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INVESTMENT OPPORTUNITY PROPOSAL
for the

REVOLVING FUND

Sponsor: Zambezi Agri-Production Ltd.

Amount: $2,500,000

Project Name: Zambezi Valley Agricultural Project

OFFICE OF INVESTMENT
BUREAU FOR PRIVATE ENTERPRISE
U. S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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I. EXECUTIVE SUMMARY

The sponsor of this proposal is Zambezi Agri-Production Ltd., a newly-formed company incorporated in Zambia which is wholly owned by Western Agri-Management International. A financial package totaling $26.5 million is being requested from a syndicate of multilateral and bilateral agencies. These include the IFC, OPIC, and PRE. The proposal is to fund a 3,000 hectare irrigated agriculture complex located 170 miles southeast of Lusaka, Zambia in the Chiawa region.

The Office of Investment proposes to participate in the syndicate. The $2,500,000 loan facility ex-tended from PRE's Revolving Fund would be a six year credit at approximately 10% p.a. interest. PRE involvement in this project commenced with a feasiility study it financed in 1984.

The proposed investment would support AID Mission and the Government of Zambia's policy objectives of increasing agricultural production and providing assistance to subsistence farmers. Zambia has recently instituted a number of encouraging steps designed to eliminate market subsidies and protective barriers. The country's economy remains weak due to low prices for its primary export- copper.

The project has a number of important development impacts. It will serve to demonstrate the commercial viability of private sector investment in Sub-Saharan agriculture. The investment is expected to result in net foreign exchange inflows and savings of $26,000,000 over ten years. Production of non-traditional Zambian crops (i.e. dry beans and groundnuts) would expand significantly and annual wheat output would be almost doubled.

Other project benefits include market extension services for regional farmers such as crop storage and sale of production inputs. The project will maintain an active research center to develop new seed strains for a variety of crops. The region's infrastructure will be improved by road construction, land clearing, and bringing in electricity. Excess water capacity from the irrigation system will be available for local area growers.

The project risks include transportation of crops to market, uncertainty of future demand, and weakness in foreign exchange cash flows. Issues that need to be resolved include the finalization of equity and debt financial plans including the nature and extent of local equity participation, and loan disbursement and repayment schedules.

Financial highlights show gross production revenues stabilizing at $14.1MM annually once the project is operating at full capacity, year 3 of production (5th project year). At this level, fixed operating expenses reach $1.5MM and variable operating costs run $5.6MM. Debt repayment (principal and interest)

averages $2.6MM/year with the proposed financing structure yielding a healthy average pre-tax profit of approximately $3.2MM /year. The project's cumulative cash flow is projected to turn positive in the fourth year of operations and remains positive thereafter.

II. PROJECT DESCRIPTION

1. General

A) Concept

The project will be an integrated agricultural operation. Four principal crops will be grown: cotton and groundnuts (peanuts) in the summer season, wheat and dry edible beans in the winter. All except wheat will be sold outside the country. The farm complex includes processing and storage facilities.

Western Agri Management International International is the project's sponsor and will be both a minority shareholder and contract manager of the farm. The company has worked extensively with center pivot irrigation projects both in the U.S. and overseas and has a proven track record in this field.

Western Ag formed a new Zambian Company, Zambezi Agri-Production Ltd., which will function as the project operating company. The company will receive equity subscriptions from Western Ag, local Zambian investors, and the institutional investors and will in turn contract with Western Agri-Management International to manage the project. Western Ag will invest $1.0-1.5MM in the project and will assign a small portion of their shares (approximately 10%) to Dick Katongo, a local attorney who has been instrumental in developing the project.

The Government of Zambia, the AID Mission, and the US Embassy have all expressed strong support for the project. Zambian President Kaunda granted a 99 year lease on 20,000 hectares of prime farmland and agreed to several major financial concessions.

