistance, have clearly resulted in improved performance of the agricultural sector. These changes can be viewed as fostering the establishment of efficient mechanisms for maintaining and increasing the stocks of the various forms of capital. In Cameroon, however, AID has

engaged very little in policy dialogue, although in 1985 AID proposed an initiative to reform and restructure the national fertilizer importation and distribution system under the African Economic Policy Reform Program. The lack of involvement by AID in policy dialogue is probably a function of Cameroon's relatively good performance (food self-sufficiency) and an absence of the kind of intervention and distortion in the agricultural economy that is present in many other African countries.

#### AID's Achievements and their Costs

Comparisons of the impact of AID activities and their costs should ideally be done in a benefit/cost framework. Unfortunately quantifiable benefits, and even some costs, are impossible to compute or compare. Nevertheless, some useful observations and judgements can be made from AID's Cameroon experience.

Participant training and development of educational institutions costs little more than it would in the US. To send a Cameroonian to an American university for graduate training is only slightly more expensive than to send an American student. Selecting the best candidates will be more difficult and costly, but these costs are not large when compared to tuition and subsistence. The probability of participant trainees returning to their home country to work in a capacity that makes full productive use of their skills may be lower than for an American student, but given the scarcity of trained manpower in Africa it is also likely that the marginal productivity of those who do end up using these

skills will be quite high. Numerous Cameroonians trained under AID sponsorship, and encountered during the field visits for this study, bear this out.

Africa lags behind much of the rest of the developing world in infrastructure. Infrastructure development such as railroads, roads, and buildings are generally quite costly in Africa, due in part to the high cost of importing heavy equipment and construction materials. Implementation can be relatively straightforward and these investments tend to be more durable than those in other types of projects (if maintenance is provided). Thus, even casual observation leads to the conclusion that the return on such investment is high, making this an obvious priority area for bringing rates of return to the various forms of capital into alignment. However, AID's Africa Bureau has maintained a policy for quite some time of avoiding these kinds of activities. Furthermore, it is no longer clear that the US continues to have a comparative advantage -- relative to other donors -- in this area.

Endorsing infrastructure development implies careful choices among alternatives. A railroad, for example, must be built where the demand is greatest. The dams that were to have been constructed in the Mandara Mountains Water Project were found to entail unacceptably high costs, and they would have been neither an essential element of a strategy for economic development nor would they have had a high economic rate of return. Neither the water-points nor other construction for the North Cameroon Livestock project appear to have positive rates of return, based on

evaluations and the judgment of AID staff.<sup>2</sup>

The relationship between the costs and benefits of establishing a national agricultural research program depends on many factors. The costs will vary with the costs of the technical assistance, the requirements for construction of additional facilities, the existing pool of trained scientists, and so on. The benefits will depend on the size and characteristics of the agricultural sector, the agroclimate, and the potential for improvements with significant productivity gains. Furthermore, the size of the country and the potential for creating a "critical mass" of researchers will affect the sustainability of a national research program, the quality of the research, and the ability to attract and maintain a staff of highly qualified scientists.

The NCRE project appears to be one with relatively high potential benefits and relatively low costs. The AID contract with IITA includes a number of favorable circumstances which account for its apparent high benefit/cost ratio; including 1) the proximity of IITA, 2) the relatively low cost of many of the well-trained scientists, who do not require salaries commensurate with US standards, 3) the long-term commitment and continuity of staffing from IITA, 4) the large proportion of technical assistance team members that have prior relevant experience in Africa, and 5) the significant number of Cameroonian scientists already available

<sup>2</sup> In addition, both the Mandara Mountains project and the catchments built for the North Cameroon Livestock project can give rise to serious health problems through schistosomiasis infestation.

including some trained by other AID programs. In addition, Cameroon is a country whose diverse and productive agricultural economy provides an environment which seems capable of supporting a "critical mass" of agricultural scientists, and one where the intellectual and financial incentives can encourage and retain a highly qualified staff.

#### Biases and Distortions Caused by Aid

Aid can have unintended as well as intended effects. Offers of financial assistance by donors can bias the judgments that recipients make about policy and use of revenues. In some cases the biases are intentional and constructive, as in the case of conditional aid for policy reform or of aid that induces recipients to make long-term investments in agricultural education and research. But tied aid, the problems of recurrent costs, enlarged government bureaucracies, and government involvement in inappropriate activities are distortions that can be costly or counterproductive.

