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RECONNAISSANCE SURVEY REPORT
AGRIBUSINESS INVESTMENT OPPORTUNITIES
IN BELIZE

PREPARED BY
THE
AMERICAN SOCIETY OF AGRICULTURAL CONSULTANTS INTERNATIONAL
UNDER A GRANT FROM
THE
U.S. TRADE AND DEVELOPMENT PROGRAM

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I. INTRODUCTION

Working under a grant agreement with the U.S. Trade and Development Program (TDP), the American Society of Agricultural Consultants International (ASACI) organized a Reconnaissance Survey Team to begin the first phase of work to identify potential agribusiness projects in Belize for prospective U.S. investors. Members of the team were Dr. Glenn E. Taylor, team chairman, Oakdale, California; Roger A. Killingsworth, Jonesville, Louisiana; and Michael W. Hurley, McLean, Virginia.

To prepare the current report, the three man team first studied pertinent data available from U.S. sources, and then traveled to Belize for three weeks in June/July of 1987 to conduct interviews, make on-site inspections, and gather first hand information. Taking the stance of a potential U.S. investor, team members assessed the investment climate, analyzed the agricultural sector, and made a preliminary evaluation and selection of prospective project opportunities.

In the second phase of grant activities, a follow-up team of ASACI consultants will review the Reconnaissance Survey Report, and then work for three weeks in Belize in October/November of 1987 to further evaluate and then select those prospective ventures of highest potential interest to U.S. investors. Project investment profiles on these preferred ventures will then be drafted by the team to form the report Agribusiness Investment Opportunities in Belize, Volume II: Project Profile Report. The investment profiles, upon approval by TDP, will then be made available through the marketing network of ASAC members to selected U.S. potential investors. Other prospective investors and interested parties may obtain the current Reconnaissance Survey Report at a nominal cost, and subsequently the Project Profile Report, by contacting ASAC headquarters at the following address:

ASAC International
8301 Greensboro Drive, Suite 260
McLean, Virginia 22102
telephone: (703) 893-8303
telex: 704419 ASACI MCLN UD

COUNTRY BACKGROUND SUMMARY
BELIZE

Geography

Location: On the eastern or Caribbean coast of Central America, bordered on the north by Mexico and on the west and south by Guatemala.

Size: 168 miles long by 67 miles wide, roughly the size of New Hampshire.

Climate: Sub-tropical, with heat and humidity tempered by trade winds. Rainy and dry seasons, rains from 60-160 inches/year. Hurricanes in 1961 and 1978.

People

Population: 166,200--most sparsely populated country in Central America. 50% in cities, 50% in rural areas.

Language: English is official language, Spanish also widely spoken. Functional literacy rate is over 80%.

Ethnic Groups: Multiracial with half being of African descent (Creoles) and one-fifth of Indian/European descent.

Work Force: 51,000 with 30% agriculture, 18% services, 11% trade, 10% manufacturing. Immigration of farm workers from El Salvador.

History and Government

History: Former British Colony, British Honduras.

Government: Parliamentary democracy, with Constitution and independence established September 21, 1981. Member of British Commonwealth. Prime minister and cabinet, bicameral legislature, law based on British legal system. Political party system since 1950. Peaceful transition of power in 1984 with second set of democratic elections (at least every 5 years).

Economy

GDP: US\$163.5 million (1985). Agriculture-20%, trade-17%, manufacturing-15%, government-11%, fishing-4%.

Trade: Major exports are sugar, bananas, citrus concentrate, fish products, garments, timber, honey. Imports--food 20%. 1985 exports US\$73 million, imports \$112 million, deficit \$39 million. Major trading partners-U.S., U.K., CARICOM with preferential market access.