B) Summary of Loan Terms and Conditions

Borrower:	Zambezi Agri-Production Ltd.
Amount:	Up to $2,500,000
Purpose:	To finance capital expenditures and/or working capital including equipment and machinery purchases, infrastructure development, and land clearing
Interest Rate:	10% per annum, in arrears, paid semi-annually from the date of drawdown.
Term:	6 years (from date of disbursement)
Grace Period:	3 years on principal from commitment date (loan signing) (2 1/2 years from drawdown date).
Disbursement:	Single disbursement during the 4th quarter of FY 1986 or 1st quarter of FY 1987, but not later than 6 months from loan signing.
Repayment:	6 equal semiannual installments, the first one due 3 1/2 years after commitment date.
Facility Fee:	1% flat fee on the total amount of the loan, payable upon signing of the Loan Agreement
Commitment Fee:	1/2% per annum on any unutilized portion of the Loan, during the 6 months after date of signing of Loan Agreement to date of disbursement.
Security:	Collateral will be taken against borrower's equipment and machinery
Covenants:	- General covenants on any material changes in financial condition including: liquidity, leverage, dividend payout (foreign exchange component), and management bonuses - Covenants restricting management changes or alteration of the management contract without prior lender approval - Covenants restricting new crop production, and expansion or decrease of land under cultivation without prior lender approval - Negative pledge clause - Cross default clause

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C) Timetable

Total project cost is estimated at $26.5MM. It will have three distinct pre-operational phases: 1) Preparation for trial period planting, 2) trial period planting and infrastructure development (buildings construction, land clearing), and 3) farm machinery and equipment purchases, irrigation system installation, and full 3000 hectare planting.

The cost of clearing and preparing two sprinkler-irrigated fields during the first phase will be approximately $500,000. This will cover the purchase and installation of a diesel pump, 20kw generator, and hand-coupled irrigation pipes attached to a pivot. The estimated completion time is 90 days.

In the second phase three months later, trial field planting will start. Concurrently, various infrastructure requirements will be undertaken such as bringing in electric power, land grading and preparation, building roads and compound facilities. Approximate cost will be $10.8 million.

One year or two trial growing seasons later, the third stage will start. Farm machinery and other equipment will be purchased, a pumping station and reservoirs built, the full irrigation system installed, and processing and storage facilities constructed. Cost of this stage is estimated at $8.5 million. Full scale production is expected to start at this point, or 15 months after first disbursement of funds.

The balance of $6.7 million will be used as follows: $2.2 million for Working Capital needs, $1.5 million as a contingency fund for cost overuns, $1.7 million as an inflation fund for increases in equipment prices, and $1.3 million to fund the initial operating deficit.

2. Project Considerations

A) Relationship to host-country priorities

General :

President Kenneth Kaunda has been in power since independence in 1964 and is also head of the country's only party, the United National Independence Party (UNIP). He has wide support among his countrymen and is well-respected by other black African leaders. His presence has given the country a measure of stability and continuity.

Zambia is landlocked and this is considered a major deterrent to expansion of its international trade. Until recently, the country was a solid economic performer among Sub-Saharan African nations.

However, it relied heavily on copper as the major source of foreign exchange earnings. As the world market demand for the commodity faltered and prices dropped, the country's trade balance deteriorated and it was forced to borrow to meet existing debt obligations. Diversification of production into other sectors, especially agriculture, was crucial. Zambia's population of 6 million is increasing at an annual rate of 3% and further stretching the country's resources.

Economy:

The Zambian economy has been in a prolonged state of contraction since 1975. Relying on a single primary commodity for the bulk of its export earnings, with an industrial sector heavily dependent on imported inputs, Zambia was vulnerable to the combination of deteriorating export prices, increasing costs for imported goods and raw materials, and regional unrest that ocurred over the past decade.

In 1983, Zambia initiated a program of economic reforms to diversify the economy and to reduce dependence on foreign exchange. The program included adopting a flexible foreign exchange system that resulted in an effective kwacha devaluation of 60%. In 1985, the Government introduced a foreign exchange auction, which has regularized foreign exchange transactions and has significantly increased local business and foreign lender confidence. Government has satisfied all IMF pre-conditions for a new IMF facility which is expected to be opened in 1st quarter of 1986.

The reforms are only slowly taking effect. GDP declined 2% in 1984: the third straight yearly decline. GDP in currently 12% below 1981 levels. Only the agricultural sector showed a 10% increase in production, evidence that the Government's policy of redirecting extension services to subsistence farmers and eliminating most price supports is paying off. The IBRD expects marginal GDP growth of 2-2.5% over the next decade. Agriculture will be the strongest sector with average real growth rates of 4% per annum.