Tied aid is one form of distortion that can have adverse consequences for the developmental impact of aid. AID is required to use US-made commodities for all projects except when specific waivers are obtained. Waivers have been used for many projects in Cameroon. But under the US Foreign Assistance Act, US vehicles must be used except where the costs of maintenance are unreasonable. Since American Motors markets through Renault, which offers servicing and parts in Cameroon, the AID mission has been

unable to justify waivers for vehicles. In the NCRE project, US vehicles are imported for use by all technical assistance staff. This practice can have three negative consequences: 1) reducing the effectiveness of project implementation because the commodities are inappropriate, 2) creating a continual dependency on imported goods that may be more costly and less efficient than alternatives, and 3) diverting use of scarce foreign exchange earnings for the purchase of spare parts and replacements.

In the NCRE project, the technical assistance team argued convincingly that the requirement to use US-made vehicles was handicapping their work. US vehicles are too large for the roads, inappropriately built for the road conditions, and uneconomical. Also, long delays occur when ordering US-made vehicles, and they are extremely difficult to get repaired. At one research station three US-made vehicles were no longer usable; each had less than 40,000 miles on the odometer. As a result, several of the research scientists were prevented from carrying out their research programs.<sup>3</sup>

Immediately after the drought there was a widely held view that government intervention was needed to restore the agricultural economy to full productivity. AID and other donors responded with

<sup>3</sup> The mission reports that they received many complaints but little cooperation in documenting vehicle performance so that a case could be made for waivers. Usage reports from contractors were never sufficiently complete or convincing to justify scraping the use of US vehicles, according to the mission. Very recently Renault has decided not to stock Jeep parts any longer. As a result, the AID mission is issuing waivers for all types of vehicles.

initiatives that, individually, may not have been excessive but that, when taken together, could have left the GRC overextended. Fortunately, the GRC has shown caution in committing itself. In some countries, the creation of parastatals, regional development authorities, and seed multiplication farms have resulted in more government involvement than would have occurred without donor encouragement. But in Cameroon this problem has been relatively small, and there have been encouraging signs that the GRC is committed to promoting development through the private sector.

Recipient governments cannot independently assess all donor proposals; they must rely on the donors justification and analysis to some degree. As a result, the government may be misled into inappropriate commitments. In both the North Cameroon Livestock Project and PROSEM, the GRC appears to have been persuaded by AID's analysis of the project's benefits. Clearly, the GRC has very limited capacity to assess the feasibility of a deferred grazing scheme (although it may have had political reasons for wanting to pursue the project independent of the feasibility question); similarly it found AID's pronouncements about the availability of improved varieties persuasive, at least initially. Likewise, the complex nature of the technical design for the Mandara Mountains project made it difficult for the GRC to challenge these AID's computations.

In some cases the direct cost to Cameroon of accepting AID's initiatives was small; for example, the Mandara Mountains Water Project required only that the GRC establish a coordinating

committee. But the indirect costs of a mistake, for both the GRC and AID, appear to have been quite high. Discussions with government officials involved in the project reflect a loss of confidence in, and reluctance to accept, US advice in the future. The GRC suffered political damage since it had promised the people of the Mandara Mountains region that they would get large supplies of potable water. These observations are not intended to advocate "sticking with" troubled projects, but rather to stress the need to improve project selection and design so that undertakings embarrassing to both AID and GRC are avoided.

In other cases the direct costs incurred by the GRC are high. Although it has no evidence that PROSEM has had any significant impact, the GRC has already committed itself to contributing \$5.1 million to this project and to repaying a \$5.6 million loan. This commitment of scarce resources was apparently made on the basis of AID's assertion that improved crop varieties would soon be available, resulting in higher yields and more food.

Government revenues are scarce, as are the administrative and managerial skills of the government bureaucracy. The GRC's judgements about the best use of these scarce resources are influenced by the donors' own agendas. One instance in which this appears to have led to a misjudgment was the North Cameroon Livestock Project: the GRC committed itself to try, in essence, to manage the growth of grass in northern Cameroon with very ambiguous evidence about the potential benefits.

Excessive recurrent cost problems have received more attention

in recent years. It is common now to hear about donor's efforts to dismantle the agencies and parastatals that they urged local governments to create ten years ago. There are counter-examples showing the Governments caution as well: In 1980, AID proposed a \$30 million Medical Systems Project (MEDCAM), but it was rejected by the GRC on the grounds that the management and recurrent cost requirement, exceeded its resources.