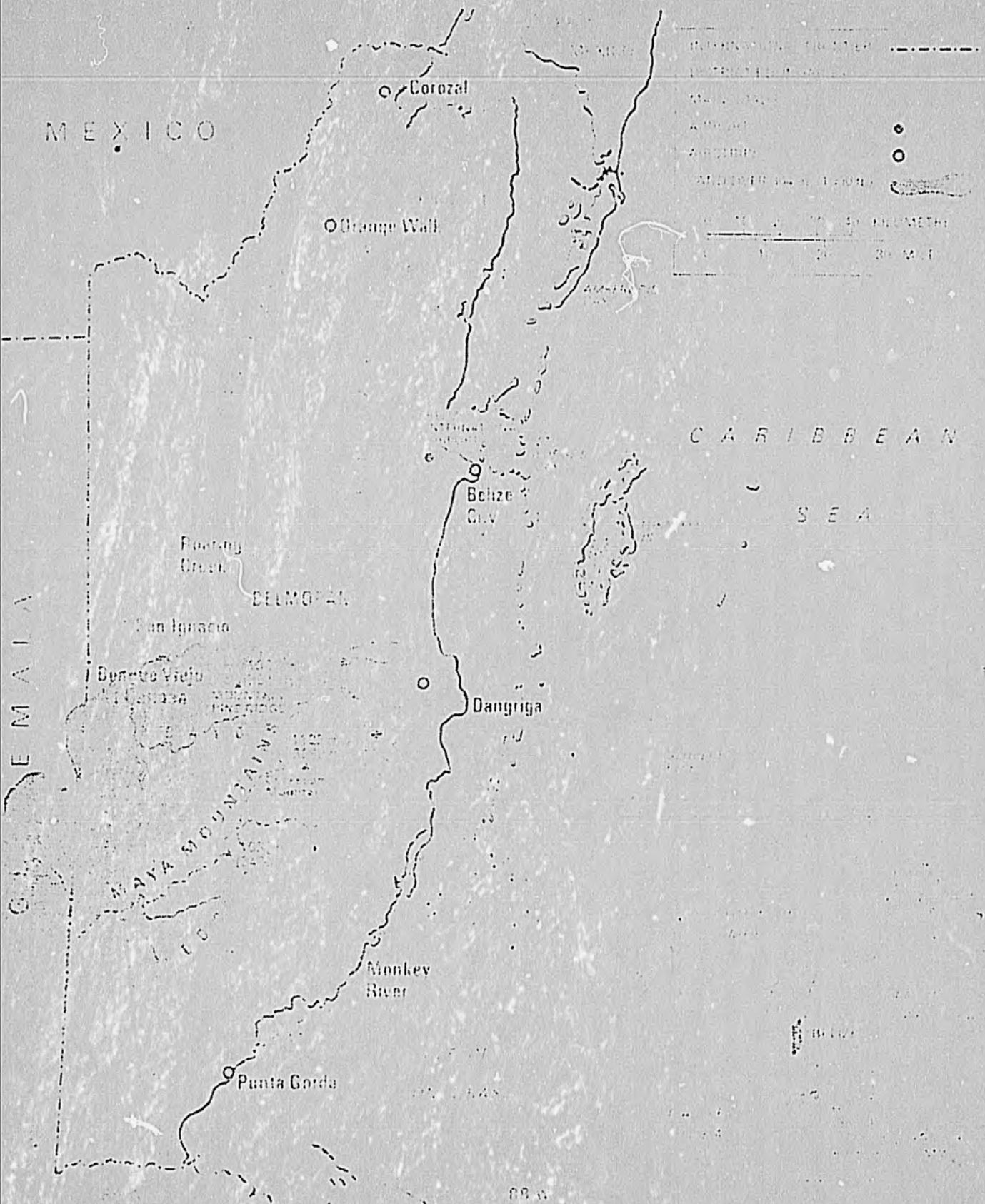
Exchange Rate: Belize dollar tied to the US dollar at a fixed rate of BZ\$2=US\$1.

Tourism:

Barrier reef-excellent diving/fishing, Mayan ruins.

Growing industry, real potential, hotel industry needed.

Belize



INVESTMENT CLIMATE SUMMARY- BELIZE

Country Stability

Political: Long tradition of respect for constitutional government. A Commonwealth nation and British Protectorate. British Army a deterrent. Peaceful atmosphere undisturbed by unrest in Central America motivated recent large U.S. agribusiness investments.

Economic: Versatile, diversified and still growing in agriculture and tourism. Considerable foreign development assistance from U.K., U.S. and Canada.

Social: Harmonious racial mix. Civil unrest unknown. Relatively high standard of living with employment prospects improving. Immigration needs monitoring and control.

Gov't Policy on Private Foreign Investment

Policy: Supports a strong unfettered private sector.

