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CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) - PART I

Report Control  
Symbol U-447

1. PROJECT TITLE Zimbabwe Agricultural Sector Assistance Program		2. PROJECT NUMBER 613-0209	3. MISSION/AID/W OFFICE Zimbabwe <span style="float: right;">2949</span>
		4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code Fiscal Year, Serial No. beginning with No. 1 each FY) <span style="float: right;">84-4</span>	
		<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	
5. KEY PROJECT IMPLEMENTATION DATES		6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY <u>82</u>	B. Final Obligation Expected FY <u>85</u>	C. Final Input Delivery FY <u>89</u>	From (month/yr.) <u>9/29/82</u> To (month/yr.) <u>3/31/84</u> Date of Evaluation Review <u>6/25/84</u>
		A. Total \$ <u>45.0</u> B. U.S. \$ <u>45.0</u>	

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Continue implementation of ZASA program	Winter/Working Group	NA
2. Seek to strengthen ZASA working secretariat located in MFEPD	Winter/MFEPD	9/30/84
3. Develop and promulgate guidelines for proposals preparation and submission	Winter/MFEPD	9/30/84
4. ZASA Working Group should not be involved in determining Private Sector CIP allocations	Stacy/Winter	6/30/84
5. Some resources will be held in reserve to meet unforeseen constraints	Winter/Working Group	NA
6. Efforts be undertaken to strengthen operation of Cooperation warehouse program	Winter/Working Group	12/31/84

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS	10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT
<input type="checkbox"/> Project Paper <input type="checkbox"/> Implementation Plan e.g., CPI Network <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Financial Plan <input type="checkbox"/> PIO/T <input type="checkbox"/> Logical Framework <input type="checkbox"/> PIO/C <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Project Agreement <input type="checkbox"/> PIO/P	A. <input checked="" type="checkbox"/> Continue Project Without Changes B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan C. <input type="checkbox"/> Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)	12. Mission/AID/W Office Director Approval
Marcus L. Winter Agricultural Development, USAID/Zimbabwe	Signature <i>John F. Hicks</i>
Christopher Kanyuchi Chairman, ZASA Working Group	Typed Name John F. Hicks, A/Director
Ministry of Finance, Economic Planning and Development	Date USAID/Zimbabwe      7/5/84

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EVALUATION OF THE  
ZIMBABWE AGRICULTURAL SECTOR  
ASSISTANCE PROGRAM

March 30, 1983

USAID/zimbabwe

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Washington D.C. 20036

## PREFACE

The Program Assistance Approval Document (PAAD) the Zimbabwe Agricultural Sector Assistance (ZASA) program provides for a Technical Review team to "assist the evaluation and decision-making process which will occur over a 60-90 day period each year (year 1 excluded)". This is to take place " during the April-June budget review and concurrence. The team, under the supervision of the USAID/Z Agricultural Development Officer, will evaluate the progress of ministries to date in addressing the constraint areas, assess on-going capabilities of participating GOZ entities, assist in reviewing annual activity proposals and plans, and generally assist USAID/Z during this most crucial annual period."1/

The current evaluation was initiated the second week of March 1984 with a team composed of Dr. Richard Newberg and Dr. Oleen Hess provided under contract with RONCO Consulting Corp., and Dr. Robert Armstrong of REDSO/ESA, who participated throughout the evaluation.

The terms of reference of these annual reviews/evaluations were to "include an assessment of the implementing agencies continuing capabilities and actual progress in implementation of GOZ agricultural sector programs", and it was stressed that "it will be the responsibility of the evaluation team to weigh the factors and to develop a recommendation on whether or not to continue the ZASA program". The detailed evaluation criteria are listed as items 1-10 in Section H Evaluation, Annex E. of the PAAD.

The team spent three weeks in Zimbabwe. During the first two weeks programs and secondary data were reviewed, and public and private development activities were discussed with the ZASA Working Group, the Secretaries, Department Heads, and other Senior Officials of the Ministries of Agriculture and of Lands Resettlement and Rural Development, AFC, Commercial Farmers Union, National Farmers Union, AMA, ARDA and the University of Zimbabwe. Two days were spent outside Harare visiting AGRITEX, Chegutu, cooperative storage facilities, Kadoma Cotton Training center and Chibero College. The conclusions and recommendations of the team were distributed to and discussed with the Working Group before the team departure.

1/ PAAD Paper P E3

The team in carrying out the assigned scope of work and providing other outputs, considered several analytical tasks essential. These included:

- Review of the current macro economic and sector situations to appraise whether the economic situation continues to be appropriate for this program approach and direction.
- Review progress to date to determine whether or not it has been acceptable relative to initial implementation schedules and standards expected for such an activity.
- Appraise GOZ development progress applying criteria 1-10 from Annex 1.
- Appraise the current appropriateness of the priority constraints cited in the PAAD paper and of those selected for attention under the ZASA program.
- Analysis of institutional capacity to perform as anticipated considering changes in staff, organization, budget, etc, and performance with the ZASA Program.
- Finally, based on the above, make recommendations on future program operations and allocations of resources that should be anticipated.

In general, the team has found progress and accomplishments to date to be substantially above levels we would have expected from experience with other agricultural programs and projects, though the program is somewhat behind the very optimistic schedule included in the PAAD. One of the problems encountered in this program, common to many others, is coordination with other donors. This problem may in fact be more serious than usually encountered; the flexibility of resource application implicit in this modus operandi, generally has led other donors to make commitments in some areas in which ZASA tentatively had budgeted resources, since the ZASA areas were not considered "staked out". On balance this flexible type of programming may be good for the GOZ. However, it has caused some difficulties and delays in drawdown of funds. The preemption of a large part of the research and extension programs by IBRD is most significant in this regard.

The work of the team has been greatly facilitated by the cooperation received from Zimbabweans at all levels in the various ministries, cooperatives, parastatals and private entities and from personnel in USAID/Zimbabwe.

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## I. EXECUTIVE SUMMARY

### INTRODUCTION

The Zimbabwe Agricultural Sector Assistance Program (ZASA) is a controlled resource transfer in the form of budgetary support to the Government of Zimbabwe (GOZ). ZASA has one basic objective - to support implementation of GOZ policies that will improve the economic status of the smallholder, viz. increase smallholder agricultural productivity and on-farm income.

ZASA is based on the assumption that the various Zimbabwe administrative organizations have the capacity to design and implement the programs necessary to attain the GOZ goal of "Growth with Equity" in the agricultural sector. The role of USAID is to supply financial support for activities in the agreed upon constraint areas.

As a sector program, success or failure is to be judged by sector performance. Consequently, regular program reviews/evaluations are required. These reviews/evaluations, are primarily: (1) to assess the implementing agencies continuing capability and actual progress in the implementation of GOZ agricultural sector programs; and (2) to evaluate GOZ progress towards sound sector objectives and policies. Decisions on whether and how to continue the sector support program will be based on these reviews.

### PRINCIPAL CONCLUSIONS

From its review of current capacities of principal implementing agencies and accomplishment to date, the evaluation team has concluded that the criteria for continuation have been adequately met. It has concluded further that provision of resources at the level planned in the original ZASA document (PAAD) is justified.

The program agreement was signed on schedule in September, 1982. To date, US\$18.7 million of the planned US\$45.0 million has been obligated and plans call for the obligation of US\$15 million in FY 84 and the balance in FY 85. The actual sub-obligation of funds and the implementation of the programs under the grant have been delayed between 6 months and a year. Causes have been the slow inauguration of the ZASA Working Group, which did not start to function effectively until May 1983, and the initial unavailability of local currency which is only generated as the CIP component of the program is drawn down. Sub-obligations now total U.S.\$5,055,000 and Z\$7,552,000.

A major element of the program was to support the University of Zimbabwe Faculty of Agriculture development, which included a technical assistance and training component to be carried out under contract. The professional personnel were scheduled to arrive under that contract in May-June 1983. They are now expected to arrive in May 1984. This delay is about par for AID projects.

Analysis of the program indicates that ZASA support for activities are being planned or undertaken in all seven of the identified constraint areas. Support of academic and short term training programs at the University of Zimbabwe and the colleges will help provide the higher level trained agricultural scientists and managers needed to strengthen long term development of key institutions in research, extension, veterinary services, cooperatives, irrigation development, agricultural credit and marketing, and input supply.

#### GENERAL CONCLUSIONS

The ZASA Working group is responsible for the administrative coordination of the program. The review team felt that this approach is basically sound. However, there appears to be some weakness in its operation largely resulting from lack of secretariat staff.

An analysis of the recent USAID evaluation of the earlier CIP program offers some insights into problems which should be anticipated in the ZASA program. The design of the ZASA program and the internal organization of the GOZ places the major burden on the implementing organization's ability not only to design and implement programs, but also to manage and monitor these programs. Overall monitoring responsibility is vested in the Ministry of Finance, Economic Planning, and Development (MFEPD). Recommendations concerning the management and monitoring function are made in the following section.

The task of evaluating the GOZ progress toward agriculture sector objectives and policies was made much more difficult by the fact that since 1980 the Zimbabwe agriculture sector has not had a "normal" year. The 1980-81 season was an unusually good year followed by three drought seasons. Given this distortion, the team can only speculate as to what the GOZ strategies might have produced under normal conditions. The team observed substantially increased emphasis being made in the last two years on programs and policies which will benefit the communal area farmers. Research is being directed increasingly

to communal farmer problems, and extension programs are being greatly expanded in communal areas. Agricultural education is being expanded at all three higher levels with training directed to meet needs of the communal areas. Institutional credit for communal and settlement farmers has been increased from Z\$1.6 million in 1979-80 to Z\$30 million in 1983-84. Marketing, cooperatives, and input supply systems have similarly been substantially expanded to serve communal and small holder areas. Fertilizer consumption in communal areas has gone from about 8% of the total in 1974-75 to 23% in 1983-84, with the tonnage in communal areas up about 250%. Membership in primary cooperative societies has about doubled in the last 2-3 years, and about half the societies are being provided with physical facilities.

A policy of elimination of consumer and producer subsidies has been adopted, and by 1983-84 costs had been greatly reduced. This policy will be somewhat set back by the drought, which will involve some subsidies to off set higher costs of imported foods.

The evaluation team was impressed with the progress that has been made by the various organizations and ministries responsible for the implementation of the ZASA program. The team's recommendations and suggestions follow in the next section. Although not specifically called for in the evaluation scope of work, the team reviewed the USAID/Z files on the ZASA Program and found them good order.

### RECOMMENDATIONS

The scope of work of the team specifically requires that the team review the merits of the current ZASA program approach in light of accomplishments to date and current conditions in Zimbabwe and make a recommendation on whether the ZASA program should be continued. Though not as explicitly required, the team's review of program documents and other secondary material and discussions with large numbers of GOZ officials led it to consider three other areas bearing on potential program achievements. Where it appears appropriate, recommendations also are included in these three areas namely, (1) methods of operation of the ZASA program, (2) agricultural development, organization and policies and (3) budgetary allocations to ZASA supported activities.

#### Continuation of the ZASA Program

In considering the continuation of the ZASA program, the team applied the criteria specified in the PAAD and scope of work (See Preface). Particular emphasis was given to:

- a. Capacity of participating agencies to do the required project planning, detailed design and to implement sub-activities as assumed in the PAAD;
- b. The extent to which GOZ programs and policies in general, and specific activities supported by ZASA, contribute to the well being of low income small holders;
- c. The efficiency of the approach and procedures employed in the ZASA program for sub-obligating and drawing down the resources provided to alleviate identified priority constraints.

Based on the discussions, analysis of program documents, and other secondary data, the team recommends that the ZASA program be continued. Annual reviews, as provided for in the PAAD, should be continued, but in the future it would be desirable for these to be joint GOZ-USAID rather than USAID reviews. They should include approximately equal numbers of GOZ and USAID representatives, with at least one of the GOZ representatives from an agency not involved in ZASA program implementation.

#### Methods of Operation of the ZASA Program

- a. Strengthen the operational and administrative capability of the ZASA Working Group Secretariat presently vested in the external donor section of MFEPD. If necessary, some of the ZASA resources should be set aside for this purpose. Weaknesses include late distribution of meeting agendas and documents covering items in the agenda; delays in preparation and distribution of detailed minutes; and follow-up on actions taken by the Working Group. Based on experience with the earlier CIP Program, 613-K-603, we should also anticipate weaknesses in monitoring of activities supported by ZASA. This weakness could be much more serious for ZASA than for the CIP program since it is the ZASA activities not imports that are the justification and focus of ZASA.
- b. Develop and promulgate a set of guidelines for preparation and submission of proposals to the ZASA Working Group for its approval;
- c. Submit recommendations of the Working Group on import priorities to be financed under the CIP element of the ZASA program to the Ministry Trade and Commerce. These recommendations should be advisory only.

## Agricultural Development, Organization, and Policies

- a. During the past two years, focus in government planning and budgetary allocations has shifted increasingly to the communal area farmers from commercial and resettlement areas. The team supports the shifts made to this point, but notes that further reduction in support to the commercial farm area could jeopardize this important underpinning of the entire economy. As subsidy costs are reduced, a greater share of the national budget should go to agricultural production support activities.
- b. There are a number of activities essential to agricultural development where responsibility needs to be more clearly defined, and in some cases focused in a single agency. These include land and water use planning, small and medium scale irrigation development and operation, credit to cooperatives, conservation of agricultural resources, and agricultural development in resettlement areas. The team recommends that assignment of responsibility in these areas be reviewed at the appropriate levels and that necessary changes be made to increase development efficiency and effectiveness.
- c. It is recommended that as the cooperative building activities financed by AID are completed, (construction of warehouse, depots, sales/marketing facilities), this revolving fund be transferred to APC. It recommends also that some ZASA funds be channeled through APC to primary societies for operating capital.
- d. The team supports the steps being taken to reduce and ultimately eliminate both consumer and producer subsidies. It believes that competitiveness in Zimbabwe agriculture requires that this be accompanied by increased efforts to reduce costs of production by shifts to the lowest possible forms and sources of essential inputs (e.g. introduction of DAP, MAP and  $\text{NH}_3$ ) and increased efforts to improve efficiency of input use, (e.g. soil testing services in communal areas with fertilizer recommendations based on on-farm soil analysis - fertilizer response correlation research).
- e. It is recommended that measures be taken to insure maximum utilization of primary society facilities and union managed production input supply depots and input sales points financed by AID. This can be accomplished by using both networks to distribute inputs and to assemble and market farm products.

### Budgets for ZASA Supported Activities

- a. The PAAD included an Illustrated Expenditures Budget, (P 40B). Several shifts in the illustrative budget should be anticipated. Somewhat more resources are likely to be needed by the University of Zimbabwe, and for improved land and water use. Research and extension are likely to require less if the IBRD support develops as now planned.
- b. While not specifically mentioned in the PAAD, we recommend that some resources be held in reserve, to be obligated in later years to overcome constraints not now foreseen.

### Completion of Project Activities

The PAAD indicated that program expenditures would be completed in 1987, but showed a final estimated delivery date of December 31, 1988. The Project Activity Completion Date (PACD) was extended accordingly to March 31, 1989. We suggest continuation of expenditures through the Project Activity Completion Date be anticipated and that the final evaluation be planned in January-February 1989.

## II. THE ZASA PROGRAM

### PROGRAM DESCRIPTION

ZASA is a controlled resource transfer in the form of budgetary support to the GOZ. The program is targeted to meet resource gaps to expanded smallholder output in seven constraint areas - agricultural research, agricultural extension, agricultural credit, marketing and input supply, land and water use, agricultural manpower training and policy/planning. Resource allocations will be made by an inter-ministerial ZASA Working Group. Actual releases of funds to the GOZ are contingent upon satisfaction of the general criteria that program resources: (1) are directed at relieving the identified constraints; (2) have the potential to, or will directly, improve the welfare of Zimbabwean smallholders; (3) are reasonable in terms of the types of activities to be funded; (4) will help meet an identified budgetary shortfall; and (5) will not impose an unacceptable recurrent cost burden.

The major advantages of the PAAD approach are its flexibility in use of resources, its relatively rapid initial draw down of U.S. dollar resources, (a rapid resource transfer) and the minimal requirement for additional staff for either USAID or the GOZ since resources are managed by implementing agencies using established GOZ procedures..

## PURPOSE OF THE ZASA PROGRAM

The Zimbabwe Agricultural Sector Assistance Program (ZASA) has one basic objective - to support implementation of GOZ policies that will improve the economic status of the smallholder, viz. increase smallholder agricultural productivity and on-farm income. The ZASA program will impact on this process by supporting GOZ programs that provide small-scale farmers with greater access to and use of technologies that will enhance agricultural production and generate greater income.

ZASA makes two assumptions which differ from the traditional USAID Project approach:

- (1) that major policy changes are not required but only refinements and resources to enable implementation of adjustments already underway;
- (2) that the various Zimbabwe administrative organizations have the capacity to design and implement the projects necessary to obtain the GOZ goal of "Growth with Equity" in the agricultural sector.

## THE ADMINISTRATIVE PROCESS - HOW THE PROGRAM WORKS

The overall administrative coordination for ZASA is the responsibility of the "ZASA Working Group". The group is chaired by a representative of MFE&D and is made up of representatives from the Ministry of Agriculture (MINAG), the Ministry of Lands Resettlement and Rural Development (MLRRD), the University of Zimbabwe, the Ministry of Trade and Commerce (MTC) and USAID. This working group receives proposals and requests for funding from various organizations and ministries and measures these against the criteria for use of program funds as specified in the program agreements.

If the working group approves the project and USAID concurs, the project is authorized for implementation by the proposing organization. Expatriate services contracted for come from traditional USAID sources. The most important source of such services is likely to be the Michigan State University/Pennsylvania State University (MSU/PSU) contract for technical assistance (TA) and training to be provided primarily in support of the University of Zimbabwe, Faculty of Agriculture development program.

The approach of using a controlled resource transfer to offset a financial resource gap to implement programs in the seven constraint areas places the major burden on the capacity of the individual implementing organizations in the various constraint areas. The MFE&D provides the secretariat for the Working Group

and has the responsibility to ensure that allocations of ZASA resources are consistent with overall national policy and national directions.

As a sector program aimed at alleviating some of the budgetary constraints facing GOZ smallholder programs, success or failure is to be judged by sector performance. Consequently, regular program reviews/evaluations are essential. These reviews/evaluations, as specified in the PAAD are: (1) to assess the implementing agencies continuing capability and actual progress in the implementation of GOZ agricultural sector programs; and (2) to evaluate GOZ progress towards sound sector objectives and policies. Decisions on whether and how to continue the sector support program are to be based on these reviews.

This evaluation is to assess the current capacity of these organizations, progress to date in dealing with the task, and to review the performance of the agriculture sector as a whole.

#### OBLIGATION AND ALLOCATION OF RESOURCES

On September 23, 1982 the grant under the PAAD was approved for US\$45,000,000, and was to be obligated over the 3 years, 1982-1984 at US\$15 million per year. The first agreement was signed September 29, 1982. Of this total of US\$45 million, approximately US\$30 million is to be utilized to generate local currency through a CIP for the purchase of agriculture-related commodities from the U.S. Commodity Import Financing(CIP) in itself is not a central objective of the program, but was chosen by USAID/Z as the most effective way to obtain local currency and at the same time provide foreign exchange to the agriculture sector. AID's local currency contribution was not intended to be used directly to finance specific projects, but rather to constitute an additional resource to the agriculture budgets of the participating agencies. As it has developed, specific proposals are presented with details on justification and planned use of resources that are similar to a project.

The US\$15 million balance of the grant will be available to meet some of the projected direct foreign exchange costs of the activities related to the constraint areas. Here also proposals specify and justify items or services to be procured.

To date, US\$18.7 million has been obligated and plans call for the obligation of US\$15 million in FY 84 and the balance in FY 85. Of the US\$18.7 million, approximately \$12 million has been allocated to generate local currency through the CIP and US\$6

million is available for the foreign exchange needs of the approved programs, primarily for technical assistance, overseas training, and specifically identified equipment.

The actual sub-obligation of funds and the implementation of the programs under the grant have been delayed between 6 months and one year. The delay in the program was caused by the slow inauguration of the ZASA Working Group, which did not start to function effectively until May 1983, and the initial unavailability of local currency which is only generated as the CIP component of the program is drawn down.