AID staff are generally not directly accountable for, and do not bear the consequences of, the commitments they promote. And although AID staff are quite conscientious and dedicated, conflicting pressures may make them predisposed toward optimistic assessments of the economic viability of unproven undertakings. Currently AID is involved in debate about the design and development of the national extension service in Cameroon. The costs of a national extension system need to be carefully assessed in relation to the opportunity costs of the committed resources, and especially in relation to a realistic assessment of the technologies available to be extended. Some people in AID believe that existing knowledge or the expectation of future research results to offer to farmers is sufficient to justify the costs of a national system. Yet such a system may not be warranted. And it is the GRC that will pay the costs and that may or may not reap the assumed benefits.

Similarly, the Dschang University Project needs to be reexamined with the costs, intended enrollment, location, demand for graduates, and sources of scholarship funds assessed from a

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long-term perspective. The project must stand up to scrutiny even after satisfying the current short-run shortage of agriculturalists to fill government jobs.

## CHAPTER VI. CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the findings of this study. Conclusions and recommendations are based primarily on evidence from AID's experience in Cameroon. But because the author is also examining AID programs in Senegal and Nigeria, it is unavoidable -- and probably desirable -- that these conclusions reflect some of what has been learned from these countries as well. A set of conclusions are presented that reflect generalizations and patterns that emerge from the study. And recommendations are put forth which are believed to be reasonable proposals for improving the effectiveness of AID.

Several matters should be kept in mind when interpreting these conclusions and recommendations. First, the study is focused on the development objectives of aid and therefore will understate its overall effectiveness by ignoring the extent to which other objectives -- such as political or humanitarian ones -- are met. Second, the analysis is based to a large extent on judgment and subjective assessment of impact and success. Different people view the impact of AID's activities differently. Disparate assessments were weighed along with the available evidence in an effort to reach a balanced conclusion. Third, an attempt has been made to be "forward-looking," and practical, in drawing conclusions and making

recommendations by focusing on modifications in what AID does and the way it does it that are realistic.

### Conclusions

1. The AID mission in Cameroon has, in recent years, done relatively well in developing a country program that is based on a coherent strategy for development, one focusing on agriculture. Having a clear focus has not only meant that components of the program are complementary, it has also given AID greater influence on the Cameroonian Government than would otherwise be expected given the size of the program.

2. Lack of continuity impedes AID's ability to make more substantial contributions to fostering agricultural development. Discontinuities in direct-hire staff, contractor staff, and GRC officials are frequent. Gaps in AID staffing can be traced to the difficulties and complexities of making assignments, occasional poor planning, and unforeseen events. This problem can manifest itself in poor project performance, inadequate institutional memory, and the absence of "learning-by-doing" or increased competence over time. The lack of continuity is exacerbated by frequent changes in directives from AID/Washington. Often these changes are the result of congressional pressures and of the multiple objectives of US foreign assistance (See Johnston et al. 1987). But since 1980 the Cameroon AID mission appears to have been relatively more successful in resisting these pressures; and it has maintained a reasonably consistent program strategy.

3. AID's project designs are often unrealistic. AID seems unable to base project identification and design on reasonable assessments of the costs, time frame, and expected benefits of a project. They try to do too much in too short a time with too few resources. Many of AID's failed projects are the result of exaggerated assumptions about the benefits of a specific technology on which a project is based. There appears to be no requirement that a project design substantiate those assumptions. Among the erroneous assumptions that have led to project obligations in Cameroon are these:

- a) After one year of training a farmer could increase farm income by 50 percent -- an assumption based apparently on heresay (Small Farm Family Training Centers).
- b) A range management scheme could be implemented and would increase the land's carrying capacity while halting range degradation (North Cameroon Livestock).
- c) During the Sahel drought farmers had sold or eaten their seed and were forced to use floor sweepings when planting time came (PROSEM).
- d) Improved, appropriate crop varieties had been developed that both required and warranted a seed multiplication system (PROSEM).
- e) Technological innovations for food crop protection that were economic could be quickly developed and disseminated to farmers (Regional Food Crop Protection).
- f) The demand for milk was sufficient to support development

of a US-style dairy operation, which was an appropriate technology that could be transferred to Cameroonian farmers (Small Farmer Livestock).

g) A potable water supply could be provided to the people of the Mandara Mountains region at a reasonable cost by building a series of small dams (Mandara Mountains Water).