Foreign Investments: Welcome, especially those using Belizean raw materials, products for export market, projects upgrading skills of Belizeans. Focus on agriculture and tourism.

Foreign Ownership: 100% permitted, joint ventures encouraged.

Financing

Development Loans: Available from Development Finance Corporation and Caribbean Development Bank. 12 months processing, high collateral requirements, timing perhaps unacceptable, 12 1/2% interest.

Commercial Loans: Available from four banks, interest 16%. Belize Bank starting to work more with developing agribusinesses, has full-time agronomist.

Local Equity Capital: Not a likely source for new agribusinesses.

Establishing a Business

Registration: First requirement for a foreign investor is to establish/register a Belizean company, acceptable red tape.

Investment Incentives

Repatriation of investment and profits: Guaranteed, 100% of profits up to amount of original investment.

Tax Holiday: Up to 15 years, with exemption from import duties and raw materials where final product is exported.

Foreign Market Incentives

Tariff free access: To U.S., U.K. and CARICOM under CBI, Lome Convention and CARICOM market agreements.

Investment Insurance:

Available from OPIC for currency and political risks.

U.S. Investors' Experience

50 U.S. investors do business in Belize. Coca Cola/Hershey's have made recent substantial investments in agriculture.

SUMMARY OF AGRIBUSINESS SURVEY-BELIZE

Physical Conditions and Resources

Land: 2,000,000 acres of arable land, only 15% in use. Available from government or private owners--lease/purchase.

Climate and Water: Hot and humid, rainfall from north to south ranges 60-100 inches, dry/wet seasons. Water available for irrigation from rivers and wells.

Soils: Myriad, best along river beds, 115,000 acres prime land. Maps available. Limitations handled by crop selection.

Agricultural Production

Sugar: Main crop, 50% of exports, 80,000 Mt/year, quota to U.S. Growers beginning diversification--solo papaya, etc.

Citrus Concentrate: Oranges/grapefruit, 1.5 million boxes/year, 1.1 million gallons/year, growing industry with exports to U.S.

Bananas: Exports of 1 million/boxes year, quota with U.K. for 5 million boxes.

Cacao (cocoa): Increasingly important export crop with Hershey's farm and contract growing. 142,000 lbs in 1985.

Food Crops: Corn, rice and red kidney beans.

Livestock: Beef cattle, hogs and poultry--nearly self sufficient. Imports of some processed meats, and exports of boneless beef to CARICOM and cleared by USDA for U.S. market.

Small dairy industry--\$13 million/year imports/dairy product

Lard/fats/oils--\$13 million/year imports.

Fish Products: \$7.5 million/exports in 1985, mainly rock lobster. Young shrimp farming industry.

Honey: Growing export industry.

Forestry: Some rejuvenation of pine and secondary hardwoods

Critical Factors for a Potential Agribusiness

Land Lease/Purchase: Land leased from government averages US\$3/acre/year. Defined amount of work to be done to obtain option for purchase at cost of US\$25-200/acre.

Managers, Technical People, Field Labor: Managers and technical people need to be brought in with project. Local personnel training feasible. Low cost migrant labor.

Agricultural Production Inputs: One company has monopoly on fertilizers/ag chemicals sold at high cost. Concession needed from gov't for direct project imports. Is being done.

Disaster Factor: 1961, 1978 hurricanes, med fly clear, insects/molds/parasites of tropical climate--manageable.

Electric Energy: Expensive, US\$.205/kwh, diesel generators. Need and option available for project to supply its own electricity.

Communications: Good domestic/international phone/telex service.

Living Conditions Safe environment, suitable housing and consumer goods and primary/education available.

Cost Competition: Slightly higher production costs than some competitor countries, compensated by stable environment and tariff-free access to key foreign markets.

Market Advantage: Tariff free to U.S., U.K., and CARICOM.

Long Term Commitment: Needed for proper project development.

SUMMARY OF POTENTIAL PROJECT INVESTMENT OPPORTUNITIES
BELIZE

Selection Criteria

Interviews and Inspections: The Team spent three weeks with agribusiness owners and their operations, discussed project ideas. Criteria: Is there a ready market for the product? Can the product be efficiently produced? And can the investor make a good return on his money?