The Consumer Price Index increased from 9.7% in 1979 to an estimated 20% in 1984. This reflected the elimination of a variety of price supports and subsidies. Despite this, the Government has succeeded in keeping inflation relatively under control.

The lack of trade with which to earn foreign exchange has severely restricted the purchase of needed raw materials and manufactured items. Several bad crop years, adverse weather conditions, and increasing domestic demand for food have resulted in ever higher levels of food imports.

The government has emphasized agricultural production both to reduce levels of imported food and to provide a new source of

exports and thus hard currency revenues. To this end, it has provided assistance with improved tax legislation, allowing repatriation of funds earned by agribusiness projects, and better agricultural extension services.

The government's 1984 Annual Plan stressed agricultural and rural sector development objectives in support of policies formulated in the Third National Development Plan. These include:

- Promoting self-reliance and self-sufficiency in staple foods, both nationally and regionally where feasible, and to provide raw materials for agroindustries

- Stimulating and increasing farm production for exports

- Increasing the contribution of the rural sector to GNP and promoting the diversification of the rural economy

- Improving rural standards of living and nutritional status and creating a self-reliant and progressive rural economy

- Creating new employment and income opportunities in rural areas to counteract rural-urban migration, and improving infrastructural services related to increased productivity in this sector

To encourage private sector agricultural investment, the government has taken the following steps:

- reduced income tax rates
- allowed accelerated depreciation on farm equipment
- declared a 5 year tax holiday on dividends from farm profits
- allowed a 50% repatriation rate

In July 1984, legislation entirely eliminated import tariffs on agricultural machinery. Most businesses pay a uniform 45% tax. Concessionary rates are given to businesses in rural areas (30%) and to farms (15%). Zambezi Agri-Production Ltd would qualify under the Industrial Development Act as a farm entity that intends to export most of its production. It will get relief from income taxes and import duties on machinery, favorable adjustment of export tariff rates, and relief from tariffs on imported raw materials.

The project won a significant and unprecedented concession from the Zambian Government when it was allowed a 100% retention rate on export revenues. The normal retention rate of 50% will be reinstated when all debt is fully paid off. The project will thus not be forced to convert scarce hard currency into kwachas.

Balance of Payments:

Zambia's Balance of Payments has improved considerably. Whereas the trade account deficit reached $645MM in 1981, it was estimated at $73MM in 1985. To keep pace with the declining value of exports, imports were reduced from $1.1 billion in 1980 to $615 million in 1984. However, debt servicing has risen from 11% of exports in 1975 to 40-50% of exports currently.

In order to cover payments falling due on existing debt, Zambia will need additional gross capital inflows of $800MM a year over the next three years. Nearly 40% of this amount is due to multilateral institutions, 20% to bilateral agencies, and 20% to private creitors. The remainder is for interest expense on the new debt and much-needed reductions in commercial payment arrears (currently $600MM).

The country's outstanding debt was estimated at $4.7 billion in 1985. In 1983 and 1984, nearly $400MM of principal and interest payments were rescheduled under succeeding Paris Club agreements and during negotiations with commercial lenders and non-OECD countries.

Zambia has proposed a financial rescue plan whereby it would receive an average of $350MM in loans and grants from multilaterals and bilaterals. Rescheduling existing debt would reduce needs by an additional $350MM-400MM. But, even under this scenario, the country would still need to make up the balance of $50MM-100MM. The country's economic recovery will neither be easy nor quick. The official exchange rate of the Kwacha is set at the weekly auction and the rate has fluctuated between 4.5 and 6.5 Kwacha for $1. Strict currency controls have been in effect since the 1970's. To finance the worsening foreign exchange deficit , the government delayed allocating hard currency to pay substantial portions of outstanding foreign supplier credits and other remittances thus creating $600MM in commercial payment arrears. Currently, all foreign exchange transactions must be carried out only through authorized exchange bureaus and banks.

B) U.S. AID CDSS Priorities

The US AID Zambia Mission CDSS for fiscal 1985 lists several priorities. The short term objective is to assist the Zambian Government achieve economic stability primarily through: a) reduction of food imports and b) increasing food production. Within this context, the longer term objective is to eliminate the pricing and marketing policies perceived as constraints to increased production.