Given the relatively "slow" start, the program has progressed very well. Sub-obligations now total US\$5,055,000 and Z\$7,552,000. Over US\$11 million have been allocated under the CIP to generate local funds. The special account has over Z\$4 million available for program use which has not been earmarked for specific projects.

A major element of the program was to support the University of Zimbabwe Faculty of Agriculture development which included a technical assistance and training component to be carried out under contract. The professional personnel were scheduled to arrive under that contract in May-June 1983. They are now expected to arrive in May 1984. This delay about par for AID projects.

An analysis of the programs presently being supported by ZASA indicates that activities are being undertaken or planned in all seven of the identified constraint areas. Support of academic programs at the University of Zimbabwe and the colleges, as well as programs in short-term training, will help provide needed higher level trained personnel thereby strengthening the long term institutional development in agricultural research, extension, veterinary services, cooperatives, marketing, credit, and other areas important to communal agriculture.

#### CIP OPERATIONS AND LOCAL CURRENCY APPLICATION AND MONITORING

A detailed evaluation of the operation of the larger initial Commodity Import Program (613-K-603) was carried out by Lieberson and Hawkins, (USAID Feb, 1984). Given the similarities between that and the CIP part of THE ZASA program, it was not considered necessary to repeat that analysis. The same general procedures applied - use of regular GOZ import procedures, support of private enterprise, use of private importers, concentration on productive imports (in the case of

ZASA for agriculture), and a tendency to import heavy equipment. U.S. Funds for both programs have been drawn down very rapidly. In both cases, AID avoided involvement in the issue of the priority imports within the broad range of eligible commodities. In each case, local currency is deposited into a special account by the importer or his bank when the letter of credit is paid. If the importer fails to make payment, MFEPD requires his local bank to do so. Delays and difficulties in making deposits common to this the type of operation in other countries have not been encountered in either program. Clearly the ZASA CIP has benefited from the earlier CIP 613-K-603 experience. Local currency generated by this earlier program has been quickly allocated and rapidly draw down.

The local currency from the initial CIP Program has been applied to a very broad range of programs with resources used primarily for reconstruction, construction, and development of physical facilities - education facilities, roads, water supplies, grain storage, cooperative facilities, small scale industry, pilot agricultural programs, and housing/government buildings. The evaluation suggested that the range of activities probably was too broad and unfocused, but noted that this was to be expected with a program that was primarily reconstruction. The ZASA program is more sharply focused - agriculture emphasizing small holder farming in communal areas. More attention is given to individual allocations. The draw down of Letter of Credit funds has been somewhat slower, but still at rates that compare favorably with the more typical AID project operations. The same criteria have been applied in selection of activities for support:

- Project areas included in GOZ priorities and for which proposals are prepared by the cognizant entity;
- Concentration on financing of non recurrent costs - mainly facilities and equipment;
- The program is quite flexible;
- Emphasis on a few larger rather than many small activities;
- Emphasis on the communal sector;
- Management including monitoring and reporting left in GOZ hands with, in both cases, the responsibility vested in MFEPD.

One difference is that, while the former program was concentrated on reconstruction and rehabilitation, the ZASA program is concentrated on agricultural development.

The 613-K-603 evaluation noted that monitoring and reporting were weak points in program implementation. It is too early to draw such a definite conclusions with ZASA, but weaknesses in the ZASA Working Group secretariat have been noted - in late preparation and distribution of agenda and project proposals, and in reporting and following up on Group action. This appears to result mainly from inadequate staff in the Working Group secretariat in MFEPD. It is likely that unless corrective measures are taken, ZASA will also encounter implementation monitoring difficulty. However, the fewer number of activities and the management strength of candidates entities for funding, should help reduce this problem. The greater focus of ZASA also should make appraisal of achievements considerably easier and more accurate.

There is one notable difference in emphasis. Lieberson and Hawkins in their evaluation noted that in CIP programs, such as 613-K-603, imported commodities are the real additive resource and the local currency represents a double counting which generally receives merely a pro-forma attribution. Thus they focus on the issue of how much the imported commodities contributed to economic growth and only incidently on use of the LC. In contrast, in the ZASA program the emphasis is on the use of local currency, (and foreign exchange used with it). The imports are primarily a means of converting the US dollars to local currency and, in the process, assuring that foreign exchange is made available to the agricultural sector in its broadest definition. No effort was to be made to ensure that the CIP part of the foreign exchange would be used to import goods of particular value to the smallholder although small holders are the target. Thus in ZASA, the principal concern should be on how the local currency and the approximately one third of the foreign exchange not going into the CIP part are allocated and used.

As Lieberson and Hawkins point out, "if a host country managed local currency program is to work, the following preconditions need to exist:

- a. The host government should have the financial, technical, and administrative capability to manage the program itself. It would be hard to justify the manpower costs of AID managing such a program.
- b. Capable private sector contractors, operating under a system of competitive procurement, reduces the management burden on AID and the host government. Government or "force account" would normally not be as desirable.

- c. The local market must be able to provide most of the required materials.
- d. If AID is to allow the host government to manage the program, the government and private sector need to be relatively free of graft and corruption".

The feasibility of the ZASA program must be appraised, and also support to alternative candidate entities must be allocated, applying these or similar criteria. Item (a) might be modified slightly to stress that in particular the implementing agencies, must have the requisite financial, technical, and administrative capability to plan, design and to manage the resources allocated to them. It should be stressed further that grantees need not all be Government agencies (e.g. National Farmers Association could be a grantee).

In the Zimbabwe system, planning and implementation tend to be decentralized, vested in the principal departments of various ministries. Illustratively, in the MINAG, it is in the Departments of Research and Specialist Services, Extension, Veterinary Services, the Education Branch and their divisions and sub-divisions. In Extension (AGRITEX), planning as well as implementation, are largely carried out at the Provincial level with guidance and technical support from the central office. The various departments and their sub-divisions in the MINAG, MLRRD, the APC and University of Zimbabwe demonstrate a strong capability for sound planning and effective execution and monitoring of implementation of programs, including those directed to communal farmers. In part, the strength lies in continuing to follow closely a traditional way of doing things and a traditional standard of individual integrity not just in terms of the usual concept of honesty but also in terms of "a strong work ethic".

Commitments made now to expand particular facilities or operations, as a result of ZASA allocations, in many cases imply long range recurrent costs. Thus, the Working Group needs to be particularly careful to apply sound criteria in its decisions on resource allocations. The various members of the Working Group represent different agencies, and have a responsibility for consistency with the policies and priorities of their respective agencies. However, the principal responsibility for ensuring that the Working Group criteria and decisions are consistent with broader Government policies and priorities rests with MFEPD. For this, MFEPD and the Working Group need timely and accurate information on how effectively resources made available under ZASA are being used.

The following table summarizes allocations to date and proposals pending. Proposals approved to date meet the established criteria. Proposals pending may go through some adjustment in the approval process, but in general they also fall within the categories of activities envisaged for ZASA.

ZASA WORKING GROUP APPROVED ALLOCATIONS

<u>Activity</u>	<u>Agency</u>	<u>Amount</u>	
		<u>Z\$</u>	<u>US\$</u>
Higher Education (AGR)	Faculty of AGR U/Z	2,000,000	2,600,000
Extension Communication	AGRITEX	-	500,000
Soil Conservation	MLRRD/MOA	-	1,600,000
S.T. Training Abroad	(General AGR)	-	275,000
Jojoba Feasibility	ARDA	-	80,000
Diploma Training	Chibero College	1,500,000	-
Irrigation Development	MLRRD	2,000,000	-
Cooperative Credit	Cooperative Unions	2,000,000	-
Cooperative Marketing and Supply	Dept. of Coop.	2,000	-
Open Wells Test	Dept. of Water Dev.	50,000	-

PROPOSALS PENDING BEFORE THE WORKING GROUP

Dairy Production Improvement	ARDA - MLRRD
Five Year Dairy Research and Development Program	Henderson Research MINAG
Nutritional Factors Limiting Productivity of Cattle in Zimbabwe	MINAG
Optimizing Performance of Tractors and Tillage Implements	Institute of Agric. MINAG
Heartwater Control in Zimbabwe Program	Dept of Vet. Services MINAG
Revolving Funds for Cooperative Unions	Dept of Coops MLRRD

Rutenga Study Mapping ARDA/Surveyor General  
(For Irrigation Planning MLRRD  
Purposes)

Small Scale Industry Silveira House  
and Agriculture

### III. ECONOMIC ENVIRONMENT

#### GENERAL ECONOMIC SITUATION

The Zimbabwe economy is more diversified and advanced than any other country in Sub-Saharan Africa except the Republic of South Africa (RSA) and ranks second only to RSA in size. In 1981, GDP was Z\$4,528 million and population about 7.5 million. Thus per capita GDP was about Z\$600 (about US\$840). In real terms, per capita GDP was down about 6% from 1975 but about 12% above 1979.<sup>1/</sup>

GDP grew at an estimated rate of 11% in 1980 and 12% in 1981. However, for most sectors production has fallen since the peaks reached in 1981. From mid 1981 to mid 1983 output of most manufacturing was off by 15 to 20%. Wood and furniture was off by about 40%, while food manufacturing was up about 15%. Mining volume and real value of mineral exports both fell between mid 1981 and 1983 but should recover in 1984 with recovery in the world economy. Real GDP dropped by 1% in 1982, 4% in 1983, and is likely to drop further in 1984 as a result of the drought, despite growth in minerals production and exports.

Manufacturing is the most important contributor to GDP with about 26%, agriculture and forestry contribute about 18% and mining about 5%, (about 50% comes from these three sectors). From 1975 to 1980 the Z\$ maintained an almost constant rate of exchange with the US\$ (1975 Z\$ = US1.60/and in 1980 US\$

<sup>1/</sup> The total population reported in the August 1982 census was 7,539,000

1.586). During 1981 through November 1982 it held steady with most other currencies but declined about 0.75% per month against the dollar as the dollar strengthened against most currencies. However, in December 1982, the Z\$ was devalued by 20% to about US\$1.08. During 1983 it declined along with most other currencies against the dollar - reaching about US\$0.90 in December. It has fluctuated somewhat but in March, 1984 stands at about US\$0.91.

#### BALANCE OF TRADE

After over a decade of favorable balances of merchandise trade, Zimbabwe suffered a deficit of Z\$46 million in 1981 and Z\$113.4 million in 1982, and in 1983 this trend was expected to continue. In the last two years, exports in current Z\$ have increased by 7% but declined by 30% in constant Z\$ terms. The deficit has been financed by the International Monetary Fund (IMF) facility and higher foreign borrowing. Recently the level of import allocations was reduced by 60%. This has been cushioned somewhat by the use of loan funds to finance imports (including the U.S. CIP). Measures to improve the Balance of Payments in addition to reduction in allocations include devaluation of the Z\$, wage restraint to control the costs of production, and activation of a US\$70 million IBRD export facility.

Inflation has run at a 15-20% rate over the past 18 months. The inflation is largely attributed to foreign factors, since the money supply has been tightly controlled (grown by less than 1% over the past year). The terms of trade between imports and exports has deteriorated somewhat in recent years and in 1983 stood at about 70% of the 1964 level.

In 1979-80 prices of flue cured tobacco, the major export dropped substantially; but in 1981 prices of flue cured stripped tobacco recovered to almost Z\$3/kg from about Z\$1.50 in 1979 and about Z\$1.75 in 1980. Leaf was about Z\$1.00/kg in 1979, about Z\$1.20/kg in 1980, and Z\$1.45/kg in 1982. As a result, Zimbabwe has shifted types of tobacco exported (from leaf to stripped). Exports went from 84,000 Metric Ton (MT) of leaf and 33,000 MT of stripped tobacco in 1981 to 17,000 MT of leaf in 1982 and 51,000 MT of stripped. In Jan-April 1983, leaf exports were only 2,200 MT and stripped 16,500 MT, with prices about Z\$1.80 and Z\$2.95 respectively. Bulky prices, typically about Z\$2.00, moved up in 1981 and average about Z\$3.30/kg in 1982. In 1981 total tobacco exports reached a peak of about Z\$200 million after a very depressed value of exports in 1980 (about \$85 million). In 1984 value of tobacco exports should be up substantially from the 1982 level of Z\$190 million.

Other major change in exports have been sharp declines (about 90%) in tonnage and value of beef exports from 1978 to 1983. Some increase is expected in 1984. Tea and coffee exports also should be up from the late 1970's. Sugar exports were near 200,000MT in the late 1970's and 1980-82. However, the total value is off substantially because of low prices and in 1983 the volume also was off (by about 50%). Current tobacco supplies are good and the 1984 tobacco crop is expected to be the best in the last 40 years (up 15% over 1983). Hence exports of tobacco should be up in 1984-85.

Cotton, another major agricultural export, has been fairly stable at about 50,000 MT but prices have been creeping upward. The 1984 crop of cotton also is expected to be good.

The continued drought will reduce supplies of some products available for export; and for maize, the balance will shift from net export to net import. Wheat imports will be much higher. Sorghum production should be up some from last year, substituting in a small way for maize imports.

Maize exports which reached 348,000MT, valued at Z\$40 million, will be replaced by imports now estimated at between 500,000 and 800,000 MT. As of April 30, the total maize supply in the Grain Marketing Board (GMB) hands is expected to be completely exhausted. Foreign exchange costs including ocean and land freight for maize imports are expected to be between Z\$150 and Z\$250 million. The wheat crop which reached 230,000 MT in 1982 was estimated at 130,000 MT in 1983. It is expected to be substantially less in 1984. With consumption of 250,000 MT, imports in 1984-85 are expected to be 150,000 to 200,000 MT and to cost about \$50 million. With cattle liquidation due to the drought, beef exports may be up somewhat; but this will mean reduced availability later.

Sugar prices are expected to continue at their present very depressed levels, under US\$160/MT. There has been some recent pick up in mineral production and, with world economic recovery, the value of mineral exports should increase significantly. Exports of manufactured goods may increase also if countries importing from Zimbabwe participate in the recovery. All considered, Zimbabwe's balance of payment situation in 1984 is expected to be worse than 1982 and 1983.

## THE 1983-84 BUDGET

### Expenditures

Total expenditures in the 1983-84 fiscal year are expected to reach Z\$2,709.4 million, an increase of 5.9% over the actual 1982-83 expenditure of Z\$2,558.9 million. Expenditures during 1982-83 fell short of the original budget estimate by Z\$240 million in spite of overspending being recorded in the Ministries of Defence (Z\$58 million), Construction (Z\$22 million) and Agriculture (Z\$12 million).

Vote appropriations make up Z\$2,060 million or 76% of the total budget estimate for the current year. The major expenditure votes are Education and Culture Z\$414 million, Defense Z\$382 million, Finance, Economic Planning and Development Z\$253 million, (of which donor funded projects account for Z\$152 million), Health Z\$125 million, Home Affairs Z\$121 million (of which the Police Force budget is Z\$111 million), and Agriculture Z\$118 million (of which subsidies are approximately Z\$40 million).

Constitutional and Statutory Appropriations make up the balance of estimated spending and total Z\$649 million. The major items under this heading are interest payments of Z\$283 million and loan repayments of Z\$216 million.

### Revenue

Receipts from taxes on incomes, profits, goods and services, duties, fees, and other recurrent sources are expected to rise from Z\$1,756 million in 1982-83 to Z\$2,079 million in 1983-84, an increase of 18.4%. The principal revenue sources are sales tax, Z\$490 million, (durable goods rates were raised from 19% to 23%; general goods from 16 to 18%); individual income tax Z\$484 million (surcharge raised by about one third to a range of 20 to 40%); company income tax Z\$310 million (surcharge reduced from 20 to 15%); customs duties Z\$307 million; and excise duties Z\$198 million. Revenue from four of the above are expected to be up between 23 and 35%; for the 5th, company income tax, revenue is expected to be down by 15%. The five categories together provide 86% of total revenue.

The difference between revenue and expenditure amounts to an estimated \$630.5 million for the current year, a decrease of 21.5% over the financing requirements of Z\$802.9 million in 1982-83. This is to be met as follows:

	<u>Z\$ million</u>
Borrowings and Cash	584.9
International Aid	132.5
Loan Recoveries	<u>14.6</u>
	732.0
Less: Short Term Loans	<u>101.5</u>
	<u>630.5</u>

#### EFFECTS OF DROUGHT IN THE DOMESTIC ECONOMY

The drought is likely to make this a difficult year for the domestic economy and the Government budget. While the Government has taken major steps to reduce consumer subsidies on agriculture based commodities, (from Z\$200 million to Z\$58 million), the need for drought relief will add a major negative element. As noted earlier, maize imports are expected to cost Z\$150 to Z\$250 million. Concessional food imports are likely to make up only a small part of this. Much of these imports will have to be distributed free or at concessional prices to drought affected families. The Government announced in mid-March plans to stretch out payment on some Z\$50 million of farm loans obtained from AFC. This will need to be funded by the Government to permit AFC to finance the 1984-85 crop season. Inflation is expected to be about 15%, adding to cost of regular operations. Further, drought is likely to reduce growth in GDP and consequently the rate of growth in public revenue.

#### THE AGRICULTURAL SECTOR

Zimbabwe lies between 15 and 23 degrees of latitude and has a semi tropical climate. Frosts occur mainly in the highlands. Rainfall, coming mainly in the summer months, is generally the most limiting factor to production. Precipitation, which averages 26 inches for the total country, ranges from 16 inches in the south to over 78 inches in the eastern highlands. Year to year variations are large and particularly critical in the southern areas. Based on soil, topography, and rainfall, and type of farming area, Zimbabwean's 39 million hectare area is classified as follows:

<u>Natural Region</u>	<u>Commercial Farming Area</u> (CFA)	<u>Communal Area</u> (CA)
	%	%
I	3	1
II	27	8
III	22	17
IV	26	45
V	<u>22</u>	<u>29</u>
	<u>100</u>	<u>100</u>

Source: Zimbabwe Agriculture Sector Study, IBRD, December 28, 1983, p. 3

Classes I and II are suited to crop cultivation while class III is only marginally suited to cultivation.

The agriculture and forestry sector employs over one-third of workers in wage employment, and provides employment for 50-60% of the total labor force. The sector produces a surplus of food in normal years and is a principal supplier of raw materials for the country's manufacturing industry. Agriculture and forestry contribute about 18% of total GDP and 30 to 40% of total export earnings.

The sector is highly dualistic in nature. Some 5,000 large commercial farms with 40% of the total land area (about 15 million hectares) and 70% of best land, account for nearly all the farm wage employment; they produce 70% of total output and 90% of marketed production. This sub-sector is well provided with a production services and infrastructure. Advanced technology is widely used, and yields per hectare are high. Natural resource conservation priorities are widely followed.

Some 800,000 African purchase land and communal area farmers control 45% of the land area (about 17 million hectares averaging about 22 hectares per family with about three hectares cropped) and produce about 30% of agricultural output.

Access to technical information, production services, and yield increasing inputs varies widely, but for most of the group of communal farmers, these inputs and services are almost totally lacking. Communal farms are generally characterized by low yields, low levels of technology, low levels of purchased inputs, and a deteriorating natural resource base. They have

been very much the neglected majority. Addressing this imbalance is a major objective of Government programs and policies.

Agricultural growth during the 1970's was only about 1% a year. The 1980-81 crop was good but agriculture has suffered since from 3 years of drought. Total agricultural production is expected to be down substantially in 1983-84 from the depressed 1982-83 production years - some estimate by 20%. Tobacco is about the only crop that has done well in these 3 years.

#### Farmer Liquidity Problems

Financial liquidity has become critical for almost all farmers not heavily into tobacco production. The Government announced on March 22, 1984 the establishment of a special committee headed by the chairman of AFC to attempt to resolve the problem. This committee includes representatives of commercial banks, the Reserve Bank and Treasury in addition to AFC.

The amount of financing needed for combination of rolling existing institutional credit (about Z\$140 million is owed to AFC and Z\$180 million to commercial banks) and production of the next crop has been estimated at nearly Z\$1,000 million (less what farmers may be able to pay from this year's poor harvest). AFC needs about Z\$60 million in new capital to handle its share. Applying this ratio to commercial banks would suggest another Z\$80 million needed by them. Given the reduced level of individual farmer liquidity the institutional need may be near Z\$300 million.