4. AID's bureaucratic system does not lend itself to direct accountability for individual action. Career advancement is not closely linked to any performance measure of the impact or effectiveness of the projects and programs that a staff member promotes. Other incentives, resulting from a variety of forces and pressures within AID, can lead to actions that are not consistent with development objectives. One reason for the weak link between individual responsibility for decisions and performance is the difficulty of separating the consequences of individual actions from other exogenous factors. Also, because staff assignments are relatively short (generally two years, although four year assignments are common in some countries), individuals are rarely present when the outcome of their decisions are felt. When combined with the pressure from Washington to "move money," this weak accountability may give AID staff, who are otherwise dedicated and conscientious, an incentive to adopt overly optimistic assumptions in designing projects, and to continue to support existing projects that demonstrate little success. The factors affecting this process are complex; one important ingredient, for

example, is that AID staff are often times hired for their specific technical skills and then expected to have design competency.

5. AID project evaluations are of uneven quality. While some evaluations are extremely well done and can result in important changes to improve project performance, other evaluations have been superficial, unbalanced or even absent (especially the PROSEM evaluations in 1979-80). The inconsistency of AID's evaluation procedures has resulted in some costly mistakes. Moreover, evaluations are not always independent. Some are "in-house" evaluations, while others are influenced by a mission's desired outcome. The quality of evaluations in Cameroon improved considerably after 1980 when increased emphasis was placed on establishing a systematic approach to them. Somewhat ironically, however, AID/Washington discouraged such competency when, later on, they communicated to the mission that their emphasis on evaluations should not interfere with progress in the design and implementation of projects.

In addition to the uneven quality of evaluations, AID's response to their recommendations varies. The recommendations made in project evaluations are not binding. What the mission decides to do about them can be influenced by other factors than an objective assessment of the project.

6. Legislative restrictions on AID -- such as aid tying, special considerations for PVOs and minority firms, and Title XII provisions for US universities -- can constrain AID. Aid tying (for vehicles) has led to implementation problems for the NCRE

project. It is quite possible that the mission would not have entered into the HPI livestock activity had it not been for HPI's status as a private voluntary organization. (This has been a minor project, however, and has not affected the mission's overall program substantially).<sup>1</sup>

It would be naive, however, to ignore the political concerns involved in much of the legislative restrictions. For example, Title XII funding figures importantly in attempting to maintain a domestic political constituency for development assistance, and the basis of HPI's influence is the humanitarian appeal of their activities to the American public.

7. Participant training and other educational-related projects appear to be especially effective activities for AID. Investments in human capital are an obvious priority in Africa given the generally low level of education. This type of assistance can be provided at relatively low cost; moreover, the investments are durable, do not entail recurrent costs, and require less management on the part of AID than other project assistance. Given the success of US agriculture and the system of land grant universities, it seems clear that the US has a comparative advantage in agricultural education.

8. In the past, AID has been effective in the development of basic infrastructure such as the Transcameroon Railroad and Farm-to-market Roads, although these have recently been avoided by AID.

<sup>1</sup> The contractor for PROSEM is a minority-owned firm. However, the firm won the contract through the standard competitive bidding process, not as a minority "set-aside."

These kinds of activities can be relatively straightforward. Also, with this form of aid it may be easier to curb tendencies of local governments to subordinate economic criteria to political ones. The need for basic infrastructure in Africa is still apparent. Whether the US has a comparative advantage in this kind of investment is less clear.

9. Knowledge about agricultural resources and resource productivities in Cameroon, and in Africa in general, is extremely poor. In order for governments to make policy and manage their agricultural sectors this knowledge base must be improved. AID efforts such as AGMAP and NCRE contribute importantly to developing this valuable knowledge.

10. Agricultural research has been neglected in Cameroon. Evidence from other parts of the developing world indicate that the returns can be high, but the time frame is necessarily long. The US has the institutional and technical expertise to play a leading role in this area if persistence and patience are maintained. The AID/IITA/NCRE arrangement in Cameroon has some especially encouraging characteristics. The performance of this "model" should be carefully watched.

#### Recommendations on Choice of Activity

1. AID should continue to invest in human capital both through participant training and through support for educational institutions. These investments must be carefully balanced with current and future demand for specific skills, but the costs are

relatively low, the payoffs high and sustainable.