To meet its goals, the AID Mission is assisting the Zambian Government design a strategy to increase the production and income of small subsistence farmers. An estimated 600,000 families farm 75-80% of the total cultivated land. Only some 4

million out of a total 25 million hectares suited to agriculture are being cropped continuously. Subsistence farmers account for the majority of food production.

Inefficient marketing parastatals and ineffective agriculture research and extension services still hinder the development of agricultural production. A major constraint are commodity price supports (especially for maize, the main crop) which set producer prices below import parity prices.

The Zambezi Valley project would help subsistence farmers both directly and indirectly (a detailed description of the projects smallholder development components is included in Appendix A). Extension services such as storage facilities and irrigation for smallholder fields contiguous to the farm, seed and other production inputs will be provided. The project would also develop key elements of local infrastructure, by constructing or upgrading roads and bringing in electricity. If successful, it will serve as a practical example of the viability of foreign investment in Zambian agriculture. New investment will in turn result in further infrastructure development.

The project offers important opportunities for increasing the production and income in a rural area, and would reinforce the region's self-sufficiency. Zambezi Agri-production has received strong support from President Kaunda for these reasons.

C) Revolving Fund Priorities and Criteria

Project loans from the Revolving Fund must meet established requirements. The Zambezi Agri-production proposal satisfies these criteria.

- It is consistent with AID and host-country development priorities in that it emphasizes agricultural production in a rural area. In addition to new infrastructure development, the project will provide the local community with crop inputs and outgrowers programs.

- If successful, it will have a demonstration effect on agribusiness projects in Zambia and neighboring countries. Center pivot irrigation systems offer these countries the potential of increasing yields on existing crops and bringing new farmland into production.

- The project is innovative in financing as well as scope. Capitalization will be made possible through a syndication of multilateral and bilateral agencies. In addition, companies with blocked funds in Zambia will invest their local currency as equity in the project, which will reduce the national foreign debt position. It will be commercially viable if yields are met and prices remain firm.

- Employment generation of at least 750 jobs constitutes one of the development impacts on Zambia. The company's technical research center will develop new seed strains appropriate to the climate which can later be made available to all. Certain extension services will be provided to local farmers and an example set for large scale farm management with improved technology.

- AID's share in the project capitalization will be up to $2,500,000 which represents approximately 9% of the total.

- To promote greater local involvement in the project, Western Ag is considering that the project investors turn over 1% of their equity to a stock trust held on behalf of the local community. This will also facilitate a redistribution of the projects earnings for the community where the project operates.

Smallholders will have access to the project's excess irrigation capacity (10-20%) and storage space (30%). Most importantly, the project will purchase smallholder production and thereby provide an immediate market for farmers who have traditionally waited 6 months for payment from government parastatal companies. The development of infrastructure such as road construction and bringing in electricity will benefit the community at large. Although not directed primarily at small businesses and cooperatives, the project does hold out these specific benefits.

3. Analyses

A) Environment

Soils: The soils are well-drained sandy loams and loamy sands that are suitable for the proposed crops. The soil is slightly acidic by nature with a pH ranging from 5.6-6.3; it is however, suitable to support the acacia savanna vegetation types proposed.

Only potassium is present in sufficient quantity in the soil but other nutrients will be added through fertilization. Sodium and soluble salts are in acceptable ranges, boron a little high.

The Chiawa area is part of a gently-sloping alluvial plain extending on the north side of the Zambezi from below the Kariba Dam to the entrance of the Luanga River. The land slopes an average 1% and the farm's altitude is at 380-410 meters.

Climate: Although Zambia is in the tropical zone, altitude has a mitigating effect on the weather. Rainfall averages 28" at the project site, with rain falling an average 60 days a year. The average mean temperature is 23 degrees Centigrade. Heaviest

rainfall occurs during the warmer winter season (December to May) since summers tend to be drier and cooler.

Water Resources: The farm site is on the north bank of the Zambezi River. Water quality is good to excellent for irrigation purposes and no treatment will be required. The average flows are 1950 m3/s; at peak capacity the farm will drawdown only 3 m3/s. Since this will be a drawdown of international waters, the project will be required to seek approval from neighboring countries according to international law.

Energy Resources: Two types of energy are available in Zambia, diesel and electricity. Since diesel is costly and will be used only for certain farm machinery, the latter is the preferred source of energy. A hydroelectric plant at Kafme Gorge is located 31 miles west of the project. An 88kv line runs from there through Chirundu which is 9.3 miles southwest of the farm. The project proposes to build a 380v line to the farm from Chirundu for approximately $1,000,000. Electricity will power the pumping plant, processing facilities, and farm compound.