AGRICULTURAL SECTOR STUDY  
AGRICULTURAL LAND USE (AS OF 1978/79)  
(1,000 Hectares)

	User Category			Others	Total
	African Purchase Land	Communal Area	Commercial Farming Area		
Mainly Crop Land <u>1/</u> of which:	829	4,203	7,758		12,790
Maize	35	550	200		785
Sorghum	5	90	10		105
Groundnuts	15	250	neg.		265
Cotton	12	40	85		137
Tobacco	neg.	neg.	55		55
Wheat/Barley	neg.	neg.	50		50
Fodder/Improved Pasture					
Irrigation <sup>2/</sup>	neg.	5	150		155
Mainly Grazing Land - Of Which:	648	11,297	7,437		19,382
Natural	648	11,297	7,437		19,382
Improved	neg.	neg.	neg.		neg.
Mainly Forest Land - Of Which	-	972	754		1,726
Natural	-	972	661		1,633
Managed	-	0	93		93
Parks	-	-	-	2,026	2,026
Others	-	-	-	2,911	2,911
<b>TOTAL</b>	<u>1,477</u>	<u>16,472</u>	<u>15,949</u>	<u>4,937</u>	<u>38,835</u>

1/ Defined as all land in "Natural Regions" 1 to 3, plus the total cropped hectareage outside those Regions.

2/ Some of which is covered also by the crop figures.

Source: IBRD 1984 Report, p. 16

#### IV. APPRAISAL OF PROGRESS

In a program such as the ZASA program, one would like to be able to apply quantitative measures of goal achievement such as increases in production and income in target areas. At this point that is impossible. The year before the start of the program (1981) produced a record harvest in Zimbabwe including maize, the principal small farm crop. That has been followed by three years of serious drought. Thus measures of progress must be indirect. What has been done about resource constraints inhibiting small holders progress? What is being achieved in changing directions and development of institutions to serve small holders? What is being accomplished/measured against some specific small holder progress indicators or criteria? How well is the ZASA program operating to date?

#### CONSTRAINTS

Several major constraint areas were identified in the PAAD: relevant research, extension of information on improved technology and farming systems, credit, marketing and supply of inputs, land and water use, personnel with appropriate levels and types of training, and planning capability and policies needed to address communal farm area problems. These constraints are discussed briefly in the following sections.

#### Research and Extension Training

Agricultural research, extension and manpower training experience some constraints common to most GOZ institutions charged with implementing the policy shift to small holder and communal area development. Following independence, many experienced personnel departed or retired from government service leaving agencies with less qualified replacements. Most physical facilities had deteriorated, some had been destroyed. Capital and recurrent budgets were inadequate. The socio-economic research and data, essential for the design of effective new small holder development approaches, had been largely ignored. Linkages among the public and private institutions and farmers were weak or non existent.

Although the country suffered a sizeable loss of senior level experienced staff, the human resources constraint proved less serious than initially anticipated.

Intensive in-country in-service training, on-the-job experience and external training programs over the last three years have vastly improved GOZ institutional capabilities and competence to manage their respective responsibilities. It appears that

the personnel/staff situation has stabilized, and institutional capacities should continue improving.

The conditions of physical plant and facilities have generally improved with a combination of local budget and assistance from a variety of donors.

Many institutions have individually or cooperatively undertaken socio-economic surveys/data relevant to their areas of responsibility and operations as guidelines for future progress.

The institutions generally have increased efforts and plans for expanding and strengthening linkages, and linkages have improved. However, in most cases these linkages need to be formalized and strengthened to generate the maximum benefits to agricultural development.

In addition to the common constraints described above, the institutions faced constraints specific to their respective responsibilities.

#### Research

Historically, agriculture research focused largely on commercial farming sector problems, with some spin-off to the small holder sector. Consequently, there was limited research experience/competence in or research findings on small holder practices/constraints. Research was seriously lacking on farm power, soils, labor availability, small scale mechanization, traditional crops, potential new crops or cropping systems, small holder farming systems or the economics of small holder production. Responding to the new directions required a near total reorientation of research philosophy, strategy, problem approach, and application.

The new program plan was to continue the on-station research, providing a bare minimum of research support required for the commercial farming sector. A new adaptive Farming Systems Research (FSR) program was added to cater to and service the needs of the small holder sector. There was a dramatic shift to small holder research priorities. Commercial farmers groups were encouraged to provide for themselves some of their research needs in commercial sector production.

#### Extension

Although extension has worked with small holders in the past, the dramatic policy shift required a comparable shift in extension approach. In addition to the common constraints,

extension lacked a comprehensive philosophy and strategy to implement new directions. With little research conducted on small holder agriculture, extension seriously lacked technology to extend. That available was not tested or proven under the conditions of the communal areas. Extension had not developed and tested techniques using radio, newspapers, group meetings, etc. to extend scarce extension staff efforts. The most serious immediate constraints were lack of housing and transportation in the communal areas. The latter are being alleviated through World Bank assistance. The extension/farmer ratio remains unchanged but the transportation will increase mobility and the area and number of farmers each extension worker can effectively cover. Transportation, housing, intensive in-service training programs, and effective use of farmer agents are vastly expanding extension of technical information to small holders.

A philosophy/strategy has been developed. Commercial farmers possess the management and production competence to implement new technology. Their primary requirements are and will be access to improved technology/technical services, rather than general extension services. They will be serviced by the specialist, subject matter personnel, generally on an on-call basis. Small holders will benefit from specialist and general extension services, expanded training programs, easier access to production inputs and related sources of information.

The Technical Services Division reorganization and redistribution is resulting in assigning the majority of the technical specialists to the field rather than at headquarters. This will permit more efficient and immediate provision of essential technical services to the communal areas. The Field Services reorganization reduced the layers and cost of supervision and administration, and provides more direct feed-back among farmers, extension and research. These actions somewhat alleviate the human resources and linkage constraints.

#### Agricultural Manpower Training

The colleges and institutes faced a heavy responsibility in helping relieve the middle and lower level human resource constraints. The Faculty of agriculture faced a similar situation relative to degree level personnel. All three levels of training institutions, (certificate, diploma and degree) have substantially increased annual student intake in response to the human resource constraint. All training institutions syllabi required extensive revision to include focus on small holder/communal areas development problems and priorities. The weak, almost non-existent linkages among the training

institutions and service institutions such as AGRITEX and Department of Research and Special Services (DRSS) were improved. Increasing coordination/cooperation has materially helped with modification of the respective syllabi incorporating current, relevant research and extension findings into them. The result has been a focus on skills and knowledge appropriate to small holder agriculture needs, and continuing support for the commercial sector. The most important number of students accepted at colleges and institutes will, in 1984, be more than double the number in 1982. Further, there will be a major effort to increase the number of female students with an objective of about one third females.

#### Agricultural Credit

Although the project evaluation criteria did not include a measure of progress for this constraint area, this critical issue deserves comment. An examination of AFC activities during the last two years indicates that they are on or ahead of schedule for increasing loans in all three small holder sectors. AFC has made 17 loans to cooperative unions and 430 group loans in support of the activities of 9,000 communal farmers and 1,000 farmers in the resettlement schemes. The total number of communal and other small farms provided credit by AFC has grown from 4,400 (Z\$ 1.6 million) in 1979-80 to 54,000 (Z\$ 30 million) in 1983-84. The AFC has reached the target goals established in the IBRD agreements and by GOZ policy in supplying the needs of small holder agriculture.

A credit constraint not satisfactorily addressed, one suggested in the original project paper, is the availability of operating capital for the primary societies. This is needed to purchase inputs and increase their availability in communal areas.

Farmers, AFC, and commercial banks face a serious financial liquidity problem as a direct result of three drought seasons and accumulated defaults compounded by increased input costs. AFC urgently needs about Z\$60 million extra but the total need is nearer Z\$ 300 million for all of agriculture.

#### Land and Water Use Including Irrigation

Although the evaluation criteria did not indicate a specific measure of progress for this constraint area, the issue of land and water use deserves comment. This is the one area which most needs a clearer focal point for administrative responsibility. Land and water use involves MLRRD at the national level, ARDA

at the provincial and local level, the Ministry of Water Resources for resource allocation and MINAG, particularly AGRITEX, for technical input at the irrigation site level. The GOZ should clarify the relationships that each of the various ministries and organizations have to the overall program particularly, as increased output from the communal lands becomes even more important. After examining a number of the constraint areas and the progress that the agricultural sector has made in addressing these concerns, it is clear that the issue of land and water use, including irrigation, will require relatively greater attention in the very near future.

#### Input Supply and Marketing

The commercial farm sector uses tillage equipment similar to large scale farmers in Europe and the U.S. and also uses high levels of production increasing inputs - fertilizer, pesticides, high yield crop varieties. Livestock production is similarly operated on a modern basis with good feed, breed improvement, and pest control systems. The large commercial sector is also well served by a system of public marketing boards and parastatals, which provide an assured market at a guaranteed price - usually at a level which farmer representatives have been very much involved in establishing. Prices are based mainly on estimated costs of production and incentive levels (profits) considered sufficient to achieve target levels of output. Both produce marketing systems of parastatals and input distribution systems generally were accessible to commercial farmers by roads or trails passable by trucks.

The communal farmers are served by the same price support, and marketing and input supply system. Their major problem can be summarized in one word, "access". They lack trucks and most lack even animal transport; road systems are less developed in communal areas and input supply depots and produce buying points are concentrated in commercial areas. The solution proposed was development of a large network of primary cooperative societies serving small holders especially in communal areas. In the initial phase 40 warehouses and 400 local sales input/produce assembly points were to be constructed financed by the AID CIP. As of December 1983, 36 warehouses and 165 local facilities were completed. However, most do not serve both functions as yet. Nevertheless, small holders are becoming more market oriented. Inputs are getting to them and their sales are increasing. The total business volume of cooperatives serving communal farmers increased from Z\$3.3 million in 1978 to Z\$23.7 in 1982. Progress has been slowed by the drought, but is expected to pick up with the return of normal weather. Maize and cotton, the two principal

communal products marketed, are both served by production packages composed of recommended seed, inputs, and guidance. These are available from cooperatives, extension and from many private traders who handle a variety of other farm and consumer goods. Sales of fertilizer to communal and other small holders is now estimated to be about 23% of the total fertilizer sales and, in volume, to be almost triple levels of the mid to late 1970's. About half this volume goes through the cooperative network. An estimated 35% of the total cotton now is produced by communal farmers and burley tobacco is beginning to move into these areas.

Input supplies sometimes are scarce and for some prices are high. This is particularly true for large equipment which is a concern mainly of large farmers. Fertilizers and pesticides are generally more costly than world market prices would suggest. Scarcities do occur in some areas. Seed supplies generally are adequate and of high quality.

#### Policy/Planning

Among possible constraints areas identified in the PAAD paper were policy and planning. The ZASA approach was justified in part on the conclusion that Government policies affecting agriculture were basically sound. Policy changes have been discussed in various places in this report. The Government continues to be committed to its overall policy of Growth With Equity and of following sound economic principles in international trade, its domestic budget, and in establishing development incentives. It has recently adopted an austerity budget, reducing budgets in many areas but not in agriculture which is recognized as the base on which the rest of the economy depends. Communal areas where some 900,000 small farmers operate is now the number one priority. Resettlement, which at best would directly benefit only about 10 to 15% of the farm families, has pragmatically been "stretched out" in part because of budgetary and other resource constraints. In Zimbabwe, in such a politically sensitive area as food prices, first priority is given to establishment of adequate price incentives to achieve needed investment and production effort.

Policies favor concentration of resources and efforts on the various constraints areas discussed above.

A background paper was prepared by the ZASA Project Paper development team covering development planning in Zimbabwe. It was noted at that time that planning is not centralized in a Planning Ministry as is the case in many countries. Economic Development and Finance, formerly separate, are now combined in

a single Ministry of Finance Economic Planning and Development (MFEPD). However, planning activities tend to be quite decentralized with most of the actual development planning carried out at department and sub-division levels in the various ministries and parastatals while overall policy and economic decision-making rests with the Prime Minister and the Cabinet. The Ministry of Finance, Economic Planning and Development is primarily concerned with the budgetary process including insuring that budgets and plans of implementing agencies are consistent with the broader policies and established national directions. The principal concern, at the time the Project Paper was prepared, was the number of vacancies at planning levels and the anticipated departure in the near future of many experienced staff officials in key positions. The departure of senior officials has continued about as expected. They have been replaced by less experienced people, and in some cases people with very limited experience occupy senior positions. However, there is a small, generally overworked, nucleus of experienced people in each of the various implementation agencies. And the strong traditional ways of doing business tend to compensate for deficiencies in planning numbers and depth of experience. In general, only the Department of Research and Specialist Services (DRSS) and the Economic section of the MINAG appear to have suffered in the last two years by departure of senior personnel, and for those two the problem is not critical. For DRSS this is reported to have resulted in reduced ability to prepare research proposals. IBRD has made a commitment to a major program of support to DRSS and AGRITEX which will provide support in planning as well as project implementation. The economics section of MINAG has only 9 of 16 positions filled and, excluding the Chief Economist with over twenty years experience, the staff averages less than two years experience. The expanded University of Zimbabwe training programs should enable agencies to overcome these institutional deficiencies before long.

The only problem for ZASA stemming from weaknesses in planning are minor delays in obtaining adequately prepared proposals for consideration of the Working Group.

#### STATUS OF PRINCIPAL IMPLEMENTING AGENCIES

The agencies principally responsible for implementing programs to remove the principal constraints identified and principally responsible for implementation of the ZASA program are discussed in the following section.

## Ministry of Agriculture (MINAG)

The MINAG, established in 1903, plays the leading role in support of agricultural growth and development both in commercial and communal areas. However, with creation recently of the Ministry of Lands, Resettlement and Rural Development some of MINAG's responsibilities have been transferred to MLRRD. Most notable are responsibility for cooperative development and some aspects of irrigation and conservation. Central administration of MINAG includes the usual management and support functions, and an Economics and Marketing Branch (EMB). EMB's marketing work is primarily analytical rather than operational. Due to the MINAG's relatively small size and the close working relationship among its senior staff, a formal central planning section has not been considered necessary.

Primary planning as well as implementation responsibility is located in the four principal department and services:

- a. Research and Specialist Services - crop, forage and livestock research; production services such as pest management; some regulatory functions;
- b. Agriculture Education - which includes two diploma level colleges and four certificate level institutes providing training below university level;
- c. Veterinary Services - mainly livestock diseases and pest control; and
- d. AGRITEX - agricultural extension.

Each department and its sub-sections has had long experience in planning, budgeting, implementing, and administering various activities. Extending additional services to the communal and settlement areas has imposed increased burdens on the operating divisions concurrent with reduced overall staff experience due to retirements and departures. DRSS and AGRITEX had been well staffed with experienced, senior management, and other professional personnel. In the past 4-5 years, crop research has lost several senior scientists and administrators, but in the past two years has achieved increased staff stability and, of course, most of its new staff now has two years more experience compared with 1982. Veterinary Services was well staffed at independence, and appears to have come through the independence years with relatively little loss of staff capability. Agriculture Education was transferred from DRSS two years ago and set-up as a separate branch. It has a much smaller central staff than the three older departments. Most of the education staff is located at the college and institutes.

Despite the loss of some experienced staff, the MINAG was operating sufficiently well in 1982 for AID to opt for a PAAD rather than project support approach with the major part of the US\$45 million of AID resources planned under the PAAD to go to the MINAG. USAID concluded that the existing staff capacity and operating procedures were adequate for effective utilization of resources to be made available to the MINAG.

The MINAG was judged capable, with existing and planned new staff, to plan and implement expanded programs in research, extension, and agriculture training. Our review indicates that it is more settled and probably stronger now than it was two years ago.

#### Ministry of Lands, Resettlement and Rural Development (MLRRD)

At the time the ZASA program was designed, MLRRD had as its major responsibility the very ambitious program of the resettlement of 162,000 families in a three year period of time. In the last two years the ministry has undergone changes not only in organization and staff but in strategy and program. Two years ago MLRRD did not have the staff strength of other ministries, but since then the overall staff strength has improved not only in numbers but also in training and experience. The emphasis in recent months has shifted from a primary concentration on resettlement to include a number of different programs and undertakings. The most important shift in strategy is a greater emphasis on the requirements of the farmers in the communal lands. The resettlement program has been delayed due to shortfalls in funding, resulting from a general world wide recession and by three years of drought.

Although MLRRD has not utilized a great quantity of funding from the ZASA program, it has managed funds from other USAID sources. The Department of Cooperative Development, a department of MLRRD, has the overall responsibility for the construction of the warehouses and distribution points presently being constructed as part of the CIP program.

One of the issues that will need clarification is the relationship between MLRRD and MINAG concerning the issue of land and water use planning and irrigation. The ability to develop a viable program in such areas as small scale irrigation will be enhanced by a clarification of this administrative issue.

MLRRD is new and has one of the most difficult and complex tasks in the government. It appears to be making satisfactory progress towards its stated goals. One notable measure is that

in the last two years it has developed a very pragmatic approach to problem prioritizing and the manner of dealing with them.

Agricultural and Rural Development Authority (ARDA)

In the two years since the conception of the ZASA program, ARDA has made progress in formulazing and clarifing its role in the overall development of the Zimbabwean agricultural sector. Discussions with the Deputy Director indicate ARDA has now taken responsibility for activities in a number of areas. They operate the sixteen GOZ owned estates with some 20,000 ha in crop land and 15,000 full time staff. ARDA is concentrating on the growth side of "growth with equity" and has identified seven different geograhpic zones in which it is developing what they refer to as "rural development promotional units". These are micro-projects supported by an adjoining estate. ARDA has also undertaken the responsibility for a number of integrated rural development feasibility studies. The organization's most importantly responsibility is rural agricultural planning at provincial and local project level. ARDA has a central planning staff in Harare and regional and provincial planning units throughout the country. ARDA is concentrating on the generation of "new wealth" by bringing new lands into production and by increasing the productivity of under utilized land in commercial farming areas. ARDA seems to have stablized staff numbers, and individuals in different positions particularly on the operations side, but still needs more trained planners with agricultural economic backgrounds to replace some of the experienced staff that it has lost. ARDA appears to be able to deal adequately with its assigned tasks in the agricultural sector, and most important appears to be improving its capability. Its principal need is to strengthen planning staff skills in agricultural economics.

## Department of Cooperatives

In 1982, the Cooperative Department had 57 officers, 117 other professionals, and 35 other staff. It planned to recruit and train sufficient personnel to reach a staffing level of 605, of which 200 would be officers. It has made progress in training and developing staff to achieve these objectives. The Department of Cooperatives has tentative plans to establish a cooperative college to train cooperative specialists (a) to work in the Department, (b) to train managers and other staff employed by cooperatives, and (c) to train the boards of directors and managers of cooperatives. It is also recognized that cooperative specialists need solid agricultural training to function effectively with farmers.

In view of the cost it may be more appropriate to establish management and other cooperative training as an integral part of or adjunct to an existing agricultural institute, college or the University Faculty of Agriculture. This should be a quicker, lower cost, alternative to the special college. Board members of small cooperatives and societies, as well as lower-level functionaries, can attend short courses at provincial facilities or at colleges or institutes.

It is proposed that AID support such an alternative, including (a) financial resources to expand a facility related to one of the agricultural colleges or the university; (b) training for teachers both here and in specialized schools abroad; (c) visits to successful small-farmer cooperatives in developing countries (e.g., India); and (d) if needed, the short-term services of personnel from other countries to assist in designing and initially teaching the management and cooperative training curricula.

### Other Agricultural Agencies

The principal other candidate agencies for ZASA resources are APC and the University of Zimbabwe Faculty of Agriculture. Both these have substantially improved their staff capability and methods of operation. They have also developed a stronger and more settled communal farmer focus than was the case two years ago.

More detailed discussions of various institutions are contained in the annexes to this report.