Description and Ranking of Project Opportunities

Tropical Fruits: Papaya, Melons, Mango: Ready U.S. market, CBI advantage, good shipping, attractive margins.

Citrus Concentrate: Good market through CBI to U.S. Land available, good profits according to current producers.

Winter Vegetables: U.S. market in "dead of winter", good shipping. Cucumbers, etc. exported now. Good profits.

Shrimp Farming: Good natural conditions, some farms starting to produce, U.S. market, weekly reefer shipping.

Cacao (cocoa) Production: Hershey's guarantees purchase, supplies seeds/technical assistance, low cost land available

Banana Production: 10 year market contract with Fyffes of U.K., premium price, quota of 5 million/boxes/year, current production, 1 million boxes, 6,000 acres of available land

Dairy and Dairy Processing: US\$13 million imports/year, Land/climate is available/suitable. Processing of UHT milk.

Ornamental Plants: U.S. market through CBI. Year round growing climate, one U.S. company producing for export.

Hydroelectric Generating Plants: High cost electricity, profitable project could supply hydro power at one half the cost. Would supply project needs and sell surplus to public utility.

Pineapple Production: Growing U.S. demand, CBI market advantage, good product currently grown, land available.

Rice Farming: Supply domestic market/CARICOM market as done before. 10,000 acre irrigated farm is for sale.

Logging and Timber: Rejuvenations offers opportunity.

Oil Seed Production/Processing: For import substitution.

Deep Water Ocean Fishing: Untapped potential.

Other Aquaculture Projects: Crawfish farming is done.

Cashew Nut Production: Cashews grown but not commercially.

Herbs and Spices: Grown for export, room for growth.

Sheep Production: Project for U.S. and CARICOM markets.

Beef Cattle Feeding: Using local raw materials, for processing for domestic and CARICOM and US markets.

Cogeneration of Electricity: Using available bagasse to supply a lower cost electricity and save foreign exchange.

III. COUNTRY BACKGROUND

A. Geography

Belize lies on the eastern or Caribbean coast of Central America, bordered on the north and part of the west by Mexico, and on the south and the remainder of the west by Guatemala.

At its longest and widest, the country measures 168 miles by 67 miles and encompasses 8,866 square miles, roughly the size of New Hampshire. The inner coastal waters are shallow, protected by a spectacular barrier reef which is dotted with small islands (or cayes). The low coastal plain rises gradually inland toward the low peaks of the Maya Mountains (highest point being Victoria Peak at 3,680 ft.)

The climate is sub-tropical, with heat and humidity tempered by the trade winds. Temperatures range from 50 degrees to 96 degrees Fahrenheit, with rainfall varying from 60 inches in the north to 160 inches in the south. The rainy season usually extends from May to February. Belize lies within the hurricane zone and has experienced destructive tropical storms along its coast in 1961 and 1978. A rainfall map is included with other country maps in Appendix A.

A relatively new capital Belmopan (population 4,000) was built 50 miles inland because of occasional heavy hurricane damage done to Belize City. With 40,000 inhabitants, Belize City is the country's most populous urban area and its principal port.

B. People

Belize is the most sparsely populated territory in Central America with an estimated population in 1985 of 166,200. The population is roughly divided between 50% rural and 50% urban.

English is the official language and is spoken by virtually the entire population. An English dialect (a pigeon English), Creole, is the street language. Spanish is also widely spoken, especially in the northern and western areas bordering Mexico and Guatemala. The rate of functional literacy is over 80%.

Most Belizeans are of multiracial descent with half being of African or partly African descent (Creoles). About one-fifth of the population is of mixed local Indian and European descent (Mestizos), and another one-fifth of Carib or Mayan Indian ethnic origin.

Approximately half the people are Roman Catholic with the Anglican Church and other Protestant groups accounting for the other half. A Mennonite colony of some 3,000 forms a significant farming community in the western part of the country.

Emigration of workers to the United States has offset a natural growth rate of 3%. In recent years, settlers and refugees from neighboring states have migrated to Belize, especially as a result of the civil unrest in El Salvador.