B) Production

Cotton

Cotton is considered a warm season crop which grows in temperatures of 16-39 degrees Centigrade, with 34 degrees optimal. The project will produce medium length lint cotton with fiber length ranging from 1 to 1 and 1/16 inches. Longer-fibered cotton is higher in price but also more easily damaged by mechanized harvesting as will be the case in this project. Average crop maturity is reached 120-133 days after planting.

Several varieties originally introduced from the U.S. have been successfully tested in South Africa and found to provide high yields and good lint quality. Reports from Zimbabwe indicate that yields of 5 metric tons/hectare are possible, producing 2-2.5mt/h of lint. A further 2.5-3.0mt/h are available as cotton seed or can be processed into cottonseed oil.

Groundnuts

Groundnuts are a low-growing annual legume which constitutes a source of high quality protein and vegetable oil. Of the four major types of groundnuts, the large Virginia variety consistently brings higher prices in the European markets and is used primarily as a confectionary nut. Suppliers of this variety curently exist only in China and the U.S.

The Zambia Seed Company, Ltd. has several varieties available including Chalimbana, Makulu Red, and Natal Common. The Chalimbana variety closely resembles the Virginia nut and, in the opinion of the sponsors, meets the established criteria to be

Classified as a Virginia-type. Under irrigated conditions, Malawi reported yields in excess of 4mt/h for this variety.

Edible Beans

Three types of dry edible beans predominate in the world markets. The California Dark Red Kidney Beans will initially be the variety produced by the farm. Beans are generally adaptible to a wide variety of soils and the optimum temperature range is 18-24 degrees Centigrade. Maturity is reached approximately 140 days after planting.

Yields in excess of 3.3mt/h have been realized on Western Ag's farms in the US, and 2.5mt/h is common.

Wheat

Wheat is a cool season annual crop that matures in about 120 days, depending on the altitude it is grown at. Hard and soft spring wheat is sown during the cooler winter season to avoid disease problems associated with warmer weather conditions. New varieties of wheat are released every year from research centers such as CIMMYT in Mexico and the University of Zambia.

Wheat is moderately drought-tolerant with better harvests obtained under controlled irrigation conditions. Yields as high as 7-8mt/h have been reported in several East African countries, including Zimbabwe and Kenya. Best yields are obtained at the higher altitudes due to the longer growth period. Reports from the Zimbabwe lowveld at altitudes similar to the proposed farm site indicated that yields of 4-4.5mt/h can be expected.

Summary of Crop Yields (metric tons per hectare) — Table 1

	Year 1	Year 2	Year 3	Year 4-10
Cotton	1.00	1.25	1.50	1.50
Groundnuts	2.50	3.00	4.00	4.00
Wheat	3.00	3.75	4.50	4.50
Dry Beans	2.00	2.25	2.50	2.50

Summary of Crop Prices — Table 2

Cotton	$1,430/mt	(1,000 hectare planting)
Groundnuts	850/mt	(2,000 hectare planting)
Wheat	400/mt	(1,500 hectare planting)
Dry Beans	650/mt	(1,500 hectare planting)

C) Marketing

All crops except wheat will be sold outside Zambia, mainly in European markets. The preferred method of transport is by rail or alternatively by truck. Three major transportation routes have been identified: to Beira in Mozambique, to Dar-es Salaam in Tanzania, and to Johannesburg or Durban in South Africa.

Wheat will be sold to government-owned purchasing bodies at a price level established by the government. Currently, the Zambian Government is paying $800/metric ton for wheat, although the actual world market price is less than half. The World Bank has projected a parity price of $275/mt. If the Government changes its policy, wheat prices can nevertheless drop over 60% before the project's cash flow is endangered.

Cotton can be sold to local agents of European buyers such as Baumann and Hinde. Alternatively, the company can take the risk of transportation and sell directly to buyers in Europe FOB at one of the four points mentioned previously. The shipping cost farm-gate to port has been estimated at $150/metric ton. Depending on its risk preferences, the company can take advantage of the differential between quoted Lusaka prices and world market prices less estimated shipping costs.