### SOME MEASURES OF PROGRESS<sup>1/</sup>

#### Allocation of GOZ Resources to Beneficially Effect Low Income Small Holders.

The total government budget for 1982-83 was increased from Z\$ 2,122 million in 1981-82 to Z\$2,2799 million. The 1982-83 budget was subsequent increased by Z\$137 million to a total of Z\$2,936, an increase of almost 40% over 1981-82. There was a general recognition that this rate of growth could not be maintained. An austerity budget proposal was introduced in 1983-84 reducing the total to Z\$2,709 million in current dollars, down about 8% from 1982-83 and about 25% over 1981-82. In constant dollars the budget for 1983-84 is about 5% below the 1981-82 budget.

In submitting the 1983-84 austerity budget, the government indicated its policy was to reduce allocations to social sectors and to channel a greater percentage of the budget to production sectors. The Ministry of Agriculture budget was increased from Z\$99.6 million in 1981-82 to Z\$153.8 million in 1982-83 and then reduced in 1983-84 to Z\$118.0 million. Much of the increase in 1982-83 went to pay consumer subsidies. After adjustment for subsidies the net budget went from Z\$55.9 million in 1981-82 to Z\$78.5 million in 1983-84, an increase of 40% in current dollars and about 7% in constant dollars. 2/

1/ As identified in the PAAD.

2/ The reduction in subsidies, mainly on basic foods, was accompanied by an increase in wages and salaries of between Z\$5 and Z\$10 per month for workers receiving under Z\$300 per month.

Between 1981-82 and 1983-84 the budget of the Ministry of Lands, Resettlement, and Rural Development was reduced from Z\$44 million to Z\$32 million. Within that budget two areas of most importance to small holders were increased - cooperatives from Z\$1.3 million to Z\$2.0 million and Rural Development, a new department with no 1981-82 budget, received Z\$8.9 million in 1983-84. Two other ministries, of some importance to agriculture, were increased, Community Development and Women's Affairs from Z\$2.2. to Z\$5.0 million and Water Resources and Development from Z\$18.2 to Z\$37.2 million.

AGRICULTURE AND RELATED BUDGETS (Z\$ 1,000)  
(where two figures are shown the first is the 1982-83 budget figure and the second in the revised figure from the 1983-84 budget)

	1981-82	1982-83	1983-84
MOA			
DRSS	7,731	8,154	8,978
AGRITEX	15,307 <sup>1/</sup>	14,692	16,965
VETERINARY SER.	14,652	16,519	16,874
AFC (LOSSES)	100	1,340	3,000
AFC GRANT	679	1,508	2,800
TOTAL MOA	91,643	141,910(153,836)	118,014
LESS SUBSIDIES	<u>43,738</u>	<u>75,906(75,906)</u>	<u>39,552</u>
NET	55,905	66,004 (77,930)	78,462

<sup>1/</sup> Includes special item not repeated of \$1,068,000

Subsidy Reduction

The GOZ has established a policy of gradual elimination of subsidies including subsidies on basic foods. At the same time, farmers are to be assured prices which are sufficient to cover costs of production and stimulate adequate increases in output. On September 2, 1983 the Government issued a statement which cited current agricultural product subsidy levels of Z\$200 million per year and announced that measures would be taken to reduce such subsidies by Z\$142 million (to a total of approximately Z\$58 million).

Subsidies for manufacturing and processing are channeled through the Ministry of Trade and Commerce. The Trade and Commerce subsidy budget for 1981-82 was Z\$90 million and for 1983 it was

Z\$116 million. In implementing the September announcement of reducing subsidies to Z\$52 million, the 1983-84 Trade and Commerce budget included only Z\$28 million for subsidies.

Subsidies through the Ministry of Agriculture for the Grain and Dairy Marketing Boards, (Z\$41 million in 1982-83) were eliminated from the 1983-84 budget, but a subsidy of Z\$37 million for the Cold Storage Commission(CSC) was included. AFC is budgeted for Z\$20 million through the MINAG for loans, grants and other assistance. The subsidy element for bad debts is only a small part of this Z\$20 million.

BUDGETED SUBSIDIES (Z\$ 1,000)

<u>Ministry</u>	<u>1981-82</u>	<u>1982-83</u>	<u>1983-4</u>
Trade and Commerce	(79,900)*	116,000(52,000)*	28,000
Agriculture	(43,738)*	75,906(75,906)*	39,552

\* Actual expenditure are shown in parentheses.

At the time of the subsidy announcement, new retail prices were promulgated for roller meal (maize) ranging from Z\$0.212/kg in 5kg packages to Z\$0.20/kg in 50kg bags (Z\$200 to Z\$212/MT). Prices were increased also for bread, milk, beef, and vegetable oil. The price increases were large, 40 to 45% for meal, 21 to 27% for bread, 50% for milk and 35 to 50% for beef. Compensatory pay increases of Z\$5 to Z\$10/month were announced for workers earning under Z\$300/month.

Prices for agricultural products also have been increased. Before planting time a new 1983-84 maize price to be paid by the GMB of Z\$140/MT was announced, which is 16.7% over the 1982-3 price paid. Another increase may be announced at harvest. The GMB currently sells maize in stock from the 1982-3 crop at Z\$158 for a margin of Z\$38/MT. GMB handling costs are estimated to be about equal to this margin. However, with equal prices throughout the country, total costs including freight could be substantially higher in many areas.

Production inputs such as fertilizer generally are not directly subsidized.<sup>1/</sup> However, with prices held constant since July 1982 and considerable inflation in the period (15%/year), the fertilizer companies probably will require some increase in prices soon. The Z\$ has dropped from US\$1.31 to US\$0.92 since July 1982. There also has been considerable decline in world prices of fertilizers (in US\$) in this 20 month period but most of the N and P products come from local factories.<sup>2/</sup>

A Land Resettlement Policy Which Recognizes Availability, Competing Smallholder Assistance Requirements and Production/Export Goals

A great deal of time and effort has been devoted to the policy issues evolving from the GOZ resettlement program. It has been addressed in the Riddell Commission Report and in two different studies by B.H. Kinsey in which he dealt with most of the policy issues and problems.

In his 1983 study, Kinsey pointed out two potential problems caused by the initially planned rates of resettlement (162,000 families in 3 years). First, there is a very real danger to the economic growth potential of the commercial agricultural sector, which if realized would reduce exports and domestic resources available for future development of the economy. It was estimated that total agricultural production would decline substantially and agricultural exports by nearly 50%. Second, resettlement programs would divert a major part of total financial resources and attention from many other essential activities, particularly from the needs of communal farming areas. Even after resettlement of the 162,000 farm families the communal areas would contain 75% of the rural population and 50% of the farming area of the country.

<sup>1/</sup> The Sable nitrogen plant which uses the electrolytic process is highly dependent on cheap electricity.

<sup>2/</sup> Sources: Quarterly Economic and Statistical Review, Vol. 4, No. 3 - Sept. 1983, Reserve Bank of Zimbabwe, and other publications.

The resettlement program has not progressed as rapidly as planned due to the shortage of financing resulting in part from the three years of drought. The plans for 1982/83 called for a resettlement of 54,000 families of which 19,200 families or 35% were actually resettled. The 1983/84 target is to resettle the remaining 54,000 families. The position presently taken by MLRRD is that the goal for resettlement has not been changed but the time frame has been substantially adjusted. In the meantime, a greater emphasis has been placed on needs of the farmers in the communal areas; and increased emphasis will be placed on investments such as small scale irrigation, which in effect extend the arable land supply and increase yields in communal areas.

Discussions with key members of the three ministries involved (MINAG, MLRRD, and MFEPD) indicate that the Government of Zimbabwe is making satisfactory progress in their attempts to develop a land resettlement policy which recognizes the availability of land as well as the needs of other parts of the sector, including the communal areas.

It should be pointed out here that the ZASA program indirectly supports the resettlement program by supporting the needs of the smallholders in general.

#### The Application of Commercial Rates of Interest in Lending to the Smallholders.

In 1982, the IBRD supplemented the Small Farmer Credit Scheme with Z\$22,000,000. Interest rates to smallholder started at 9%, and were to be increased by 2% per year until they equaled the standard commercial rates. They have since been raised to 11% and are scheduled to go to 13% on April 1, 1984. Small holder rates are now the same for short, medium, and long term loans; this policy is under review. In 1983, deposit rates of financial houses were about 8% for three month terms, 9% for 12 months, and 10% for 24 months. Building societies pay similar rates. Post office deposits are about 0.5% lower and commercial bank rates 1 to 2% higher than financial houses. Lending rates of commercial banks are about 13% for minimum overdrafts. Building society mortgages on residential property are 13.25%. Hire purchase rates of finance houses were 20 to 24% in mid 1983.

#### An Increase in Research on Crops and Integrated Crop/Livestock Systems Directed Specifically to Communal Farm Conditions

There has been a dramatic shift to and increase in crops research in communal areas. Less emphasis has been placed on research on integrated crop and livestock systems, but initial actions have been taken to expand this effort.

An FSR planning committee is functioning, composed of representatives of DRSS, AGRITEX, U of Z Faculty of Agriculture, and private agribusiness. An adaptive research FSR unit has been added to DRSS's organizational structure, focusing on small farming operations. An assistant director has been assigned as full-time head of this unit. He is responsible for coordinating all on-station and on-farm research for and in the communal areas. He also liaises with the Faculty of Agriculture's research efforts, and with AGRITEX. The latter plays a crucial role in implementing on-farm research trials and extending proven results to farmers.

Three soil scientists, a maize breeder, two agronomists, two livestock specialists and two agricultural economists are on-board or being recruited for full-time assignment to FSR, in addition to other staff inputs. The World Bank is providing 35 person years of technical services emphasizing adaptive research. CIMMYT sponsors regular in-country training programs. Twelve DRSS officers have completed training programs at CIMMYT in Mexico and more are scheduled for training. This training is directed specifically at increasing local capacity for adaptive research in the communal areas.

Linkages with and support from the several international research centers are strengthening the capacity to conduct adaptive research. Surveys are underway on current crops and livestock enterprises of small holders and additional ones that might be appropriate to their circumstances.

The Agronomy Institute's Communal Area Research Trials (CART) and FSR, currently being conducted in two districts with 100 field trials, are being expanded to 13 districts and over 240 trials. This will be coordinated with expanded research efforts by sub-stations located in the communal areas on crops and enterprises suited to small holder conditions.

The Faculty of Agriculture's recent procurement of a farm with ZASA generated funds responds to the need for practical undergraduate training and for graduate thesis research, largely aimed at small holder constraints and needs. The Faculty has also established a research program in a communal area with activities underway on animal/range management, maize and sorghum production, small holder irrigation and studies on links between human nutrition and farm production. This is under the supervision of four Faculty staff.

In summary, the GOZ has established a strong base for and increased adaptive research directed specifically to communal farm conditions in a short period of time.

Extension of Price Stimuli Now Applied to Major Commercial Crops to Some Present and New Small Farm Crops.

As discussed in more detail in the Annex, two major steps have been taken to provide price stimuli: (1) the system of marketing has been increased principally through cooperatives to make guaranteed prices more accessible to communal farmers, and (2) additional communal commodities are now covered - ground and bambara nuts, sunflowers, sorghum and beans in addition to maize and cotton grown in communal areas, which were previously included.

Employment of Market News and Other Innovative Measures to Extend Technical Information on Production and Marketing to Smallholders, thus Serving a Large Number of Farmers with the Number of Available Extension Workers

A variety of new approaches using other entities are being adopted to expand the extension function. Four pilot district schemes, in physically and socio-economically representative parts of the communal areas, are being designed to refine extension transfer techniques and test new teaching aids, support services and equipment. Mass radio, newspaper and related media coverage are provided and a modified train and visit (T and V) system, adapted to Zimbabwe's circumstances, is being tested. The pilot schemes are/or will be preceded by baseline studies followed by comparison/result finding studies to measure progress and to identify needed modifications.

The selected communal areas are divided into extension coverable areas with farmer groups organized in these areas. The groups identify the areas of training they want. The groups each elect farmer leaders to attend the centrally located training programs and return to transfer the new skills and knowledge to the group. Regional Agriculture Extension officers train Extension Workers (E/W), who train the group leaders. The E/Ws regularly monitor and assess the rate of technology transfer and adoption by groups and individual farmers. This serves to identify modifications in training methods needed to improve the programs. This approach neither requires an expanded extension staff nor increases recurrent budgets. The elected group leaders serve in the role of expanded staff. AGRITEX will pay the training, transportation, and subsistence costs initially. The groups are subsequently expected to cover this cost.

Extension production packages consisting of seeds, insecticides, and simple planting/management instructions for traditional small holder crops are being distributed to farmers through AGRITEX, cooperative unions and societies, private sector input

suppliers, private cafes and shops, etc. Instructions on utilization of these packages are a part of the training programs.

Private sector fertilizer and other input suppliers, such as the Zimbabwe Fertilizer Company and Windmill, are expanding field services and input supplies into the rural areas. Fertilizer sales in communal areas have increased from 8% of the total a few years ago to 23% now and are targeted for 50% in a decade. Close coordination between extension and the input suppliers field representatives, relative to inputs utilization, will effectively expand extension services in the communal areas.

Adequate Government Support of Rural Savings Clubs as a Mechanism for Mobilising Rural Savings for Smallholder Credit and for Channelling Loan Funds at Lower Costs through Groups to Smallscale Farmers.

To date there has been no major effort to tap this source of rural generated funds and direct their application back to rural areas. APC is dealing with this problem in the context of the larger policy issue of a possible legislative amendment which would broaden their scope of activity to include lending in support of all rural development activity. If favorable consideration is given to a legislative amendment, APC would request authorization to receive deposits and could then re-channel funds from rural savings clubs directly into rural activities.

Development and Adoption of Measures to Increase Cooperation and Linkages Between Research, Extension, and University Education

Positive measures have been taken to increase cooperation and linkages between research, extension and university education. However, stronger, continually functioning linkages between all GOZ supporting and implementing institutions, farmers, private sector input suppliers and support entities are needed. Strong linkages between institutions and farmers are particularly important. Although this is implied, these additional linkages should be formalized and strengthened and included in future ZASA evaluations. A small amount of resources might be made available to the National Farmers Association for this purpose.

The Faculty of Agriculture's monthly Department Head meetings include DRSS representation to review research and instructional plans and programs and increase their harmony with national policy and needs. The Faculty, Colleges, and Institutes are beginning to incorporate research and extension findings in their instructional programs to enrich graduate training and knowledge relative to communal area conditions and needs.

An Assistant Director in DRSS has full-time responsibility for the FSR program liaising with AGRITEX and the Faculty of Agriculture on on-station and on-farm adaptive research efforts. AGRITEX and the Faculty have initiated a joint extension student practical experience program with a group of client farmers in the communal areas. DRSS and AGRITEX have formed close linkages on program activities from identifying and planning research on small holder needs through on-farm demonstrations and extending the proven technology to the wider community of farmers. Linkages are also being expanded and strengthened with the international research centers.

On adaptive research, an FSR planning committee is functioning composed of DRSS, AGRITEX, the Faculty of Agriculture, and private agri-business to coordinate activities, to minimize duplication and enrich the program with inputs from a variety of agriculture support sub-sectors.

The plans for strengthening and/or expanding linkages to more effectively achieve agricultural development objectives appear appropriate and should be pursued.

Reduction in the Costs of Essential Inputs by Substituting Lower Cost Items and More Efficient Methods of Use, thereby Easing Elimination of Subsidies.

Progress to date has been slow on substitution of lower cost inputs or by increasing input use efficiency. The amount of imported Urea is increasing relatively to higher cost locally produced Ammonium Nitrate. The two principal fertilizer distributors (ZFC and Windmill) are committed to buy all the locally produced N and P before using imports. With the drought, consumption and consequently imports have fallen off. There is an interest in shifting to higher analysis DAP and MAP when imports of Phosphate are required.

Soil testing services are available at a fee, but apparently not much used by communal farmers as yet. Much more soil analysis - fertilizer response correlation research on small holder farms is needed and likely much more soil analysis capacity will be needed soon.

## V. CONCLUSIONS AND RECOMMENDATIONS

### GENERAL CONCLUSIONS

#### Macro Economic Justification of CIP and ZASA Approaches

The U.S. Zimcord commitment and the CIP and ZASA program choices were made because the economic situation in Zimbabwe at that time required an approach that could permit transfer and quick draw down of resources. Both foreign exchange for import of essential production goods and local currency for reconstruction were urgently needed. Much of physical reconstruction has been completed, but the institutional and social reconstruction and development are on-gong. Large foreign exchange and local currency needs still exist. The current Balance of Payments and budgetary situation clearly indicate that the CIP and ZASA approach are as appropriate in March 1984 as they were in 1980 or 1982, probably more appropriate. There is an urgent need for foreign exchange to finance imports to keep the economy moving. The GOZ has undertaken an austerity program to improve its budgetary balance including major reductions in consumer subsidies, but the drought and requirements for drought relief are likely to more than offset efforts to improve the budget and the balance of payments. Thus, unless quick disbursing assistance is continued, foreign exchange to import production supplies and equipment will have to be rationed more strictly and budgets for agricultural development curtailed.

#### Efforts on Principal Smallholder Development Constraints

Zimbabwe clearly has made significant progress since work was initiated on the PAAD paper in concentrating its institutional, human, and financial resources on the objective of development of communal areas and other small farms.

Specific action taken to reduce the identified constraints to achievement of small farmer production and income goals have been discussed by individual constraint areas earlier.

The extent to which overall Government efforts to remove constraints to development in these areas has affected production and income is impossible to measure since 1980/81 - the logical base year - was blessed with near ideal weather and bumper crops. And since then Zimbabwe has suffered a disastrous three year drought. Agricultural production except for tobacco has declined seriously. Farmers have become progressively more decapitalized and, if they could borrow, more in debt. There are some indications that the combined efforts on different constraint fronts are having a positive effect on

communal and other small holder agriculture. Between 1975 and 1982 fertilizer sales to the communal sub-sector grew by 250% and increased from 8 to 23% of total sales. This increase of about 25,000MT of nutrients in a normal year would have provided an additional production equivalent to about 250,000MT of maize - 50-60kg more per capita for families dependent on communal and small holder agriculture for a living. For the 1978-82 period, volume of business of cooperatives serving the smallholder group increased from Z\$3.3 to Z\$23.7 million. Over a somewhat longer period, a cotton technology package has been introduced into the communal areas. Now communal areas contribute about 35% of the crop which totals about 200,000MT/year of seedcotton. A similar package is being put out for maize. Packages including improved seed, fertilizer, and pesticides are distributed by AGRITEX, cooperatives, and private traders.

Tobacco is also beginning to be introduced into communal areas. Tobacco and cotton have done quite well through this 3 year drought period.

#### Institutional Capacity

The PAAD paper concluded that the various institutions principally involved in agricultural development had the capacity to effectively exercise their assigned responsibilities, utilizing their budgets and also funds that would be available from ZASA. It is too early in the Program to draw firm conclusions about the effectiveness with which ZASA funds are being utilized. However, review of the various candidate institutions indicates that, as a group, they are better able to perform their assigned tasks, including use of ZASA resources for these tasks, now than they were two years ago. The 1981-82 period was one of considerable change in personnel and MLRRD was new on the scene; AGRITEX had just been organized to include the old CONEX and DEVAG; the Department of Cooperatives had been shifted from MOA to MLRRD and MLRRD was almost totally preoccupied with a massive resettlement program dropped in its lap; Education had just been removed from DRSS. No such new reorganizations have been made since; resettlement has more modest goals and all agencies have had two years to settle in with new personnel and the new directions stressing communal farm areas. Thus the team has concluded that the implementing institutions are able better to carryout their regular responsibilities and to implement ZASA now than 2-3 years ago.