2. AID should carefully assess the need for basic infrastructure in Africa. If AID's comparative advantage is no longer in this area, collaboration with other, more suitable donors may be possible. Arrangements of this type have already been made, such as for the construction at Dschang in Cameroon, and for research facilities in Senegal.

3. AID should continue its support for agricultural research through national programs, regional programs, and International Centers. Potential for other arrangements like the IITA/NCRE project should be explored.

4. AID should expand its involvement in helping African countries to develop their knowledge about their agricultural resources. From agricultural censuses to on-farm trials and surveys, these data are essential for future development planning.

5. AID should view projects based on the transfer of a specific technology with great skepticism. Judgments about the appropriateness of the technology and the potential benefits are nearly always exaggerated.

6. AID should avoid projects requiring intensive management and supervision. AID staff resources are scarce, these types of projects are complex, and difficulties are exacerbated by discontinuities in staffing.

### Recommendations on Implementation

1. AID should implement a more systematic procedure for evaluating its projects, including required end-of-project evaluations, concentrating on high and consistent quality and the power to enforce recommendations made. This could be done in a way similar to the Inspector General's Audits, whose recommendations can be enforced and are therefore taken seriously. Augmenting the responsibilities, and technical competence, of the Inspector General's office might be an effective way to do this. Evaluators need a more direct link with decisionmakers to be effective.
2. Changes in AID should be made in order to move in the direction of more accountability, linking career advancement to aid effectiveness. Specific changes are difficult to prescribe; one possibility might be to assign authorship to project design documents to create an incentive for more realistic assumptions in the design stage.
3. AID needs to preserve and enhance the pool of knowledge and competence of its staff. The system as it now exists inhibits "learning-by-doing" and the creation of "institutional memory." Permitting staff to remain involved in a specific country or region would augment AID's institutional memory as well as the staff's expertise. The long-term involvement of US universities with AID offers a way to build up the capacity and effectiveness of work in Africa. An example of what is possible can be found in the special competence that Michigan State University brought to the Agricultural Research and Planning Project in Senegal.

APPENDIX

Table A1. AID/Cameroon Agricultural Project Obligations  
(in thousands of dollars)

Project title	Number	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984		
Technical Support	6310000	326	234	183	145	106	-13	2	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
N.Cam.Seed Multiplication	6310001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Young Farmer Training	6310002	0	0	0	0	0	0	0	0	0	0	0	0	0	500	289	379	20	150	140	0	0	0	0	
N.Cam.Livestock & Ag.	6310004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	952	0	0	0	0	0	0	0	0	
Manpower Training	6310005	65	42	83	64	84	0	0	0	0	0	0	0	0	0	0	1050	875	1114	0	1500	900	0	0	
Road Survey	6940008	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Farm-to-Market Roads	6310009	338	243	130	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ag.Management & Plan.	6310008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Highway Development	63111010	2047	232	296	166	566	131	0	0	0	0	0	0	0	0	0	0	620	400	2763	0	0	0	817	
Pilot Comm.Develop.	6310010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Transcam.Railroad 3	6310011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142	0	209	0	0	-3	0	0	0	
Mandara Mount. Water	6310012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7500	0	0	0	0	0	0	0	
Nat'l Cereals Improv.	6310013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1875	775	2300	0	0	0	0	
Small Farmer Live-	6310015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	875	900	900	475	2000	2547	0	
Ag.Extension & Plan.	6310016	0	188	88	60	128	115	33	0	0	0	0	0	0	0	0	0	0	672	300	0	313	0	0	
Cocoa Disease Control	6310017	0	200	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Nat.Plan.Comm.Devel.	6310017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mile 47 - Maefe Road	6310018	0	0	0	3400	0	0	0	0	0	0	0	0	0	0	0	0	0	475	0	0	-73	0	0	
Small Farm Fish Prod.	6310022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
N.Cam.Seed Multipli.2	6310023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450	150	0	157	0	0	
N.Cam.Seed Multipli.2	6310023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1100	1712	2139	0	
Food Crop Protection	6310024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1100	4230	270	0	
Margui-Wandala Water	6310025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	400	298	362	0	0	0	0	
Dschang Ag. University	6310031	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	534	925	0	0	0	0	
Dschang Ag. University	6310031	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2300	0	3010	0	
Nutrit.Advisory Serv.	6310040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8000	9731	9620	0	
Credit Union Develop.	6310044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230	0	0	0	0	0	0	
Northern Wells - II	6310051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	302	0	500	798	0	0	
N.Cam.Rural Health	6310201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	820	
Special Self-help	6319701	0	0	0	0	0	0	0	0	0	0	0	0	212	0	0	257	0	0	0	0	0	0	0	
Transcam Railroad 1	631-H-001	9195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	73	82	0	
Transcam Railroad 1	631-H-004	0	0	0	0	0	0	10000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Transcam RR Phase 2	631-H-004	0	0	0	0	0	0	0	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Transcam Railroad	631-M-005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SAFGRAG	698-0393	0	0	0	0	0	0	0	0	0	0	0	0	770	0	0	0	0	0	0	0	0	0	0	0
Food Crop Protection	625-0916	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	98	252	0	0	0	140	
LCBC Livestock	625-0010	0	0	0	0	0	0	0	0	0	0	0	0	0	457	110	195	0	0	0	0	0	0	0	
Health Constraints-Rural	698-0408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500	0	0	0	0	0	
Onchocerciasis	698-0399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1500	2000	0	
Reg.Rural Devel.Frain	698-0405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0	0	0	0	0	
Reg.Ag.Training	698-0501	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	750	1000	1000	1000	950	0	1000	0	
																								166	