Groundnuts will be sold in Europe. Traditionally, African groundnuts do not fetch the premium price paid for US groundnuts, as African prodction has faced both quality and health problems. However, groundnuts from East Africa, particularly Malawi and Zimbabwe, have established a premium market niche in Europe, as their large size and high quality make them especially attractive for the confectionary trade.

Dry beans can be sold directly to the regional markets of South Africa and Zaire or to brokers in Europe. Kahn and Kahn in Johannesburg have already been approached and have expressed their interest. In some cases, selling to neighboring Botswana or Swaziland may be a viable option, although their deteriorating balance of payments position makes any long term contract in foreign exchange an unlikely event.

Zambia Production compared to Project Output

Table 3

Actual Zambian Output		Project Output
Wheat (1981)	11,500mt	6,000-9,000mt
Cotton (1982)	12,800mt	1,000-1,500mt
Groundnuts (1982)	704mt	5,000-8,000mt
Dry Beans	n.a.	3,000-3,750mt

D) Financial

Profitability:
The financial statements include conservative yield assumptions to counterbalance potential negative variations in prices. High levels of debt service require those crops to be grown that have the highest value in a given year. The financial success of the project will depend to a large extent on correct market assessment by management and by quick sales turnover.

Projections are based on four major crops. Groundnut sales represent approximately half of all production revenues while cotton accounts for the smallest share. If prices are firm and yield expectations are met, production revenues should stabilize at $14.1MM/year after year 3 of production (5th project year).

Total project operating and financing costs amount to $70.6 MM, with fixed and financing costs accounting for 33% of this total. Variable operating expenses are projected to stablize at a $5.6 MM annual level in year 5. The major components of the latter include material costs ($2.7 MM/yr.- mostly fertilizer and transportation).

The combined foreign exchange and kwacha Income Statement shows the operation becoming profitable by year 4, or the third full year of production. The first planting is slated to begin in year 2, season 2 without any corresponding revenues, thus producing a net loss for the year of $5.6MM. In the following fiscal year, a loss of $174M is recorded, and then profits rapidly increase from $1.2MM in year 4 to the $4MM range in years 5 and 6. The average Return on Equity is 21% over the ten year projection period.

Cash Flow:
The combined foreign exchange and kwacha cash flow statement shows significant capital expenditures occuring in years 1 and 2 (approximately 85%). Project capital costs total $25.4 MM for equipment, installations and infrastructure. Production results begin in year 3. Part of the capitalization is therefore used to finance a working capital need. To protect the project's ability to purchase inputs when needed, sponsors have expressed their intention of seeking a $3MM foreign exchange line of credit.

The cropping schedule results in revenues being consistently higher in season 1 than in season 2. Production revenues will peak at $14.1MM according to anticipated yields and prices.. The projected combined foreign exchange and kwacha cumulative cash flow becomes positive by year 4. Since, the project's wheat revenues are earned in kwacha and are therefore not available to cover the project's foreign exchange operating expenses, it is necessary to study the project's foreign exchange cash flow. The cumulative foreign exchange cash flow becomes positive in year 5, and experiences sharp fluctuations due to differences

between the time revenues and costs are realized as well as to debt servicing requirements - all in hard currency.

III. FINANCIAL STRUCTURE

1. Capital Structure

The proposed capital structure envisions total capitalization of $26.5 MM, of which $16.0MM is term debt and $10.5MM equity. The resulting leverage is approximately 55%-45%. A breakdown of the potential participant's contribution is delineated in Table 4. Western Ag and the international institutions have agreed to the principle that all equity will be drawn down before debt is drawn on.

Illustrative Capital Structure — Table 4

Debt			Equity		
IFC	-	$6.0MM	IFC	-	$3.0MM
OPIC	-	4.0MM	OPIC	-	2.0MM
PRE	-	2.5MM	Western	-	1.5MM
Export Credits	-	2.0MM	Sterling	-	1.0MM*
			EMICO	-	1.0MM*
			"Pipeline"	-	2.5MM*
			DBZ	-	.4MM*
		$14.5MM	ZSIC	-	.6MM*
					$12.0MM

2. PRE Facility

The PRE facility will be shorter in tenor than that of other lenders to reflect management's objectives of keeping Revolving Fund loans to 5 or 6 year maturities. The PRE debt will not be subordinated to other term debt, however. The facility is proposed as a 6 year, $2.5MM loan carrying a fixed rate of approximately 10% p.a. interest payable in arrears. The loan will include a 3 year grace on principal only. Repayment of principal shall be in six equal, semi-annual installments. PRE will share the machinery and equipment taken as collateral with other lenders.