Of the nation's work force of 51,000, employment by sector is represented in the following percentages:

<u>Sector</u>	<u>Percentage</u>
Agriculture	30.0
Services	18.2
Trade	11.2
Manufacturing	10.3
Transportation	5.0
Finance	1.4

C. History and Government

Numerous ruins still evidence the ancient Mayan civilization which spread into Belize between 1500 B.C. and 300 A.D. and flourished until around 1000 A.D.

The first recorded European settlements were begun by shipwrecked English seamen in 1638. The early settlers governed themselves under a system of primitive democracy by Public Meeting. Great Britain intermittently recognized Spanish sovereignty over the territory in several 18th century treaties.

Belize was formally termed the "Colony of British Honduras" in 1840, and became a crown colony in 1862. Representative government was expanded over the years through constitutional changes until full internal self government under a ministerial system was granted in January of 1964.

The official name of the territory was changed from British Honduras to Belize in June of 1979. And on September 21, 1981, Belize became an independent nation, a member of the British Commonwealth.

The independent sovereign nation of Belize has been recognized by all the nations of the world, except Guatemala which yet maintains its territorial claim over Belize. Negotiations still continue to settle the dispute. Meanwhile, a British military garrison remains in Belize to assure Belizean security.

The Government of Belize is operated on the principles of parliamentary democracy based on the Westminster System. A Prime Minister and Cabinet make up the executive branch while a 28 member elected House of Representatives and an 8 member appointed Senate form a bicameral legislature. Her Majesty the Queen is the titular head of state, and is represented in Belize by a Governor General who must be a Belizean.

The Governor General appoints as Prime Minister the person commanding the support of the majority party in the House of Representatives. The Cabinet consists of the Prime Minister and other ministers appointed by the Governor General on the advice of the Prime Minister. Elections are held at least once every five years.

The law of Belize is based on the English legal system, together with locally enacted legislation.

For administrative purposes, Belize is divided into six districts: Belize, Corozal, Orange Walk, Cayo, Stann Creek and Toledo. The districts are represented in the Political Map in Appendix A.

The political party system in Belize began in 1950 with the formation of the People's United Party (PUP) and the National Party. The PUP under the leadership of Mr. George Price dominated the political scene for more than thirty years until the 1984 elections when the United Democratic Party (UDP) won a resounding victory, taking 21 of the 28 seats in the House of Representatives. Political control passed from the hands of one party to another peaceably without so much as a fist fight.

The present Government of Belize with Mr. Manuel Esquivel as Prime Minister has established a positive and progressive attitude in addressing the nation's problems of economic growth and development.

D. Economy

Forestry, mainly the export of logwood, mahogany and chicle, was the only significant economic activity of Belize until well into the 20th century when the supply of timber began to diminish. Belize's economy grew steadily through the early and mid 1970s, led by sugar, bananas, citrus and garment exports. But growth faltered somewhat in the early 1980s. The economy is based on the agricultural sector which accounts for 65% of foreign earnings and employs 30% of the work force (51,000 in 1986). The relative importance of the leading sectors of the economy based on the 1985 GNP of US\$163.5 million (current prices) is shown in the following percentages:

<u>Sector</u>	<u>Percentage</u>
Agriculture	20%
Trade, Restaurants	17
Manufacturing	15
Public Administration	11
Transport	10
Community & Other Services	9
Real Estate, Dwelling Etc.	5
Construction	5
Fishing	4
Finance and Insurance	4
Others (Forestry, Electricity, Water and Mining)	3
Banking Charges	<u>-3</u>
	100%

Sugar represents over half the exports along with citrus concentrate, bananas, fruit, timber, shellfish and clothing as indicated below (in millions of U.S. dollars):

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Sugar	34.20	32.60	24.95
Molasses	.95	1.15	.85
Bananas	2.40	3.05	3.30
Citrus Concentrate	6.85	9.75	12.10
Fish Products	6.95	6.70	7.50
Timber	1.85	1.05	.60
Honey	.20	.20	.20

Source: Central Statistical Office of the Ministry of
Economic Development

Belize is highly dependent on foreign trade. Despite an abundance of arable land, Belize still imports a large share of basic foodstuffs,

accounting for 20% of total imports in 1984. Except for 1974, when sugar earnings tripled, Belize has consistently run a substantial trade deficit, reaching US\$39 million in 1985. The deficit is financed primarily by foreign aid, foreign investments and substantial remittances from Belizeans working in the United States. Total merchandise imports in 1985 totalled US\$112 million while exports were only US\$73 million. These and other economic indicators for years 1983, 1984 and 1985 are given in Appendix B.