#### Measures of Progress

Ten measures of progress were specified in the evaluation section, Annex E pp 11-12 of the PAAD Paper. These measures all

emphasized progress in implementing the Government's policy of assigning priority to improvement in the economic status of communal and other small scale farmers. The team concluded from its analysis that significant progress had been made on all but two of the ten measures of progress. One of the two is "provision of adequate support of rural savings clubs as a mechanism for mobilizing savings for small holder credit and for channeling loan funds at lower costs through groups to small scale farmers". This issue is receiving high level attention to remove legal impediments to provision of support through AFC and use of club funds to augment the small farmer loan fund. AFC already is moving ahead rapidly on group lending to small size farms. On the other item, "reduction in costs of essential inputs by substituting lower cost items and more efficient methods of use, thereby easing the elimination of subsidies", there has been some progress. Some research is underway on more efficient cropping systems in communal areas but much more is needed on on-farm soil analysis - fertilizer response correlation research and providing small farmers with soil analysis. Introduction of high analysis fertilizer has been restricted to Urea on a commercial basis and small amounts of DAP/MAP for testing. However, there is a growing interest in these lower cost fertilizer forms.

#### ZASA Implementation Progress

The program agreement was signed on schedule in September 1982. To date US\$18.7 million of the planned US\$45.0 million has been obligated and plans call for the obligation of US\$15 million in FY 84 and the balance in FY 85. The actual sub-obligation of funds and the implementation of the programs under the grant have been delayed between 6 months and a year. Causes have been the slow inauguration of the ZASA Working Group, which did not start to function effectively until May 1983, and the initial unavailability of local currency which is only generated as the CIP component of the program is drawn down. Sub-obligations now total U.S.\$5,055,000 and Z\$7,552,000.

A major element of the program was to be support to the University of Zimbabwe Faculty of Agriculture development, which included a technical assistance and training component to be carried out under contract. The professional personnel were scheduled to arrive under that contract in May-June 1983. They are now expected to arrive in May 1984. This delay is about normal for AID projects.

The ZASA Working group is responsible for allocation of funds and for the administrative coordination of the program. The review team felt that this approach is basically very sound.

However, there appear to be some weakness in its operations largely resulting from lack of secretariat staff.

An analysis of the recent evaluation of the earlier CIP program offers some insights to problems which should be anticipated in the ZASA program. The design of the ZASA program and the internal organization of GOZ places the major burden on the implementing organization's ability not only to design and implement programs but also to manage and monitor these programs. Overall monitoring responsibility is vested in MFEPD. The team feels that the Working Group secretariat needs to be strengthened to perform its support and monitoring functions properly. Recommendations concerning the management and monitoring function are made in the following section.

### Principal Conclusion

From its review of current capacities of principal implementing agencies and accomplishments to date, the evaluation team has concluded that the criteria for continuation have been adequately met. It has concluded further that provision of resources at the level planned in the original ZASA document (PAAD) is justified.

### RECOMMENDATIONS

The scope of work of the team specifically requires that the team review the merits of the current ZASA program approach in light of accomplishments to date and current conditions in Zimbabwe and make a recommendation on whether the ZASA program should be continued. Though not as explicitly required, the team's review of program documents and other secondary material and discussions with large numbers of GOZ official led it to consider three other areas bearing on potential program achievements. Where it appears appropriate, recommendations also are included in these three areas namely, (1) methods of operation of the ZASA program, (2) agricultural development, organizations and policies and (3) budgetary allocations to ZASA supported activities.

#### Continuation of the ZASA Program

In considering the issue of continuation of the ZASA program, the team applied the criteria specified in the PAAD and scope of work (See Preface). Particular emphasis was given to:

- a. Capacity of participating agencies to do the required project planning, detailed design and to implement sub-activities as assumed in the PAAD;

- b. The extent to which Government of Zimbabwe programs and policies in general, and specific activities supported by ZASA, contribute to the well being of low income small holders;
- c. The efficiency of the approach and procedures employed in the ZASA program for sub-obligating and drawing down the resources provided to alleviate identified priority constraints.

Based on the discussions, and analysis of program documents and other secondary data, the team recommends that the ZASA program be continued. Annual reviews, as provided for in the PAAD, should be continued, but in the future it would be desirable for these to be joint GOZ-USAID rather than USAID reviews. They should include approximately equal numbers of GOZ and USAID representatives, with at least one of the GOZ representatives from an agency not involved in ZASA program implementation

#### Methods of Operation of the ZASA Program

- a. Strengthen the operational and administrative capability of the ZASA Working Group Secretariat presently vested in the external donor section of MFEPD. If necessary some of the ZASA resources should be set aside for this purpose. Weaknesses include late distribution of meeting agendas and documents covering items in the agenda, and delays in preparation and distribution of detailed minutes and follow-up on actions taken by the Working Group. Based on experience with the earlier CIP Program, 613-K-603, we should also anticipate weaknesses in monitoring of activities supported by ZASA. This weakness could be much more serious for ZASA than for the CIP program since it is the ZASA activities not imports that are the justification and focus of ZASA.
- b. Develop and promulgate a set of guidelines for preparation and submission of proposals to the ZASA Working Group for its approval.
- c. Submit recommendations of the Working Group on import priorities to be financed under the CIP element of the ZASA program to the Ministry of Trade and Commerce. These recommendations should be advisory only.

#### Agricultural Development, Organizations, and Policies

- a. During the past two years, focus in government planning and budgetary allocations has shifted increasingly to the

communal area farmers from commercial and resettlement areas. The team supports the shifts made to this point but notes that further reduction in support to the commercial farm area could jeopardize this important underpinning of the entire economy. As subsidy costs are reduced, a greater share of the national budget should go to agricultural production support activities.

- b. There are a number of activities essential to agricultural development where responsibility needs to be more clearly defined, and in some cases focused in a single agency. These include land and water use planning, small and medium scale irrigation development and operation; credit to cooperatives; conservation of agricultural resources; and agricultural development in resettlement areas. The team recommends that assignment of responsibility in these areas be reviewed at the appropriate levels and that necessary changes be made to increase development efficiency and effectiveness.
- c. It is recommended that as the cooperative building activities financed by AID are completed (construction of warehouse, depots, sales/marketing facilities), this revolving fund be transferred to AFC. It recommends also that some ZASA funds be channeled through AFC to primary societies for operating capital.
- d. The team supports the steps being taken to reduce and ultimately eliminate both consumer and producer subsidies. It believes that competitiveness of Zimbabwe agriculture requires that this be accompanied by increased efforts to reduce costs of production by shifts to the lowest possible forms and sources of essential inputs (e.g. introduction of DAP, MAP and  $\text{NH}_3$ ) and increased efforts be made to improve efficiency of input use, (e.g. soil testing services in communal areas with fertilizer recommendations based on on-farm soil analysis - fertilizer response correlation research).
- e. It is recommended that measures be taken to insure maximum utilization of primary society facilities and union managed production input supply depots and input sales points, financed by AID, by using both networks to distribute inputs and to assemble and market farm products.

#### Budgets for ZASA Supported Activities

- a. The PAAD included an Illustrated Expenditures Budget, (P40B). Several shifts in the illustrative budget should be anticipated. Somewhat more resources are likely to be

needed by the University of Zimbabwe, and for improved land and water use. Research and extension are likely to require less if the IBRD support develops as now planned.

- b. While not specifically mentioned in the PAAD, we recommend that some resources be held in reserve, to be obligated in later years to overcome constraints not now foreseen.

#### Completion of Project Activities

The PAAD indicated that program expenditures would be completed in 1987 but showed a final estimated delivery date of December 31, 1988. The PACD was extended accordingly to March 31 1989. We suggest continuation of expenditures through the PACD be anticipated and that the final evaluation be planned in January-February 1989.

## ANNEX A

### RESEARCH, EXTENSION AND, AGRICULTURAL EDUCATION INSTITUTIONS

#### Agriculture Research Council

The Agriculture Research Council (ARC) with twelve members, half of whom are farmers, is a statutory body responsible for reviewing agricultural research priorities and programs, and acting as coordinator of all public sector agriculture research in the country. It is essentially a management advisory board for the DRSS and employs ten technical committees as instruments for keeping informed on research programs. The DRSS, AGRITEX, the University, farmers' organizations, commercial entities serving or involved in agriculture, and public entities concerned with natural resources are represented on the committees.

#### Department of Research and Specialist Services

The MINAG's Department of Research and Specialist Services (DRSS) is responsible for the Government's agriculture research program. In addition, DRSS provides dairy and meat grading services; carries out regulatory functions with animal feeds, fertilizers, seeds and pesticides; operates the National Herbarium and Botanical Garden; and is responsible for an information service, publication of research journals and annual reports, and scientific information retrieval.

DRSS has contributed substantially to agricultural development, especially through plant breeding and soil fertility activities mostly focused on the large-scale commercial farm sub-sector. Recently, research emphasis has shifted from a focus on the commercial farm sub-sector to a wide spread adaptive/FSR program aimed specifically at the small holder sub-sector.

DRSS is headed by a Director, a Deputy Director, and three Assistant Directors, one responsible for each of three divisions, plus an Executive Branch and an Agriculture Research Advisory Council. The Crops Division is staffed by 73 officers and supporting staff; the Livestock and Pastures Division by 103 officers and technical staff, and the Specialist Services by 124 officers and technical staff. The department has a total establishment of 355 positions of which 300 are filled.

The DRSS research network consists of a central research station and center at Harare, five major regional stations, and 11 specialized sub-stations covering the various ecological zones and major categories of production.

The Crops Division encompasses three institutes and four service organizations, Plant Protection, Chemistry and Soils, Agriculture Engineering, Biometrics, the National Herbarium, Seed Certification, and Information. The Livestock and Pasture Division is responsible for research on livestock production, pasture and forage crops, and provides meat grading and regulatory services for the dairy, sheep, bee, poultry and pig industries. The Crops Division encompasses five institutes i.e. Agronomy, Plant/Crop Breeding, Horticulture, Coffee and Cotton, and the Lowveld. The Department of Veterinary Services is responsible for animal disease and tsetse fly research. Special boards or groups are responsible for research on specific commodities such as tobacco, sugar and swine. The recently formed Executive Branch is responsible for in-service training, report publication, and overall administration.

#### New Research Focus

A significant shift, from research focused on large scale commercial farms to research focused on small holder farms, has occurred during the last two years with FSR added to the Department's organization. Small holder FSR is being conducted in two proto-type areas representative of the major physical environments of small holder farms. This consists of sub-station test sites for variety selection, production and management practices adaptability, and on-farm demonstrations under farmer management to identify technology appropriate to small holder physical, economic and social environments.

DRSS remains staffed with 300 staff, 150 each of officer and technical support level personnel. Twenty-five additional staff have been requested by DRSS and agreed to by the Public Service Commission. Final approval rests with Treasury and is contingent upon a 1984-85 budget increase to cover recurrent costs.

A third country national FSR expert has been contracted for two years with an option for two additional years, funded from an IFAD/IBRD loan, to assist with planning and implementing the program. The Department has also advertised for three additional officers to be assigned to the Soils Section, preferably Zimbabweans. An assistant director of DRSS has been assigned full-time to head the new unit responsible for the

small holder FSR program. He is responsible for coordinating all the on-station and on-farm research in the communal areas, including Communal Areas Research Trials (CART) and FSR, and liaising with AGRITEX which plays a crucial role in implementing on-farm research trials. Three senior research officers, one in agronomy and two in livestock, are working full-time on FSR. Plans are to add one agronomist and two agriculture economists totaling six additional full-time researchers for FSR. A Zimbabwean maize breeder has recently been added to the staff and will investigate short season, drought resistant, dwarf varieties that may be better adapted to the small holder physical environment and management and production constraints.

The Crops Research Division's Agronomy Institute has initiated two new programs, CART, involving a range of fertilizer, varietal and husbandry practices, and FSR, closely allied with CIMMYT. The CART and FSR programs involve some 100 research trial sites in two districts, Chibi and Mangwende, for diagnostic farm survey work and FSR programs. Lack of officers to design and supervise this work has been a constraint. However, the arrival of the expatriate FSR expert, inservice training in cooperation with CIMMYT, and officer training at CIMMYT are alleviating the constraint.

A research planning committee composed of DRSS, AGRITEX, the MLRRD Department of Rural Development, Private Agri-Business, and the Faculty of Agriculture has been formed and meets at least annually.

DRSS and AGRITEX have formed close linkages in program activities, from identifying research needs through on-farm demonstrations, and extending the proven technology to the wider community. In addition, cotton and some other commodity groups conduct research on their respective commodities.

Close linkages have been formed and in-country activities are conducted jointly with CIMMYT, IITA and ICRISAT. They are being expanded to include ILCA on livestock production and animal traction. CIMMYT conducts in-country FSR training courses attended by personnel from Zimbabwe and other African countries. In addition, 12 Zimbabwean Officers have completed training programs at CIMMYT in Mexico. While most Ministries and agencies have suffered overall budget cuts, DSRR has received increases: 1981-82, 7 1/2%; 1982-83, 15%; and 1983-84, 15%. Budget increases were made specifically to fund the expanding DRSS small holder research effort. A 25% increase for 1984-85 has been proposed to fund the requested 25 additional staff and the expanding efforts in small holder research.

A review of the current program, as the basis for, and a long-term program planning are underway to assure that the GOZ funded budget will cover recurrent costs in order to avoid recurrent expenditure problems.

To date DRSS has had fairly adequate funds from its local budget plus an IBRD loan of Z\$13,000,000. The IBRD loan funds provided for housing, physical plant, equipment and transportation (motorcycles) for middle level and junior staff. A review is underway on funds available from the IBRD and next years local budget to determine whether additional funds will be needed. Some funds have been requested from the ZASA project.

A review is being undertaken jointly with the IBRD to assess the research program's adequacy and appropriateness relative to small holder needs, and to determine whether modifications are required to satisfy the needs. This will include a close look at the crops/enterprises of small holders, and to identify additional crops/enterprises appropriate to their circumstances that might be introduced. Increased emphasis is to be placed on simple water management and soil moisture retention, particularly in the light rainfall communal areas where the majority of the small holders farm.

The effort will be expanded to investigate such activities as: short season groundnut and bambara nuts; improved forage legumes/pasture production; and management in the communal areas in general and specifically to increase dairy production to meet communal area needs. This will include an investigation on the comparative advantage between indigenous and improved dairy breeds.

It is planned to expand the number of districts included in the FSR program from the current 2 to 13 by 1987, with diagnostic farm surveys conducted in all districts to gather data for designing on-farm research. The CART program plans to expand the current 100 test sites to 240 by 1987. ILCA is expected to supply a livestock/animal traction expert, and CIMMYT plans to provide, at least part time, an agricultural economist. IBRD is to provide 420 person months of other needed technical assistance. Four of the sub-stations in the small holder communal areas will expand research efforts on crops suited to small holder conditions.

Linkages with AGRITEX, the Faculty of Agriculture, the Training Institutes, and the International Research Institutes are being increased and strengthened.

The loss after independence of experienced, professional research staff created a problem, but was not a disabling constraint to implementing the Department's responsibilities. The most serious constraints appear to have been material rather than human resources. The Department has the human resources to carry on the program, and is improving this capability through training, and research facility and program assistance from the International Research Institutes and the World Bank. Further, the past two years have brought increased staff stability. The major staff weakness is in design of research proposals in new areas. The team's analysis indicates the Department currently has at least the minimum capacity necessary to perform its role and will be able to increase its capacity to better meet its responsibilities in the Government's agricultural development program. This assumes continuing adequate GOZ recurrent budget support.

#### AGRITEX/Agricultural Extension

Extension's current responsibilities are: (a) to implement the policy of the Government in relation to the development of the agricultural industry of the country, taking into consideration the rural development essential for successful production and stable agriculture; (b) planning for and increasing the productivity of agriculture with special emphasis on the communal, resettlement and small-scale farming areas through the media of agriculture extension with special reference to the rehabilitation program; (c) to stimulate the adoption of appropriate, proven agriculture conservation and management practices leading to increased and profitable production on a sustained basis; (d) to promote the development of the people on the land, thus improving the standard of living and the quality of life of the rural people; (e) to provide services to the large scale farmers, generally on an on-call basis, in order to maintain and where possible to increase productivity; (f) the servicing of small scale and new, larger scale farmers; and (g) the development and training of the department staff in the technical and extension aspects of work.

Agriculture extension responsibility is assigned to the MOA's Department of Agricultural, Technical, and Extension Services (AGRITEX). The Department is headed by a Director with two Assistant Directors responsible for the two divisions, Field Services and Technical Services. There are about 1,600 men and women operating in the 8 provinces responsible for agricultural extension in all farming areas of the country. The past policy, of concentrating efforts on the more progressive and large scale commercial farmers, resulted in the majority of small farmers being untouched. This contributed to low and

declining productivity and increasing severity of land use problems. Personnel losses in the late 1970's and early 1980's depleted the staffing rolls, leaving the Field Services Division with approximately 65% of full-staff strength. Some relatively inexperienced officers were promoted to specialist and management positions.

The Technical Services Division has seven Branches responsible for Crop Production, Animal Production, Veld and Pasture, Land Use Planning, Irrigation, Engineering, and Training. About half the Specialist Subject Matter Staff is assigned to headquarters and half to the field. Most of the Field Services personnel are assigned to field positions. The field staff organizational structure/positions consist of 8 Provincial Agriculture Extension Officers (PAEO); 16 PAEO's directing district or multi-district teams; 54 Regional Agriculture Extension Officers (RAEO's); 119 of a ceiling of 163 Agriculture Extension Officer (AEO's) supervising district staff in a multi-district group or a group in a large district; 26 Senior Extension Supervisors (Sr. ES's) supervising 230 Extension Supervisors who in turn supervised 1,234 of a ceiling of 1,314 Extension Assistants, the latter being the primary contact with the small holder. Field services were supported by 64 professional subject matter specialists, assigned in the field from the Technical Services Division. The PAEO's have two Assistant PAEO's, one for the technical services (subject matter specialist), one for field services. The latter combines communal and commercial farm activities but stresses communal or small holder activities. Assistance to commercial farmers tends to come mainly from technical services personnel at the provincial and regional levels.

The agent/farmer ratio is about 1:750. The World Bank support of AGRITEX communal areas staff will largely resolve transportation and housing constraints of AGRITEX in expanding to new areas. The increased mobility of the agents will expand their area of farmer coverage and alleviate somewhat the contact ratio constraint. Pilot programs testing a modified Training and Visit (T&V) system, mass radio and newspaper media, and farmer group information and training, plus an intensified staff in-service training program promises to expand extension effectiveness.

With the shift of major focus of AGRITEX from the commercial sector to the small holder sector, the commercial farms will be serviced largely on an on-call basis by subject matter specialists. A new Management Services Branch, composed of an Economic Analysis Section and a Policy Section, has been established to provide operational and policy advice to the

Directorate. This branch will monitor and evaluate programs, provide farm management services, and identify extension priorities for new project and program proposals.

The Technical Services Division is being reorganized (for more rational distribution of subject matter specialists between the head office and the field,) and to provide maximum technical support in the communal areas. The Field Services Division is being reorganized to reduce the administrative overhead and to improve the extension of simple technology to the small holders. The reorganization should also provide for faster, more direct feed back between farmers, extension, and research.

New job descriptions have been prepared for all personnel below the provincial level to assure that each agent knows his/her responsibilities. Every Field Level Officer is to do a program planning exercise including a base line study in his/her visitation area to establish farmers production/management levels. Program objectives are based on the data and extension activities planned to meet the objectives.

Four pilot schemes, in physically and socio-economically representative small holder areas, are being established to refine extension techniques and test new teaching aids, support services, and equipment. Groups formed in each scheme elect two leaders to attend training programs; they return and extend the training to the group. An Extension Worker (E/W) will periodically visit the groups to assess the effectiveness of the technique which is a modification of the T&V method. Mass plans are underway to test radio and newspaper media in two areas. These tests will be preceded by baseline studies and, followed later, by studies to compare results.

The agent/farmer ratio remains unchanged but 1,200 motorcycles provided by the IBRD for use in the communal areas will increase the mobility and increase the extension workers number of farmers effectively covered. This increased mobility plus a very active in-service training program and the use of "farmer agents" will vastly improve extension worker productivity.

Six hundred and sixty new houses are being constructed and two hundred and fifty existing houses are being repaired under the IBRD program. This should alleviate (eliminate in the short-term) the housing constraint, enable AGRITEX to attract and retain suitable staff, and reduce travel time.