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* Kwacha equity investment.

PRE Debt Run-off Schedule Table 5

(in $)

	Y1	Y2	Y3	Y4	Y5	Y6
Disbursement	1.5MM	-	-	-	-	-
Repayment						
- Interest	97.5M	195M	195M	162.5M	97.5M	32.5M
- Principal	-	-	-	500M	500M	500M
Balance O/S	1.5MM	1.5MM	1.5MM	1MM	500M	0

3. Co-Lender Facilities

IFC and OPIC have expressed their intention to lend for nine years, at differing rates but with a similar 3 year grace on principal. During years 4 through 6, co-lenders shall share pro-rata in the total principal payments paid each 6 months less the A.I.D. payment.

IV. DEVELOPMENT ASPECTS

1. Technology Transfer: Only one center pivot system is currently operating in Zambia. If this project is successful, it could have a significant demonstration effect on future agricultural projects in Zambia and neighboring African countries.

2. Smallholder Assistance: The project will provide inputs such as fertilizer and seeds in a smallholder farming area not currently covered by any national farming program. In addition, the project will supervise outgrower programs and will function as a regional market for smallholder crops, thereby providing immediate payment for farmers. Finally, the project's irrigation system has been designed with a 10-20% excess water capacity. Row or border irrigation arrangements can be instituted for small landholders in between or adjacent to irrigated circle lots. Western Ag has done this with success in Paraguay.

3. Employment: The project will train and employ 25 skilled workers and 750 laborers. The latter will be increased during harvests. After the first few years of operation, sponsors believe that local nationals or expatriates from nearby countries can be trained to manage the farm.

4. Stock Trust: A trust will be established specifically to benefit the local community. Up to 1% of the company's stock will be distributed to local agricultural cooperatives or other local institutions for their members. Dividends will be distributed directly to local smallholders or may be used to finance projects for the community at large.

5. Infrastructure Development: The project will require construction or significant upgrading of roads, bringing in electric power, and the construction of a machine shop and warehouses. Storage capacity will be sufficient for one-and-a-half storage seasons and up to 30% of this capacity can be made available to local growers. The irrigation system was designed to allow a 10-20% excess water capacity which can also be made available to smallholders.

6. Foreign Exchange Revenues: The project will benefit Zambia's Balance of Payments position in terms of net foreign exchange earnings of $ 5MM over ten years in addition to $20.25MM in savings on wheat purchases which would have otherwise occured. The net saving to Zambia will thus be a cumulative $26MM over ten years.

7. Wheat Production: All wheat produced by the project will be sold to local mills for local consumption. The incremental amount produced will almost double Zambia's current production.

8. Crop Research: The Project will actively research and test new varieties of seed strains. These will not be limited to the four principal crops. Results of such research will be made available to the Government's agricultural research centers. If approved, seed varieties will be sold directly to local farmers.

V. RISKS AND MITIGANTS

1. Marketing:

Transportation to market is a major risk for the project. Three major transportation routes have been identified but all entail a certain amount of risk. The railroad to Dar-es Salaam has been plagued by pilferage and long delays are common at the port. The railroad to Beira passes through territory with guerilla activity. The route to South Africa is longer and more expensive than the other two. A fourth line, the Benguela Railroad through Zaire to Angola used to be the region's best until guerilla activity forced its closure.

Transportation by truck is an alternative for bringing products to market, although logistically more complicated.

The risks associated with transportation can be mitigated somewhat if crops are sold at farm-gate or to brokers in neighboring countries who can take possession of the goods in Zambia. If Project management decides to increase margins by taking on transportation risks, insurance arragements should be explored. Identifying trucking firms, their carrying capacity, and costs could further help make this option to rail shipment a viable one from lenders' point of view.

2. Demand:

Commodity markets are volatile. Given the lead time needed for planning, purchasing inputs, planting, and harvesting crops, prices may change substantially from the time of planting to time of sale. Management must correctly anticipate which crops will be financially desirable from a market point of view. Overproduction world-wide in a particular commodity may shrink prices below the cost of production.