The United States is Belize's most important trading partner, purchasing 58% of Belizean exports in 1984 and providing 44% of Belizean imports. Other important trading partners are the United Kingdom, the CARICOM nations, Canada and Mexico.

In 1986 with the depreciation in real terms of the Belize dollar (Bz\$) along with the U.S. dollar (it is pegged at two to one against the U.S. dollar), the country improved its international competitiveness and showed a continued improvement in the overall balance of payments.

Belize successfully met performance criteria for an IMF standby agreement which ran through the first half of 1986. The economic program supported by the arrangement achieved the objectives of strengthening the net international reserve position of the Central Bank, eliminating external payment arrears, and lowering the reliance of the public sector on external commercial borrowing.

Foreign economic assistance has also played a key role in creating a more positive climate for economic growth. Development assistance from the United States, the United Kingdom, Canada and multilateral lending agencies is focused on strengthening and diversifying the country's agricultural sector as well as improving its infrastructure.

The development strategy for rapid economic growth of the current Government of Belize is based on sustained agricultural and agro-industrial development, and on a strong tourist industry.

E. Tourism

This English speaking country with its pro-American people has splendid natural resources to attract the tourist and investment in the tourist industry.

The multi-colored blue and green waters along the coral barrier reef contain cayes with beautiful beaches and palm trees as beautiful as any area in the American tropics.

The southern rain forest and low population density combine to form a tropical paradise for sightseers. The Mountain Pine Ridge has a splendor rivaling any in Central America.

Opportunity for adventure is everywhere. From the limestone core of Belize has been formed a myriad of caves to explore. Float trips down crystal clear tropical rivers, horseback and jeep trips through the pine ridge foothills are popular.

The coral reefs and the deep water ocean area combine to form some of the best underwater skin and scuba diving in the world. Tarpon, tenpounders, kingfish, snapper and bonefish tempt the rod and reel sportsmen. In the deep waters, dolphin, sailfish, marlin and wahoo are there for the catching. The Government of Belize knows what an important resource it has in sportfishing, and has enacted laws controlling prime fishing areas.

Scattered across Belize are thousands of Mayan mounds and ruins which have yet to be explored, offering opportunity to archeological groups interested in Central America's past.

Tourism could well be an important factor in Belize's future economic growth. At present, the lack of an adequate and upscale hotel industry is slowing the buildup of tourist trade. Constructing a large modern hotel would encourage an additional influx of sportsmen, sightseers and businessmen into the country.

IV. INVESTMENT CLIMATE

A. Country Stability

Politically, Belize has a long tradition of democracy dating back to the Public Meeting of the first English settlers, and of respect for constitutional law.

A former British colony, Belize made a peaceful transition to independence in 1981, following almost two decades of internal self government. In peaceful country wide elections in 1984, the United Democratic Party took control of the government from the People's United Party which had dominated Belizean politics for thirty years.

As a Commonwealth nation, Belize is a Protectorate of the United Kingdom (U.K.). The permanent deployment of the British Army is a deterrent to any aggression of neighboring nations. Britain trains troops in jungle warfare in Belize. This is an arrangement agreed to and supported by Belize, the U.K. and the U.S., which has proven beneficial to the interests of all three parties.

The United States has established a Military Liaison Office in Belize.

The unrest in other Central American nations has not disturbed the atmosphere of peaceful stability in Belize and is not likely to do so. Continued political stability were key factors in recent investments made in Belize by foreign companies including U.S. corporate investors such as Hershey's of Pennsylvania and the Coca Cola Company.

Economically, the country has shown itself versatile, diversifying from logging to sugar, and now with depressed world sugar prices into citrus, bananas, cocoa, shellfish, winter fruits and vegetables, honey and clothing. Its tourist industry is growing rapidly, including a four-fold recent increase in visitors who are seriously considering Belize as a country in which to initiate overseas operations.

The Government's strategy to promote rapid economic growth through strengthening its agricultural and tourism industries will receive continued impetus from foreign developmental assistance and from the preferential market access it has to the U.S., U.K. and CARICOM nations.