To strengthen its staff to better serve the small holder sector, AGRITEX plans to step up inservice training. Land use plans are to be developed to provide a better planning base to

reduce the current critical soil degradation and to improve small holder production from livestock and related agricultural enterprises. Increased emphasis will be placed on improved livestock and range management in the communal areas. Increased emphasis will be placed on small scale irrigation and moisture conservation/retention in the low rainfall areas.

AGRITEX plans to recruit and train personnel to fill the 60 officer level vacancies, and obtain additional cars for the officer level personnel. AGRITEX hopes to recruit sufficient field staff to reduce the farmer/agent ratio to 1:600 over the short-term.

AGRITEX linkages with DRSS, the Faculty of Agriculture, the GOZ Training Institutes and the International Research Centers and farmers are being increased and strengthened.

The team's analysis indicates that the actions and provision of the proposed other donor and AID support will enable the Department to meet its responsibilities in achieving the GOZ's agricultural development objectives. This assumes continuing and adequate GOZ recurrent budget support.

#### Agricultural Education - Colleges and Institutes

Agriculture training at diploma and certificate levels is the responsibility of the Agriculture Education Branch, headed by the Chief Agriculture Education Officer under the MINAG Deputy Secretary for Technical Services. Diploma and certificate level training for lower and middle level personnel is provided at 6 institutions. Gwebi and Chibero Agriculture Colleges will include one year of practical farm experience in 3-year diploma level training (one year on-farm practical then two years on campus). The Gwebi graduates, predominately white prior to 1980, historically entered large scale commercial farming as farmers, managers or assistant managers, or the agro-business sector serving large scale commercial farming. The Chibero graduates, predominately black prior to 1980, entered government service including parastatals. Many are currently in key extension positions. Esigodini, Mlezu, Kushinga and Rio Tinto Agriculture Institutes are being expanded by about 5 fold in number of students entering each year. They will eliminate the year of on-farm experience and provide 2-year certificate level training.

Before the start of the expansion, the annual output was 80 diploma and 70 certificate holders. Plans were made initially to expand capacity to 120 diploma (including a third college) and 240 certificate holders annually. Plans were also underway to reorient and add to the training programs as the students/trainers became equipped to absorb/provide the training to meet the needs of the small holder agriculture sub-sector.

The diploma colleges require all candidates to have completed one year of practical farm experience, have a drivers license, have completed secondary school with 5 classes at O Level, with good passes including English, Maths and Sciences, and pass a tough physical test and interviews. Forty, or about one-third the student body at Chibero, will be female with an annual intake of 20-25 girls. Increased female student intake is planned at all colleges and institutes. The colleges suffer few drop-outs for academic reasons since the annual intake of 60 students is selected from some 1,700 applicants at each college. Starting in September 1984 the colleges will offer 2 years of 60% classroom/theory instruction and 40% practical work.

The Certificate Institutes starting in September 1984 will offer a two year program of one-third classroom instruction and two-thirds practical work experience. Historically nearly 100% of the Institutes' graduates have entered government service.

The planning for management and administration of the institutes and colleges, formerly the responsibility of the DRSS, has been transferred to a new MINAG Branch of Agriculture Education, reflecting the GOZ's increasing emphasis on the training and education function, and plans for development in the communal areas and resettlement program.

The Branch had developed training plans for the period 1982-89. The projected output for this period was initially planned at 1,357 certificate and 800 diploma holders. Current plans and institutionally expanded capacity will increase the annual input to about 385 in the certificate program and 120 in the diploma; for the 1984-89 period this would give a potential total output of some 2,300 certificate and 720 diploma graduates lagged by two years, (graduates in 1986-1991). The reduction of diploma graduates reflects the decision not to establish a third college. The recent policy requiring a bonding agreement, and authorizing the MINAG to assign graduates, assures they will be available to the agriculture sector in general. The existing 1,230 extension workers (E/W) gives an E/W/farmer ratio of about 1:750. Reducing the ratio to 1:400 by the early 1990s' will require 2,750 E/W, since the expected number of farmers is expected to increase; 1,520 new E/W will be needed not counting the normal attrition rates and losses due to transfers. In addition to the needs in other MINAG Departments, there will be major requirements in other public institutions and parastatals and the private sector placing an heavy responsibility on the colleges and institutes to satisfy human resource requirements.

In recognition of the importance attached to training at these levels as expansion plans were being finalized, the program was transferred out of DRSS and up graded to Branch level under a Chief Agricultural Education Officer. This, plus facility expansion and renovation, the planned expansion in staff and staff training, and syllabus redesign to emphasize small holder development, vastly increases the program's potential for success. The team's analyses indicates that with AID and possibly other donor support the program will be able to discharge its responsibilities and contribute to adequately achieve the GOZ's agricultural development objectives.

#### Faculty of Agriculture, University of Zimbabwe

The Faculty of Agriculture is responsible for providing adequate degree level training of professional agriculturalists for Zimbabwe's public and private agriculture sectors. This will require development of increased institutional and professional status and student output, and formalizing and strengthening linkages with other university departments and with agricultural agencies branches in government and the private sector; and with agriculture scientists in other regions of Africa. The Faculty of Agriculture plans to vastly expand its research effort, coordinating that effort with teaching, especially as regards small holder agriculture.

The University is a fairly autonomous entity within the Ministry of Education. It is well organized and administered and it accords planning high priority in faculty activities. Accounting controls are tight. Until very recently, over the 28 year history of the university, the teaching of agriculture had consistently been given a low priority in terms of status within the university structure, the quality of the physical infrastructure available to the program, and financial support for the program. Due partially to this low status, the enrollment in agriculture had been the lowest of the university faculties, only 4.2% of the student body. In general, local employers preferred to hire agricultural graduates from South African Universities. This combination of factors exacerbated the problem of running a good degree program. The Department of Agriculture in the Faculty of Science was elevated to the status of a School of Agriculture in 1978, and subsequently to a Faculty of Agriculture in 1979.

The Faculty of Agriculture includes three departments and offers B.Sc. degrees in Crops Science, Animal Science and Land Management.' In response to national agriculture needs, plans were made: to double student intake to 100 annually; add one year of supervised practical work experience; add one or two departments; and add a substantial research program. A careful assessment of the plan and needs produced a definition of personnel requirements and a strategy to meet them. A recently retired senior professor and department head was employed to reduce the load on the Dean of Agriculture for planning, and especially for managing the enlarged research program. An advisory group of three internationally renowned professors was formed to advise on faculty development.

The University has strong implementation competence including local commodity procurement and construction contracting. Experience with external commodity procurement is good, but experience with contracting for external technical services is very limited. It was planned that any expatriate professors provided would have joint assignments to assist the Faculty in upgrading its curricula; teach courses at the Faculty, Colleges and Institutes; and assist the Faculty and DRSS in designing and conducting research. The expatriates are to work with Zimbabweans assigned to line positions, rather than be assigned to a position. Graduate level trainees sent abroad are to complete course work only, and return to Zimbabwe to do their thesis research. This is expected to make the research/training more relevant to Zimbabwe and save some 70 academic years of formal training expense - about US\$1,500,000.

#### Faculty of Agriculture Responsibilities

Until 1948 the agriculture program at the University consisted of a farm 28 miles from the campus and a small faculty housed at the farm. The staff traveled to the campus for classes as required. The farm was then sold and agricultural training became totally a classroom exercise.

A 4,000 acre farm with very good soil, 400 acres under irrigation, 90% arable land, located seven miles from the Campus was procured in 1983 using ZASA generated funds. The needed acreage will be reserved for faculty research and is being developed for this purpose. The balance will be operated as a commercial farm to finance the Faculty. A farm manager and farm workers have been employed.

The students will receive 12 months of hands-on practical experience on the farm and in small holder communal farm areas under the supervision of the farm manager and faculty members.

The Faculty farm is viewed as an essential and crucial facility for undergraduate training. As the graduate program develops it will also serve an important function for thesis research for the graduate students.

Some significant milestones of progress for agriculture of the University of Zimbabwe include growth from a Department of Agriculture in the Faculty of Science prior to 1978, to a School of Agriculture in the Faculty of Science in 1978, to a separately identified Faculty of Agriculture in 1979; and from having no separate faculty facilities to a respectable set of facilities. A Faculty Dean was appointed in 1979. Additional staff was employed. A faculty exchange program will be initiated under the ZASA funded U.S. University contract. A crops science building and library expansion were funded from the local budget. A student hostel using CIP generated funds has also been completed. A new agriculture building with classrooms, laboratories, lecture halls and staff offices will be completed by June 1984 with ZASA funds. Such items as teaching and laboratory equipment, computer and vehicles are being procured from a Z\$500,000 grant of ZASA funds. Additional expansion is planned.

Annual student intake increased from about 15 in 1980 to 30 by 1983, will increase to 70 in 1984, and is planned to increase to 100 within two years. The first year students enroll in introductory general agricultural science courses. The second year consists of practical experience on the University Farm and in small holder communal areas, plus 2 academic courses. During the third and fourth year students are enrolled in academic courses and spend vacation periods in the communal areas. The under graduate curriculum in agricultural economics has expanded from 3 to 8 courses. Course offerings in the other departments have expanded also.

The Faculty has established a research program in the communal areas, focused on three different soil types. Activities are underway on small holder animal science/range management, maize and sorghum production, irrigation, and related studies. The farm manager, a soils scientist, an agronomist and an agriculture economist (an animal scientist is being recruited) are responsible for designing and supervising practical experience activities for students in the communal area research sites on such functions as farm management, animal and crop production and management practices, and farm/farm family constraints and problems. The Faculty's combined research/teaching program and the students practical experience, therefore, involves activities on the Faculty Farm and in the small holder communal area during school vacations.

The first group of students have completed their programs and conducted surveys in the communal area. Reports were written and submitted to the Faculty. These students, under supervision of the staff, will now supervise other students in conducting surveys and practical experience activities. The Faculty also now has funds for hiring students as research assistants to be assigned to various activities. With the full-time professional staff in charge of designing and supervising student faculty farm and small holder field activities, the students will receive training which will prepare them for future work in small holder agriculture development.

All graduate degree candidates will be required to develop and present a research thesis proposal for review by DRSS and the Faculty, and approval by the Faculty prior to selection. The selected students will complete their course work at a US university and return to Zimbabwe to conduct their research, write their thesis, and take final examinations. This will be approved by the faculty and the degree granted by the University of Zimbabwe. This will provide experience and add status for the individual faculty members, the faculty, and the University.

All of the higher education institutions are moving effectively to meet their assigned responsibilities.

## ANNEX B

### AGRICULTURAL CREDIT AND THE AGRICULTURAL FINANCE CORPORATION

Institutional credit for agriculture is derived from two sources - Commercial Banks and the Agricultural Finance Corporation (AFC). The latter is the principal agency for publicly sponsored agricultural credit. It performs two major functions: the direct and indirect provision of credit to farmers from resources at its disposal, and guarantee of overdrafts by commercial banks to principal cooperatives including the cooperative unions which serve small size and low income farmers. AFC, through individual and group loans to farmers and loan guarantee to cooperatives, is the principal institutional source of credit to small holders. The Department of Cooperatives, with funds provided by AID from the CIP, is financing cooperative societies to construct very small office and storage facilities. These are to be used to market produce and inputs. It is also financing warehouses, depots and sales points to be used by cooperative unions to distribute production inputs. 1/

AFC has a strong planning capacity and an outstanding record in providing credit. Initially, its credit activities were directed to commercial farmers. However, with independence and the national shift in development policy to emphasize small holders, AFC has developed programs to serve the commercial areas, resettlement areas, and small scale communal farmers. It previously averaged about 2,500 loans with a potential clientele of 5,000 to 6,000 farmers. That potential clientele subsequently has grown to over 800,000. Financial record keeping and loan management have been strong aspects of AFC operations. It has recruited, trained and supervised its personnel effectively and achieved high levels of repayment in serving the commercial farming sector. One of the major questions was whether AFC could continue to maintain this outstanding performance as it rapidly expanded its numbers of farmers served and took on new classes of farmers who had little past experience with market oriented, monetized agriculture, and with institutional borrowing.

1/ The AID funded facility credit is viewed as a temporary measure designed to initiate cooperative development outside the old commercial farm areas.

In 1979-80 AFC made 4,400 loans to communal and purchase area farmers with a total value of Z\$1.6 million. By 1980-81 the number of such farmers served had reached 27,300 with value of loans of Z\$7.9 million. In early 1982 it had targets for communal and purchase areas as follows:

<u>Year</u>	<u>Farmers Provided Credit</u>	<u>Value Z\$ Million</u>	
1979-80	4,400	1.6	Actual
1980-81	21,300	7.9	Actual
1981-82	37,000	14.8	
1982-83	44,500	20.8	
1983-84	54,200	28.5	
1984-85	64,600	38.4	

Levels actually achieved were right on target for 1981-82 and 1982-83. For 1983-84, achievement is now estimated at about Z\$22 million in communal areas and Z\$8 million in resettlement areas with a total of 54,000 farmers served. In addition approximately 2,500 loans valued at Z\$6 million are being received by small scale commercial farmers.

During the same period, large commercial farmers served have declined somewhat in number. The total value of loans has gone from Z\$75.6 million in 1979/80 to Z\$108 million in 1983-84. However, with inflation running at about 15%/year, there has been a decline in real value over the five year period of about 20% in large commercial farmer lending. At current rates of growth, small farmer lending will equal or exceed total AFC commercial farmer lending by about 1986.

Loans in default has become an increasing problem for the past three years during which most of the country has suffered severe drought (1981-82, 1982-83 and 1983-84 crop seasons). Typically, prior to 1983-84, AFC had on-time loan payment experience of about 90% for larger commercial farmers, 70% for communal farmers and 40% for resettlement farmers. Its actual loan write-off experience had been about 1% per year. Of course this experience had been mainly with large commercial farmers.

Because of the drought it now appears that loans fully current in payment status will drop to the following levels in 1984.

Commercial farmers	60%
Communal area farmers	36%
Small Scale Commercial farmers	35%
Resettlement farmers <u>1/</u>	4%

In mid March, the Government announced that on some Z\$52 million of AFC farmer loans, repayment schedules would be renegotiated, (stretched out) with decisions made on an individual loan basis.

This slow rate of repayment, due mainly to the drought along with resource requirements to expanded lending to new categories of farmers, is creating serious liquidity problems for AFC. Without the drought, it would have required Z\$30 million of new long term funds to meet its need in increased lending. The Government is providing Z\$17 million, leaving a shortfall of Z\$13 million in long term capital. In addition, the AFC needs about Z\$50 million additional short-terms funds for the next year or so to cover the stretched out repayment schedules for the most seriously affected drought areas (AFC can not accept deposits).2/

AFC has made considerable progress in developing its institutional capacity to service a greatly increased volume of lending and increased numbers of farmers. Part of this has been achieved by an increase in staff and a major training program, but much has been achieved by improving efficiency of operations. The accounting staff has been reduced from 108 to 80, in part by adopting more automated (computerized) systems. Previously, separate units were responsible for four different farmer categories; these have been combined. To cut costs of servicing small borrowers, group lending is receiving increased emphasis. Currently some 430 group loans serve over 9,000 farmers and 17 cooperative farming loans serve over 1,000 farm families. All 14 cooperative unions have AFC guarantees for commercial bank loans.

1/ Resettlement farmers are provided their first year's inputs as an establishment grant. They receive special treatment for three years. This year some 900 will be shifted to regular status.

2/ The MINAG budget in 1981-82 included Z\$100,000 for AFC losses, in 1982-83 it was Z\$1,340,000, and in 1983-84 Z\$3,00,000. During the same period MINAG grants to AFC went from Z\$679,000 to Z\$1,508,000 to Z\$2,800,000.

AFC currently has 659 established posts of which 591 are filled. The Finance section has 131 of 142 positions filled, Operations has 351 of 385 filled and Administration 109 of 127. Approximately 150 of the 591 staff on board are support staff. The major current need is trained computer programmers and operators. AFC feels strongly that it must have an in-house capability to develop new computer programs as needs are identified. Ability to identify and define needs is equally important, a requirement that should be met internally.

Zimbabwe has adopted a policy of gradually raising interest rates for small holders to commercial levels. This policy, along with promoting group lending with group repayment responsibility, should reduce lending costs and loan losses. As a result, small holder credit programs should be fairly competitive in terms of costs of operation with other lending. In 1982, IBRD provided US\$22 million in financing for agricultural credit. Interest rates, starting at 9%, were to be raised by 2% per year on commercial loans. Since then rates have been raised to 11% and are scheduled to go to 13% on April 1, 1984. Small holder rates are now the same for short, medium, and long term loans; this policy is under review. In 1983, deposit rates of financial houses were about 8% for three month terms, 9% for 12 months and 10% for 24 months. Building societies pay similar rates. Post office deposits are about 0.5% lower and commercial bank rates general 1 to 2% higher than financial houses. Lending rates of commercial bank are about 13% for minimum overdrafts. Building society mortgages on residential property are 13.25%. Hire purchase rates of finance houses were 20 to 24% in mid 1983. Thus by April 1984 small holder lending should also be fairly competitive on interest rates charges.

## ANNEX C

### MARKETING AND COOPERATIVES

The principal agricultural products entering into commercial trade are tobacco, seed cotton, grain (primarily maize and wheat), oilseeds (soybeans, groundnuts, sunflower), beef, milk, poultry products, pork, and coffee. Prices of most products going into commercial channels are regulated or controlled by a parastatal marketing board. All of the "controlled products" sold by commercial farmers must be sold to these parastatals. This generally does not apply to other farmers. The first board, the Grain Marketing Board (GMB), was established in 1931 primarily to stabilize the maize market and support prices. This was followed by establishment of the Cold Storage Commission (CSC) in 1937, the Dairy Marketing Board (DMB) in 1952 and the Cotton Marketing Board (CMB) in 1969. The GMB handles maize, wheat, sorghum, soybeans, groundnuts, sunflower and coffee; the CSC regulates cattle and sheep; the DMB regulates milk and butterfat; and the CMB controls cotton and cotton seed. The Agricultural Marketing Authority (AMA) coordinates the separate Boards. Producer associations largely control the marketing of other products such as tobacco, hogs, poultry, tea and sugar. Related farmers' associations, the Commercial Farmers' Union and the AMA, play key roles in establishing price recommendations which the MINAG presents to the Ministerial Economic Coordination Committee (MECC). The MECC in turn recommends prices for final Cabinet decision.

Between 1970 and 1983 the maize crop has ranged from 1.2 to 2.8 million MT, GMB purchases have ranged from 550,000 to 2,013,000 MT, and GMB exports have ranged from 891,000 MT (in 1972-73) to 86,000 MT in 1980-81.

The Boards serve a price support (and price ceiling) function as monopoly or residual buyers. All produce which is offered for sale to them is bought at a fixed price. The GMB has some 50 depots and 270 licensed buyers. The CMB has 14 buying depots and 6 gins. <sup>1/</sup> The network of cooperative societies (almost 400 provided or being provided with facilities by AID funding)

<sup>1/</sup> In 1981-82 the marketing authorities purchased 2 million MT of maize, 20,000 MT of groundnuts, 65,000 MT of soybeans, 5,000 MT of coffee, 201,000 MT of wheat, 201,000 MT of soybeans, and 30,000 MT of sorghum. That was about 70% of the maize crop, 25% of the sorghum crop and virtually 100% of the other crops listed.

assemble produce for the grain and cotton boards. The DMB has 5 processing plants (and receiving stations). The CSC operates buying points and acts as the residual, but not the only buyer at organized sales in small holder areas. It handles about 80% of the slaughtered cattle. Purchases of various commodities are based on defined grades and standards. In the case of livestock, purchases are largely based on carcass grades.

Non-controlled products do not have boards (or a parallel mechanism for establishing and supporting prices). These products include barley, fruits, and vegetables.

Major agricultural input items (e.g., oilseed meals, feed concentrates, fertilizer, and petroleum products,) also have fixed prices. The interplay among the different farmer and government groups has been generally positive, providing prices and price stability which offer fairly good incentives to commercial farmers. There have been exceptions, however, when producer prices have been too low, i.e., well below world market prices and low in relation to input costs. That appears to be the case for several products at the present time. Some input prices are well above world market prices and prices paid by farmers in competing countries. Mechanical equipment is particularly costly.