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Table A2. AID/Cameroon Agricultural Project Expenditures  
(in thousands of dollars)

Project Title	Number	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Technical Support	6310000	250	234	205	162	122	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N.Cam.Seed Multiplication	6310001	0	0	0	0	0	0	0	0	0	0	0	0	0	121	234	387	194	181	116	98	0	0
Young Farmer Training	6310002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	374	309	28	19	221	0	0
N.Cam.Livestock & Ag.	6310004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	161	1161	1204	258	835	787	0
Manpower Training	6310005	27	37	30	74	39	76	35	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road Survey	6940008	69	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farm-to-Market Roads	6310009	278	96	208	-14	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ag.Management & Plan.	6310008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	260	688	577	1207	580
Highway Development	63110010	1232	161	330	631	364	54	78	-39	10	0	0	0	0	0	0	0	0	0	0	0	0	0
Pilot Comm.Develop.	6310010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	132	186	0	-3	0	0
Transcam.Railroad 3	6310011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mandara Mount. Water	6310012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4717	1403	1380	0	0	0
Nat'l Cereals Improv.	6310013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	267	355	1447	2010	1207
Small Farmer Live-	6310015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	588	347	146
Ag.Extension & Plan.	6310016	0	1	71	111	94	109	114	70	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cocoa Disease Control	6310017	0	0	265	103	194	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nat.Plan.Comm.Devel.	6310017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	249	95	12	0
Mile 47 - Mamfe Road	6310018	0	0	0	0	0	0	342	2557	59	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Farm Fish Prod.	6310022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N.Cam.Seed Multipli.2	6310023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	106	131	68
N.Cam.Seed Multipli.2	6310023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	435	1152	0
Food Crop Protection	6310024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Margui-Mandala Water	6310025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226	175	369	81	37
Dschang Ag. University	6310031	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	813	134	207	0
Dschang Ag. University	6310031	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1060	1025
Nutrit.Advisory Serv.	6310040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Credit Union Develop.	6310044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	81	55	0	0
Northern Wells - II	6310051	0	0	0	0	0	0	0	0	0	0	0	0	0	20	86	86	0	0	197	60	0	0
N.Cam.Rural Health	6310201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	73	79	0
Special Self-help	6319901	9195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transcam Railroad 1	631-H-001	0	0	0	0	0	0	10000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transcam Railroad 1	631-H-004	0	0	0	0	0	0	0	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transcam RR Phase 2	631-H-004	0	0	0	0	0	0	0	0	0	0	0	0	770	0	0	0	0	0	0	0	0	0
Transcam Railroad	631-M-005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	98	252	0	140
SAFERAD	698-0393	0	0	0	0	0	0	0	0	0	0	0	0	0	437	110	195	0	0	0	0	0	0
Food Crop Protection	625-0916	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500	0	0	0	0
LCRC Livestock	625-0010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1500	2000
Health Constraints-Rural	698-0408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0	0	0	0
Onchocerciasis	698-0399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reg.Rural Devel.Train	698-0405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	750	1000	1000	1000	950	0	1000
Reg.Ag.Training	698-0501	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166

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