Management believes that the center pivot irrigation system is extremely flexible and that it can therefore adjust its cropping decisions without major infrastructural changes and thus partially mitigate the risk of commodity price downswings. During a period of 3-4 months when crops are in the ground, such risk can not be mitigated. Growing two or more crops at any time will lessen the probability of a total crop price collapse. An ongoing and extensive research program for a variety of crops outside of the four major ones proposed will be needed. Furthermore, once the operation has been in business and its products become known to buyers, the company can successfully mitigate some production risk by entering into direct supply arrangements with European or other buyers. This will be possible if quality standards are met.

3. Foreign Exchange Cash Flows:

Agreements are being worked out with the project sponsor, institutional investors (principally the IFC) and the Zambian Government to provide for the appropriate assurances on the availability of foreign exchange for the project. Projections indicate a high degree of self-sufficiency in providing for the company's foreign currency needs - debt services, materials and equipment purchases, and dividends. In fact, an agreement in principle for 100% export earnings retention by the company has been obtained. However, acceptable alternatives which may be more politically durable are being explored and will be finalized prior to loan commitment.

Local operating costs which can be paid in kwacha, such as wages and electicity charges, represent only a small portion of the kwacha revenues to be realized. Wheat revenues will rise from $1.8MM in year 3, to $2.7MM in years 5-10. This represents 20% of total production income. Kwacha costs will average $795M during this time leaving a net of $1.9MM which must be used in Zambia. Since these funds cannot be externalized, they will be used to fund smallholder developoment programs.

VI. ISSUES

1. Local Equity Investment

There are a number of U.S. companies such as Mining Equipment Company that have blocked funds in Zambia. These "pipeline" companies have been waiting for up to six years in some cases to get funds out of Zambia and have been prevented by the foreign exchange shortages in the country. Western Ag has approached a number of these companies to invite them to participate in the project's kwacha equity financing. The proposed capitalization assumes that $5.5MM of equity will be in kwacha, or nearly 21% of the total.

PRE believes and other lenders concur that these pipeline companies do not constitute true local investors. Lenders have expressed their concern to Western and have requested that local Zambian investors be found. One of Western's partners in the project, Dick Katongo, a lawyer with Jacques and Partners in Lusaka, has a small share through Dicka Investments Ltd. Several local entrepreneurs also own shares in Dicka Investments.

As a result of lender concerns, the project sponsor resumed efforts to identify more sources of local equity. A major hindrance is the fact that most Zambian investors require projects with higher and faster returns on investment. They are primarily interested in foreign exchange investments to enable them to receive hard currency earnings. Kwacha investments would force them to receive kwacha dividends with the resulting difficulties of conversion.

In recent developments, two parastatals, the DGZ (the Zambian Development Bank) and the ZSIC (Zambian State Insurance Company), have expressed an interest in putting up $400,000 in kwacha equity, and have indicated their willingness to consider selling their interest to private investors once the project achieves profitability.

2. Disbursement Schedule

Other lenders are proposing a 9 year maturity for their loans and have expressed reservation with PRE's proposed 6 year term. PRE's management objectives require Revolving Fund loans to be kept medium term of not more than 5-6 years while reflows start as soon as possible to ensure the fund's revolving aspect. The proposed terms of the PRE loan include a three year grace on principal payments only during that time. Furthermore, actual disbursement to the project of loan funds may not take place before 12-18 months after signing of the loan agreement. It will therefore be PRE's strategy to request that its loan be disbursed

earlier than loans of other lenders who book their loans at time of disbursement and not at signing of the loan agreement. PRE will seek to have its loan disbursed during the fiscal period ending 9/30/86, so that first interest payment would be due during the early part of calendar year 1987.

VII. CONCLUSIONS AND RECOMMENDATIONS

It is the purpose of this IOP to point out the issues/risks of the proposed investment. The major risk is marketing. This risk will be managed by the U.S. sponsors, a highly-qualified agri-mangement group with international experience.

In the Office of Investment's opinion, the project has significant development impact, especially in demonstrating the viability of private sector agricultural investment in Sub-Saharan Africa. PRE has dealt with Western Ag before and has confidence in the company's management abilities. The strong support given by the Zambian Government, the AID Mission, and the US Embassy warrant serious consideration of this proposed investment.