The extent to which an individual farmer can benefit from favorably supported prices depends on his access to the parastatal depots or other outlets where the fixed prices are paid. Access involves transportation. For the larger farmers this is usually not a major obstacle. Small-holders or remotely located farmers, however, generally lack access to both the depots where fixed product prices are paid and the depots where inputs are sold at fixed prices. The cooperatives are beginning to fill this marketing gap, and small traders and "cafes" handle inputs. For some inputs, supplies are seriously limited by foreign exchange allocations (e.g., machinery and spare parts).

All farmers are responsible for payment of their transport to the parastatal depots. Buyers licensed by the GMB, as well as cooperatives, act as its agent in and near communal areas. The farmer, therefore, may either transport his production directly to the depot or transport it to an agent or cooperative. If he uses an agent, the agent pays the GMB fixed price minus the transport cost from the agent's facility to the parastatal depot. Again, the small and remote farmers are the most disadvantaged. The complaint that farmers usually do not get credit for high-quality produce which they may deliver is commonly made.

Major communal farmer marketing problems, identified in the report of an official study group prepared before the ZASA program was initiated, include:

- (a) distance to market and insufficient numbers of depots;
- (b) poor roads and transport services;
- (c) difficulty in obtaining inputs and credit;
- (d) difficulty in cashing checks;
- (e) inadequate extension services; and
- (f) inadequate communication services.

The principal solution being undertaken is the establishment of a comprehensive cooperative input distribution/farm produce collection network which also channels credit to communal farmers.

There is a fairly general agreement that establishment of a large network of depots by one or another of the boards would be inefficient because their services and facilities would be only partially utilized. Multipurpose depots, handling a wide variety of inputs and agricultural products and strategically located to serve multipurpose primary cooperatives, would be more fully utilized year round. Transport of inputs and produce, as well as extension services and credit, could be channeled through the cooperatives. Linkages with savings clubs could ease problems in cashing checks and handling cash needs. Although road improvements must be dealt with outside the agricultural sector, if a farmer had a reliable source of inputs and an outlet for produce on a road within a few kilometers of his farm, he probably could find locally available animal transport to move inputs and produce over short, rough trails. In many countries, the last few kilometers of rough trails have proven to be a less serious obstacle if the farmer is certain that each trip will result in a successful sale of produce or purchase of needed supplies. A multipurpose cooperative network could go far in addressing the problems cited.

In recent years, efforts to establish cooperatives at the communal-farm level to fill the input distribution/produce collection and marketing functions have had considerable success. Cooperatives have long been important to large commercial farmers. Beginning about 1960, primary cooperative societies were established to serve communal farmers. Regional unions served as agents in supplying inputs and marketing or arranging to sell produce which they handled on behalf of members of the primary society. The number of cooperatives increased rapidly until the latter part of the war going from

21 with 1,800 members in 1964 to 336 with 22,000 members in 1967. They continued to grow more slowly through the 1970's, with some set back the last years of Unilateral Declaration of Independence(UDI). Efforts were undertaken with independence to rejuvenate existing societies and establish new ones. The number of primary societies now exceeds 400, and the number of members is about 85,000. Volume of business of cooperatives serving small farmers grew from Z\$3.3 million in 1978 to Z\$23.7 million in 1982 (Table 1). The Department of Cooperatives has developed ambitious plans for cooperative expansion. In the initial phase, 40 warehouses and input distribution/collection centers at 400 primary societies are to be constructed, with AID financing. Based on past growth rates, when cooperatives were seriously constrained by lack of capital and lack of security, the current plan appears feasible. The GOZ and AID have provided local currency grants (from the FY 1981 and 1982 CIPs) totaling Z\$7.8 million for this program (constructing 40 warehouses and 400 supply/produce assembly points). As of December 1983 construction was completed on 36 warehouses and 166 input supply/produce assembly points. Additional financing has been proposed from ZASA to expand this program.

Plans under consideration with AGRITEX would involve assigning MINAG extension agents close to most of the initial input sales points and collection centers. Plans call for some of the stronger pre-cooperative societies to be developed into primary input supply/marketing cooperatives. They will operate informally until they have gained experience and membership sufficient to justify construction of permanent facilities. They will initially operate in conjunction with a primary cooperative which can undertake the input and marketing functions. Through AGRITEX and the Department of Cooperatives, they will obtain technical and management assistance.

As the pre-cooperatives and cooperatives expand their functions and business, additional facilities will be needed at both the regional and local levels. Many pre-cooperatives will evolve into cooperatives and will need storage space. ZASA should reserve some funds on a tentative basis, to help finance such facilities. If 350 cooperatives could thus be formed, a total of 750 input supply/marketing cooperatives would be operational, and the GOZ target of having one sales point/produce assembly point within 10-kms of communal farmers will practically be a reality.

One aspect of the CIP, and now the ZASA cooperative assistance program, has not worked as expected. The Department of Cooperatives has principal responsibility for operation of the

unions (their officers serve as managers). Unions operate depots and inputs sales points which retail inputs. Some grass roots groups such as Group Development Areas, farmers clubs, Silveria House (church groups) and savings clubs may go jointly to union facilities to pick-up inputs, but the union input sales points do not handle farm produce. The societies provided with facilities generally only assemble and forward farm produce and do not stock and sell inputs; hence the expected economies of multiple use are not being realized.

Table 1

COOPERATIVE VOLUME OF BUSINESS  
PRODUCE HANDLED

	<u>Maize</u> 1,000 MT	<u>Cotton</u> 1,000MT	<u>Value all Produce</u> Z\$1,000
1978	13.4	2.3	2,519
1979	6.3	1.6	1,715
1980	20.2	1.7	3,430
1981	89.1	5.7	13,298
1982	88.6	3.0	11,623

INPUT AND OTHER SUPPLY BUSINESS OF COOPERATIVE (Z\$1,000)

	<u>Fertilizer</u>	<u>Seed</u>	<u>Pesticides</u>	<u>Total</u>
1978	240	122	71	803
1979	1,142	317	121	1,810
1980	7,804	1,424	1,250	11,314
1981	5,085	867	1,030	8,571
1982	7,613	1,152	894	12,094

## ANNEX D

### SUPPLY AND DISTRIBUTION OF PRODUCTION INPUTS

Agricultural inputs in the broadest sense include all that goes into production of agricultural produce, including land, labor, and capital. However, this section is concerned with inputs other than land, labor, capital, and irrigation water. It deals with physical inputs purchased from outside the immediate community, e.g. commercial seeds, fertilizer, and other agricultural chemicals and supplies, feedstock, farm machinery, and tools.

The adequacy of such inputs to serve needs of the farm community, at large and various subsectors, should be considered from several viewpoints: (a) adequacy and appropriateness of supplies of different categories of inputs for different farmer groups; (b) adequacy of the distribution system to move available supplies to different groups and to insure that supplies are accessible as and when needed; and (c) costs relative to prices of agricultural products which make it profitable for farmers to expand their levels of use.

#### Improved Seed

Zimbabwe is unusual in the high quality of seed available for most crops and the large percentage of area of major crops planted with improved seeds. This is particularly true for maize, cotton, and tobacco where research has achieved outstanding varieties and the seed industry has done an outstanding job of production and distribution.

Maize occupies over 50% of the cropped area and is grown on almost every farm in both large scale commercial and small scale communal farming sectors. Practically all this area is planted with hybrid white maize seed which has been developed over a long period. The currently very popular SR 52 was developed three decades ago but improved somewhat since. Maize seed production is carried out by private growers (members of the Seed Maize Association) and seed is processed and marketed by the Seed Maize Cooperative.

The organization is similar for other crops with a farmers' association for the crop or group of crops producing the seed and the processing and marketing carried out by a corresponding seed cooperative. These include a crops seed association whose members produce crop seeds other than maize (wheat, barley,

soybean, sunflower) and horticultural seeds. There are also tobacco and pasture seed associations. The (GMB/CMB serve the processing and marketing functions for cotton and groundnuts. The MINAG, (Department of Research and Specialist Services) does crop breeding, provides basic seed, and performs a inspection service.

While maize is the most outstanding example of improved seed used by small farmers, cotton and groundnuts also have spread widely to small scale farmers. About a third of the cotton and almost all of the groundnuts are grown on small farms.

Commercial seeds are moved through several channels to farmers. The most important channels for small farmers are small traders, cooperatives, and AGRITEX (extension). Seed sales, through cooperatives in communal areas, increased from Z\$122,000 in 1978 to Z\$1,152,000 in 1982. Seed is sold in lot sizes appropriate to different sizes of operation. Maize seed is sold in packages ranging from part of a kg to 50 kg. Production and processing are generally adequate to meet needs. In fact, substantial amounts of maize and horticultural seeds are exported, (recently this included 5,000 MT of hybrid maize seed and 900 MT of vegetable seeds). These levels of export indicated the underlying quality and competitiveness of the seed industry.

The seed producing and handling trade suffers from some equipment and supply shortages which might be alleviated by allocation of a part of the CIP funds specifically for this purpose. This should be discussed with appropriate seed associations and MINAG to help insure that critical needs are met. There are a number of types of seeds which must be imported and new crops for development of communal areas may present new needs. U.S. assistance on this aspect has been proposed informally. Some of the seed organizations have encountered difficulty with lack of professional staff, which might be alleviated by provision of some short term specialized expertise.

One of the problems for the seed industry cited in 1982 was declining staff numbers and experience in the MINAG research organization (DRSS) and hence declining ability to maintain high quality basic seed supplies. Concerns over this situation appear to have diminished as new staff have settled into place in DRSS, and established procedures and methodology have been maintained. The staffing problem could be more serious for potential new or less developed crops designed for communal and other small scale farm areas where methodology and guidelines for conducting research and maintaining basic seed supplies have not been established.

## Fertilizer

Fertilizer consumption measured in weight of the 3 principal plant nutrients (N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O) grew fairly rapidly from 1969/70 to 1974/75 (55% in 5 years). Thereafter growth in consumption stagnated apparently due in part to economical and political conditions including less favorable prices, shortages, weather and distribution weaknesses (Table 2). The price of maize was doubled from the 1978/79 to the 1980/81 crops. This increase was substantially more than the inflation rate and more than the increase in costs of production. Fertilizer supplies were augmented by increased imports and efforts were made to increase crop production including some fertilizer use in communal areas. Despite some Ammonium Nitrate shortages, consumption is estimated to have reached 156,000MT of nutrients in 1980/81 compared with 124,000MT the year before (up 20%). With good weather, the maize crop hit a new record of almost 2.8 million MT compared with a previous average of about 1.6 million MT. About 61% of the fertilizer went in the maize crop (Table 1). Tables 1 and 2 show estimated fertilizer use by crop, total used through 1980/81 and projections to 1989/90.

In an average year, about half of the 1980-81 level of nitrogen consumption would be produced locally, and about half imported as NH<sub>3</sub> and Urea (Table 4). Local nitrogen (NH<sub>3</sub>) production at the Sable factory is based on the electrolytic process which is very high cost unless excess hydroelectric power is available. Power has been cheap, but now power is being purchased from Zambia, and higher prices have just been negotiated for electricity imports.

ZFC and Windmill, the other distributor, together are committed to take all the domestic fertilizer production before importing fertilizer products. Both their local buying and selling prices are set by the Government. Probably neither of the two fertilizer production operations could compete if imports were freely permitted, even with high transport costs from ports to Zimbabwe. Despite low electrical rates, electricity costs are estimated to make up two third's of the cost of local production of nitrogen. Costs of local production of nitrogen and imported nitrogen are blended and AN and Urea are sold at the same price per kg of nutrients (Z\$0.559/kg of N) ex-distributor warehouses. The local phosphate plant produces SSP (0-18.5-0) and DSP (0-37-0) which are sold from distributor sites at Z\$0.74 to 0.77/kg of P<sub>2</sub>O<sub>5</sub> which is at least 50 to 75 % above what it would cost to bring in phosphate in the form of DAP or MAP.

The nitrogen plant is reported to use one-third of total electricity consumed in Zimbabwe. When the new power generators come on stream (Wankie I,II) Zimbabwe should again have surplus power but under the terms of financing electrical rates are to reflect full costs. Thus a new or expanded nitrogen plant based on electrical power is not likely to prove feasible in the long run. Alternatives being examined include coal as a feed stock and imports of Urea or  $\text{NH}_3$  from Tanzania which is expected to put up a gas fueled nitrogen complex. Both have their problems. Under existing technology, an economic sized coal fueled plant is likely to involve a very large capital expenditure. Imports from Tanzania involves uncertainties at this time.

In 1981-82, imports were expected to include 20-25,000 MT of  $\text{NH}_3$ , 70-75,000 MT of Urea and small amounts of Ammonium Sulfate and Sodium Nitrate (the latter for tobacco). The country produces 80-85% of its Phosphate but imports all its Potash. Imports for 1981-82 were estimated to include 16,000 MT of TSP, and 49,000 MT of Potash (Tables 3,4).

Fertilizer and fertilizer raw material imports increased substantially from 1978 to 1981-82. Value of fertilizer imports were up from Z\$4.8 million in 1978 to Z\$22.6 million in 1981. Imports of sulfur and anhydrous ammonia increased from Z\$2.4 million in 1978 to Z\$9 million in 1981 and \$11.7 million in 1982. However, since then imports of both fertilizer and raw materials have declined due to the drought, now in its third year (Table 5). Large stocks of fertilizer, particularly nitrogen intended for top dressing, are likely to be carried over to the 1984-85 crop season. No imports of high analysis N and P compounds, such as DAP or MAP, are expected except for testing, despite the considerable saving these offer in original cost and transport.

Supplies of phosphate rock are adequate to meet domestic needs. The major obstacle in achieving self sufficiency in processed phosphate is low grade and consequently high costs and, of course, lack of sulfur (for sulfuric acid). A large capacity iron pyrite sulfuric acid plant was proposed 2-3 years ago to meet this sulfur need, but this is still in the thinking stage.

Recent forecasts of fertilizer consumption for 1981-82 to 1989-90 (obtained by IFDC from government agencies) show disappointingly low rates of expected growth - rates so low as to present a major obstacle to the target for increases in production on communal lands and among other small farmer groups (Table 3). In the current short foreign exchange situation, it is possible that these low projections may become self-fulfilling as imports

and production are scaled to these estimates instead of 20-30% growth rates which have brought major breakthroughs in food production in countries such as India, Pakistan, Indonesia and Brazil.

There is a high degree of urgency in reviewing past and projected consumption levels and establishing plans for rates that fully reflect and support agricultural growth and equity targets. Growth in consumption in the first three of the countries cited has been largely on small farms - sizes smaller than average in communal areas. If achievements in these countries were repeated in communal areas of Zimbabwe over the next decade, communal area consumption would jump three fold over the decade from 1980-81 and by 1990-91, and quite probably approach 90,000 nutrient tons. That would still be less than 100 kg of nutrients per farm on one million communal farms.

It should be possible to more than double total consumption on communal and other small farms between 1991 and 1996, bringing total use per small holder family to 200kg of nutrients.

The fertilizer trade has developed projections for total fertilizer use for the next 15 to 20 years. Consumption in MT of nutrients which previously peaked at 147,000.MT in 1974-75 and 155,000 MT in 1980-81 is expected to return to 155,000 MT in 1984-85. Thereafter it is expected to grow at a rate of reaching 265,000MT in 1990 and near 400,000MT in 1995. The major part of this increase is expected in communal areas and on other small farms. The percentage used by these groups of farmers is expected to reach 50% of the total during the 1990-95 period compared with 5% in 1974-75 and about 23% now. Measured in nutrients consumed on communal and other small farms, use grew from about 8,000MT in 1974-75, to over 30,000MT in 1980-81 and the projection is for near 200,000MT by 1995. Achievement of these targets will, of course, require a concerted effort by public and private entities serving farmers. Adequate fertilizer supplies and a large distribution network will be essential conditions for such growth rates.

For remote areas where roads are poor and transport costly, high analysis fertilizer such as DAP and MAP would be particularly appropriate. Use of one bag of MAP, where possible, to substitute for 3 bags of compound V could represent a major transport saving in addition to much lower material costs to begin with (where K and S are not essential). These and other alternatives should be appraised further and action taken, as appropriate, to reduce the high costs paid by Zimbabwe farmers.

Imported NH<sub>3</sub> along with locally produced nitrogen from the electrolytic process is used to produce Ammonium Nitrate and NP and NPK compounds. All the Urea used is imported. Low grade phosphate rock is concentrated through the flotation process by Dorowa Chemical then shipped to Zimphos for further processing into phosphate fertilizers. Basically AECI (Chemplex) is at the apex of the phosphate and the Sable nitrogen complex. ZFC, (one of the two distributors) is part of the AECI complex and actually controls Sable.

Foreign exchange is a constraint on increased imports of fertilizer. Transport to Zimbabwe is another problem. Both these constraints could be partially alleviated by a shift from other dry forms to DAP or MAP. The current CIP support provided by AID could be used to help finance such imports.

TABLE 1

ESTIMATED FERTILIZER CROP USAGE 1980-81

	<u>8</u>
Maize (corn)	61
Wheat and barley	8
Tobacco	8
Cotton	6
Coffee and tea	4
Sugarcane	4
Potatoes and vegetables	3
Soybeans	2
Other crops	<u>4</u>
<b>TOTAL</b>	<b>100</b>

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TABLE 2

ZIMBABWE -10-YEAR FORECAST COMMITTEE, SECOND FORECAST- DECEMBER 1980

(converted into nutrients by IFDC, 1,000 nutrients ton)

	N	P <sup>205</sup>	K <sub>2</sub>	TOTAL	REMARKS NUTRIENT
1969/70, actual	47	28	20	95	
1970/71, actual	52	29	22	103	
1971/72, actual	67	34	25	126	
1972/73, actual	66	35	25	126	Drought
1973/74, actual	65	37	28	130	11-month year
1974/75, actual	73	42	32	147	(anticipation of
1975/76, actual	55	32	25	112	price increases) rationing AN
1976/77, actual	60	35	27	122	No rationing AN
1977/78, actual	61	35	26	122	
1978/79, actual	61	37	28	126	Drought
1979/80, actual	60	37	27	124	Drought
1980/81, estimate	90	43	23	156	Increase in corn price
1981/82, forecast	77	38	20	135	AN rationing
1982/83, forecast	78	38	21	137	1.48% forecast increase
1983/84, forecast	70	39	21	139	1.46% forecast increase
1984/85, forecast	80	40	21	141	1.43% forecast increase
1985/86, forecast	81	41	22	144	2.13% forecast increase
1986/87, forecast	82	41	22	145	0.69% forecast increase
1987/88, forecast	82	41	22	145	0% forecast increase
1988/89, forecast	82	41	22	145	0% forecast increase
1989/90, forecast	82	42	22	146	0.69% forecast increase

Note: Product actuals and estimates for 1980/81 are supplied by Windmill of Zimbabwe. Grade D formula appears to have changed from 8-14-10 to 8-14-7 in 1980/81. Forecasts were made by the committee using two units of measure: compound and AN. In converting forecasts, the compound used averaged 7-15-8, and the AN was 34.5% N. Numbers were rounded off to the nearest thousandth.

TABLE 3

1980-81 ESTIMATED FERTILIZER PRODUCTION  
IMPORTS AND CONSUMPTION - MT

	<u>Production</u>	<u>Imports</u> <u>(nutrient tons)</u>	<u>Estimate of</u> <u>Consumption</u>
N	50,000	60,000	90,000
P <sub>2</sub> O <sub>5</sub>	38,000	7,000	43,000
K <sub>2</sub> O	<u>-</u>	<u>30,000</u>	<u>23,000</u>
TOTAL	88,000	97,000	156,000

Note: The difference between consumption and production plus imports would represent working inventories.

TABLE 4

PROJECTED PRODUCT IMPORTS  
1981-82

	<u>Tons</u>	<u>Remarks</u>
NH <sub>3</sub>	23,000	Used in AN and compounds
Urea	72,000	Direct sales
TSP	16,000	Compound production
MAP or DAP	100	Compound production
Potash, Muriate	34,000	Compound production and direct sales
Potash, Sulfate	15,000	Compound production and direct sales
Ammonium Sulfate	8,000	Compound production and direct sales
Sodium Nitrate	2,000	Direct sale--tobacco
Sulfur	16,000	For sulfuric acid production
Feed-grade Urea	8,500	Cattle feed
Ammonium Nitrate, explosive, porous grade	10,000	Mining industry

TABLE 5  
VALUE OF IMPORTS OF FERTILIZER,  
FERTILIZER RAW MATERIALS, PESTICIDES, FARM MACHINERY AND  
TOTAL IMPORTS, 1978-82 AND JANUARY-APRIL 1982 and 1983,

(in thousands of Z\$)

	<u>1978</u>	<u>1978</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>Jan</u> <u>1982</u>	<u>April</u> <u>1983</u>
Nitrogen Fertilizer	1,236	1,312	4,800	13,928	8,159	2,404	741
Other Fertilizer	3,511	2,622	4,778	8,682	8,987	1,485	643
Anhydrous Ammonia	1,735	1,369	4,231	6,755	9,327	2,871	2,916
Sulfur	681	724	1,011	2,194	2,415	539	537
Farm Machinery	5,859	8,181	17,355	18,685	18,101	5,007	11,419
Insecticide	12,045	1,315	15,894	18,486	18,064	2,765	2,027
All Imports	403,691	549,265	809,398	1,017,694	1,081,787	360,282	358,249

### Fertilizer Distribution

Fertilizer distribution is unusual in Zimbabwe in terms of concentration in the system and the small number of distributor sales points. Fertilizer distribution is handled by two companies - Windmill and ZFC - which obtain their local phosphate from ZIMPHOS and AN from Sable and additional N, P, plus K from imports. Fertilizer is sold from ZFC and Windmill facilities directly to farmers and to private trader cooperatives and cooperative unions. The cooperative network serving small farmers is being build up rapidly and now handles about half the small farmer purchases.

Under an AID grant some 36 of a targeted 40 cooperative unions operated input supply warehouses and about 165 of 400 sales points have been completed. The amount of fertilizer moved through the cooperative network has increased from Z\$240,000 in 1978 to Z\$7,613,000 in 1982(up 3,200%). This cooperative network, supplying other inputs also, is supplemented by some AGRITEX distribution and sales by private traders. The entire system will need to expand greatly if it is to provide acceptable levels of access for small farmers who have only animal transport available. For small farmers, fertilizer costs are considerably higher than for a large commercial farmer because of transport disadvantages and inability to take advantage of discounts.

### Tools, Machinery and Other Supplies

Hand tools and small and large scale machinery are all in short supply and quite expensive. Most of the needed tools, small scale (animal drawn) implements and even larger (tractor powered) implements are manufactured in Zimbabwe. Tractors, combines, and some special machines and farm trucks are the principal imports. In recent years, imports of machinery and spare parts have been very restricted because of foreign exchange constraints. Even for domestically produced implements, supplies of steel, particularly high quality steel, have been a constraint. Shortages have particularly affected large mechanized farmers. As a result of shortages and high taxes, mechanization costs are very high. The current US CIP and ZASA programs are helping to relieve the shortage but generally not pushing prices down. During the period of UDI, imports were so severely restricted that the average age of tractors is over 10 years. Beginning in 1979, imports of farm machinery accelerated going from Z\$5.9 million in 1978 to Z\$17.4 million in 1980 and Z\$18.7 million in 1981, and Z\$18.1 million in 1982. Imports for January - April 1983 were Z\$11.4 million compared with Z\$5 million in the same 4 months in 1982. In

early 1984,, with the crop prospects declining and a financial liquidity problem facing farmers, machinery sales are declining.

A variety of other farm supplies have been affected by foreign exchange constraints - chemicals, pesticides, bags, and pharmaceuticals. The value of insecticide imports increased from Z\$12 million in 1978 to Z\$18.1 million in 1982 (probably a decline in real terms).

Feed:

All feed concentrate ingredients except fish meal (for poultry), salt, vitamins, and feed grade Urea are produced locally. Raw materials for manufactured stock feed go through one board or another to one of 7 feed compounding companies (there are 4 feed millers). The Government controls and regulates prices of feed ingredients except feed grain kept on the farm. Prices of livestock are fixed. In recent years, feed concentrate consumption has averaged slightly over 500,000 MT. The distribution system for commercial feeds is very limited.

## ANNEX E

### CROP AND FERTILIZER PRICES

Fertilizer prices are controlled but basically priced at cost plus a reasonable profit with pick up at central factory or distributor depots arranged and paid for by farmers. If farmers buy from a nearby dealer or cooperative, the costs of this transport and distribution must be borne by the farmer. Ammonium Nitrate (reported to be 34.5%) and Urea have prices fixed at the same amount per nutrient kg (Z\$0.559/kg). Superphosphates are approximately Z\$0.75/kg of P<sub>2</sub>O<sub>5</sub>. Potash costs range from about 33 cents per kg of K<sub>2</sub>O for Muriate of Potash to 54 cents for Sulphate of Potash per kg of K<sub>2</sub>O. Discounts are available from distributor warehouses of 3% to 6% for early purchase (August 3% and September 6%) and 2% for buying in volume, more than bag lots.

The price of maize, the principal user of fertilizer, is currently fixed at Z\$140/MT, (14 cents/kg) at GMB depots. Hence, on the basis of GMB fertilizer distributor points, it takes about 4.2. kg of maize to buy a kg of N, 5.4 kg of maize to buy a kg of P<sub>2</sub>O<sub>5</sub> and 2.4 kg to buy a kg of K<sub>2</sub>O in the form of Muriate of Potash. By comparison, it costs 4.5 to 5 kg of maize for a US farmer to buy a kg of dry Nitrogen or P<sub>2</sub>O<sub>5</sub> spread on his field. Nitrogen in the form of Anhydrous Ammonia (available in many countries) is much less costly applied on the farmer's fields. In the U.S. it is a little over half the cost of Nitrogen in dry form. Zimbabwe farmers must bear substantial transport and application costs of fertilizer and transport maize over considerably longer distances to a GMB depot to sell maize at the fixed price.

Thus total costs for fertilizer measured in kg of maize to buy and apply a kg of fertilizer are much higher than the above figures. Data are not available, and of course they vary widely with location. A well located farmer with his own transport would probably enjoy crop/fertilizer price relationships near the above. Farmers at long distance and lacking transport well might face price relationships double or nearly double the above, that is 8kg of maize to buy a kg of N and 10 or 11kg of maize to buy a kg of P<sub>2</sub>O<sub>5</sub>. Further, compounds cost about 10% more per kg of nutrients. Maize which used about 60% of the fertilizer applied in 1980-81 is currently priced below world markets - it is about 10% below the U.S. farm price for yellow maize which means about 50% of the costs of imports. But then until this year Zimbabwe has been a substantial exporter so its prices are oriented to exports. Zimbabwe is reluctant to raise maize prices to import levels.

**EX-FACTORY PRICES OF FERTILIZER PER MT IN  
BAGS AND COSTS PER KG OF NUTRIENTS IN**

**ZIMBABWE CENTS**

	Cost/MT of Product Z\$	Cost/Kg of N	Cost/Kg of P	Cost/Kg of K <sub>2</sub> O
Urea	275.6	59.9	-	-
AM.N.	206.80	59.9	-	-
SSP	143.60	-	77.6	-
DSP	267.40	-	72.3	-
Muriate of Potash	193.80	-	-	32.3
Sulfate of Potash	267.4	-	-	53.5
<u>Compounds <sup>1/</sup></u>				
15-5-20 (J)	211.20	66.0	82.0	36.0
2-17-15 (A)	230.60	69.0	87.0	37.1
25-15-5 (T)	232.20	66.0	81.0	58.0

1/ Generally compounding adds 8 to 10% to costs per kg of nutrient.

**PRODUCER PRICES:\* BY PRODUCTION YEAR**

Crop	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>	<u>1983/84</u>
Maize (Z\$/MT)	85.00	120.00	120.00	120.00	140.00
Wheat (Z\$/MT)	115.00	135.00	165.00	195.00	220.00
Cotton (Z\$/kg)	36.50	37.50	40.00	51.50	51.50
Soyabeans (Z\$/MT)	157.25	173.00	183.50	210.00	260.00
Shelled G/Nuts (Z\$/MT)	360.00	390.00	420.00	450.00	450.00
Beef (Zc/Kg) (super grade)	70.46	81.11	102.80	124.60	124.60
Milk (Zc/Kg) (basic)	15.26	20.28	24.95	28.78	30.87

\*Weighted average producer prices.

Wheat has a reasonably satisfactory price relative to fertilizer but still is below the C and F costs of imports. Current price relationships still permit use of fertilizer on crops such as maize, small grain, cotton and tobacco, but the price relationships do not provide the level of incentive enjoyed by farmers in many countries.

To minimize this disadvantage, attention is needed to increase efficiency in fertilizer use at the farm level - use of precisely the optimal amounts, avoidance of use of elements not needed, general use of soil testing to guide individual farmers, and use of nitrogen fixing legumes where possible to reduce nitrogen fertilizer needs. Further, there is urgent need to substitute lower cost forms such as DAP (18-46-0), Monoammonium Phosphate (11-52-0) and  $\text{NH}_3$  (82.5-0-0) when imports are made. MAP and DAP have the advantage of high analysis (lower transport and application cost), and that they would require no further blending or reformulation to meet many of the pre planting or planting time needs now served by application of much more costly compounds such as D (8-14-7) or V (4-17-15). In December 1983, international costs per nutrient ton were about Z\$400 FOB for Ammonium Nitrate and under US\$300 for DAP or MAP ( $\text{NH}_3$  cost under Z\$200/MT of N). Importing or manufacturing lower cost, high analysis fertilizers and using some direct application  $\text{NH}_3$  (82.5-0-0) and elimination of unnecessary compounds could cut fertilizer costs to the farmers and the economy by large amounts. The reduction in the strain on scarce and over burdened transport by use of higher analysis materials also would be very important.

Many commercial farmers feel that prices of agricultural products have been allowed to lag well behind their costs. Fertilizer is only one of the cash costs of modern high yield farming. Costs of large imported machinery are estimated to be more than double costs to U.S. farmers. Costs of pesticide are also estimated to be well above the costs to U. . farmers, and cattle producers face more serious pest problems. Many of the durable production goods farmers buy are subject to more than 20% sales tax. On the other hand farmers pay no real estate taxes; farm wages are much lower and so are land costs.

The following table shows present fixed prices and prices the commercial farmers union estimates farmers require to meet production objectives in Z\$ per MT:

	<u>Prices</u> <u>1983-84</u>	<u>Estimated Prices Required</u> <u>1984-85</u>
Maize	140	200
Wheat	220	285
Groundnuts	450	700
Milk	300	440
Soyabeans	260	364
Beef		+ 15%

The maize price is the preplanting level; many farmers had expected a substantial increase to be announced at harvest, perhaps something half way between the announced Z\$140 and the desired 1984-85 price of Z\$200.

Usually prices realistically reflect farmers' costs of production. The 100% increase in maize prices between 1978-79 and 1980-81, and excellent rains, brought a 2.8 million MT crop of maize. Maize crops typically had been averaging around 1.6 million MT before that. In the next two years, the price was held at the 1980-81 price of Z\$120/MT and crops of 1,786,000MT and 1,023,000MT were produced. The decline has been attributed to drought in 1981-82 and again in 1982-83. For 1983-84 the price was raised to Z\$140/MT (up 17%), but there has been a severe drought in the 1983-84 season, and the crop is expected to be below the 1982-83 crop; and with stocks exhausted, large imports will be needed. One question is whether maize prices were allowed to fall too far behind inflationary cost increases which had been running at 15%.

Fertilizer is one of the largest variable inputs in maize production; use tends to be sensitive to the fertilizer/crop price relationship (maize uses about 60% of the total fertilizer). Data below shows the number of 91kg bags of maize required to buy a 50kg bag of fertilizer, (average of AN and Compound D) over the period 1969 to 1984:

<u>Year</u>	<u>Maize required</u>	<u>Year</u>	<u>Maize required</u>
1969-70	1.8	1977-78	2.2
1970-71	2.0	1978-79	2.1
1971-72	2.3	1979-80	1.6
1972-73	1.6	1980-81	1.3
1973-74	1.5	1981-82	1.5
1974-75	1.4	1982-83	1.6
1975-76	2.5	1983-84	1.4
1976-77	2.1		

The period 1980-81 to 1983-84 have been years of relatively favorable maize/fertilizer price relationships. The relationship for 1983-84 of 1.4 (bags of maize to buy a bag of fertilizer) was bettered only by 1980-81 and equaled by 1974-75 (both good maize years). The 1980-81 price was the most favorable in the 1964-65 - 1983-84 period. The 1983-84 price in constant dollar terms was exceeded only by 1964-65 and 1965-66 prices and by the high maize prices beginning with the 1981 crop.

Given the importance of maize (over 50% of the cropped areas), prices or changes in prices of other crops need to be compared with maize. Wheat appears somewhat high relative to maize based on usual world prices, but Zimbabwe is normally an importer of wheat and exporter of maize. The price of wheat in constant terms is now about the average of what it has been over the last 20 years, during which output has grown rapidly. Wheat prices have tended to vary 15-20% above and below current prices adjusted for inflation.

Prices for sorghum have stayed fairly close to those of maize. When they have risen substantially above maize, the GMB procurement of sorghum has increased considerably. Generally, however, sorghum procurement is only 2 - 3% as much as maize procurement.

Following large maize price increases of 1979-80 and 1980-81, the Government paid out large amounts in subsidies to avoid undue inflationary pressure and consumer hardship. In 1982-83, costs had reached the point where the budget could not sustain them and major increases were made in consumer prices, the largest in late 1983. Consumer prices are shown in the following table for 1980 - 1983:

CONSUMER PRICES  
(Maximum Retail Prices)

<u>1. Maize Meal:</u>				
<u>Type:</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
50kg Roller Meal (Z\$)	4.71	4.71	6.99	10.00
50kg Straight run Meal (Z\$)	4.48	4.48	10.23	11.60
50kg Super-refined Meal (Z\$)	7.70	7.70	13.60	15.58
<u>2. Bread:</u>				
720 White loaf(Zcents)	21	25	28	35
720 Brown loaf(Zcents)	19	23	26	33

<u>Type:</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
<b>3. <u>Vegetable Oil:</u></b>				
Highest 375ml (Z\$)		0.56	0.61	0.76
Lowest 375ml (Z\$)		0.49	0.54	0.68
<b>4. <u>Meat: (Super Grade) Per 1 kg.</u></b>				
Fillet (Z\$)		3.02	3.92	5.96
Rump (Z\$)		2.60	3.38	5.14
Sirloin (Z\$)		2.06	2.68	4.07
Prime rib (Z\$)		1.66	1.90	3.03
<b>5. <u>Milk:</u></b>				
600ml fresh milk (Zcents)	16	16	16	24c

The most recent price increases are reported to have had major impacts on consumption. Milk consumption is reported to have declined 22% as a result of the 50% price increase. Beef sales are reported to have declined by 40% as a result of the approximately 50% increase in retail prices. Beef stocks in CSC are reported to be large and export prospects not as favorable as hoped.

## ANNEX F

### EVALUATION TEAM SCOPE OF WORK

#### Background

The Zimbabwe Agricultural Sector Assistance Program (ZASA) is a controlled resource transfer in the form of budgetary support to the Government of Zimbabwe (GOZ). The program is targeted to meet resource gaps to expanded smallholder output in seven constraint areas - agricultural research, agricultural extension, agricultural credit, marketing and input supply, land and water use, agricultural manpower training and policy/planning - with resource allocations made by an inter-ministerial ZASA Working Group. Actual releases of funds to the GOZ are contingent upon satisfaction of general criteria that program resources: (1) are directed at relieving the identified constraints; (2) have the potential to, or will directly, improve the welfare of Zimbabwe smallholders; (3) are reasonable in terms of the types of activities to be funded; (4) will help meet an identified budgetary shortfall; and (5) will not impose an unacceptable recurrent cost burden.

As a sector program aimed at alleviating some of the budgetary constraints facing GOZ smallholder programs, success or failure is to be judged by sector performance. Consequently, regular program reviews/evaluations are essential. These reviews/evaluations, as specified in the PAAD are designed: (1) to assess the implementing agencies continuing capability and actual progress in the implementation of GOZ agricultural sector programs; and (2) to evaluate GOZ progress towards sound sector objectives and policies. Decisions on whether and how to continue the sector support program will be based on these reviews.

#### Objective

To provide a recommendation on whether or not the ZASA program should be continued and suggestions on feasible methods of improving program operations.

## Scope of Work

### 1. To examine progress of the GOZ towards:

- (a) allocation of a greater share of total GOZ resources to programs which beneficially affect low-income smallholders;
- (b) reduction and eventual elimination of consumer subsidies resulting from fixed producer and consumer prices;
- (c) a land resettlement policy which recognizes availability, competing smallholder assistance requirements and production/export goals;
- (d) application of commercial rates of interest in lending to smallholders;
- (e) an increase in research on crops and integrated crop/livestock systems directed specifically to communal farm conditions;
- (f) extension of price stimuli, now applied to major commercial crops, to some present and new small farm crops;
- (g) employment of market news and other innovative measures to extend technical information on production and marketing to smallholders, thus serving a large number of farmers with the number of available extension workers;
- (h) adequate government support of rural savings clubs as a mechanism for mobilizing rural savings for smallholder credit and for channeling loan funds at lower costs through groups to small-scale farmers;
- (i) development and adoption of measures to increase cooperation and linkages between research, extension and university education; and
- (j) reduction of the costs of essential inputs by substituting lower cost items and more efficient methods of use, thereby easing the elimination of subsidies.

### 2. To examine the capability of the GOZ to plan and implement programs in the agricultural sector.

Utilizing information gathered on the above evaluation criteria, the consultants will be expected to reach conclusions regarding the performance of the GOZ and the agricultural sector and to develop a recommendation on whether or not additional resources should be provided to the ZASA program. In reaching these conclusions and in developing a recommendation, it will be recognized that movement and progress will vary between evaluation criteria areas and between years. Similarly, variation in planning and implementation capacity between government organizations will be expected.

The consultants should also identify areas where program operations can be improved and provide feasible suggestions on how any suggested changes might be implemented.

Except as required by the above, the consultants will not be expected to review specific outputs from constraint area activities receiving ZASA resources.

#### Required Reports

The consultants will provide a review team report complete with recommendations. The report must cover each item identified in the scope of work and justify the overall conclusion. The report must be provided in final prior to departure of the consultants from Zimbabwe.

ACRONYMS USED IN THE PAPER

AFC	Agricultural Finance Corporation
AGRITEX	Agricultural Technical and Extension Services
ARDA	Agricultural and Rural Development Authority
AMA	Agricultural Marketing Authority
AID	(US)Agency for International Development
AID/Z	(US)Agency for International Development, Zimbabwe
BOP	Balance of Payments
CIP	Commodity Import Program
CIMMYT	International Maize and Wheat Research Insititute
CSC	Cold Storage Commission
CMB	Cotton Marketing Board
DMB	Dairy Marketing Board
DRSS	Department of Research and Specialist Services
EMB	Economics and Marketing Branch of the MINAG
FSR	Farming Systems Research
GOZ	Government of Zimbabwe
GMB	Grain Marketing Board
IBRD	International Bank for Reconstruction and Development
ICRISAT	International Crops Research Institute for the Semi-Tropics
IITA	International Institute of Tropical Agriculture
ILCA	International Livestock Center for Africa
IMF	International Monetary Fund
LC	Letters of Credit
MECC	Ministerial Economic Coordination Committee
MFEPD	Ministry of Finance, Economic Planning, and Development
MINAG	Ministry of Agriculture
MLRRD	Ministry of Lands, Resettlement and Rural Development
MSU	Michigan State University
MTC	Ministry of Trade and Commerce
PAAD	Program Assistance Approval Document
PACD	Project Activity Completion Date
PSU	Pennsylvania State University
REDSO/ESA	Regional Economic Development Support Office for East and Southern Africa of USAID.
SADCC	Southern Africa Development Coordination Committee
UDI	Unilateral Declaration of Independence
ZFC	Zimbabwe Finance Corporation
ZMC	Zimbabwe Fertilizer Company

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