Socially, the several ethnic groups that comprise the population intermix peaceably. Civil unrest is unknown in Belize.

The standard of living is relatively high for Central America with per capita income increasing from year to year, reaching \$984/year in 1985. Schooling is good country-wide, with a functional literacy rate of more than 80%. Health care is available nationwide and benefits for sickness are provided through the social security system.

With increased foreign and local investment in the agricultural and tourist industries, the prospects of increased employment seem good.

The recent influx of immigrants from El Salvador and other neighboring countries is providing the needed migrant labor necessary for increased farming activity. However, some problems with marijuana growing and trafficking and isolated incidents of violent crime arising from the recent immigrants need increased control and prompt solution on the part of the Belizean Government to maintain the country's peaceful atmosphere.

B. Government Policy on Private Foreign Investment

The Belizean government is committed to supporting a strong unfettered private sector which it believes is the bedrock of the country's economy. It will limit its role so as not to stifle the initiative of private enterprise.

Foreign investments are welcome and especially so if they in utilize indigenous raw material resources, produce for the export market, produce import substitutes and contribute to the employment and upgrading of skills of Belizean nationals.

While 100% foreign ownership of an enterprise is permitted, joint ventures are encouraged in which local entrepreneurs participate. Licenses for ownership of land by non-nationals of Belize must be obtained from government which encourages productive development of land and discourages speculation.

Development strategy for rapid economic growth is based on sustained agricultural and agro-industrial growth, and on a strong tourist industry.

The only areas not normally open to participation by foreign private investors are domestic merchandising, fishing inside the barrier reef, sugar cane growing, internal transportation, and restaurant and bars.

C. Financing

Local agribusiness financing at a competitive rate is primarily available through the Development Finance Corporation and the Caribbean Development Bank, with the following conditions:

1. The borrower is required to provide a minimum of 30% of the total investment.
2. The minimum value of the security pledged against the loan applied for must be 130% of the value of the loan.
3. Payment of 1% of the value of the loan must be made as a commitment fee.
4. Payment must be made of all necessary appraisal or valuation fees as well as inspection, legal, registration fees and insurance charges.
5. The loan rate from the Caribbean Development Bank is 12 1/2%. Local commercial banks charge 16%.

The time for processing a loan can take from six to 12 months from the Caribbean Development Bank. A small loan from the Development Finance Corporation will take a minimum of three months.

It is suggested that other sources of finance should be utilized. The time and the uncertainty of a loan from the above sources may be intolerable to an agribusiness venture needing timely financing.

Four commercial banks operate in Belize--Atlantic Bank, The Bank of Nova Scotia, Barclay's Bank, and The Belize Bank of Commerce and Industry. They lend about 20% of portfolio to established agricultural enterprises, but only a small portion to development ventures. The banks utilized less than half of the \$5 million agricultural development funds recently made available by USAID through the Central Bank in a program no longer effective.

The newly established Belize Bank of Commerce and Industry which has made some significant agricultural development loans now has a full time agronomist to evaluate and monitor agricultural lending. Bank officers are hopeful that USAID will again make agribusiness development funds available to local ventures, perhaps through an agricultural loan facility attached to the commercial bank. Development loan interest has been 12%.

Private capital is probably not available from local investors in Belize. None of the existing agribusinesses visited by the Reconnaissance Team (except for Caribe Farm Industries Ltd.) indicated an interest in a joint venture. The consensus seems to be that you are welcome but you are "on your own."

D. Procedures for Establishing a Business

The first order of business for a foreign investor is to properly establish and register a Belizean company. The process allows the foreign investor to repatriate 100% of the profits up to the original level of capital investment.

Formalities and "red tape" are not insurmountable. However, a presentation of a clear benefit to the economy of Belize will serve to expedite matters and to obtain concessions that the Belizean government will grant that will help to improve the economic outlook for a new business.

The Belize Export and Investment Promotion Unit (BEIPU) provides a wide range of services to assist the potential investor in registering and in applying for relevant concessions. The addresses and telephone/telex numbers of BEIPU and other investor information sources are given in Appendix D.

E. Investment Incentives

The government of Belize in its commitment to ensure a healthy investment climate offers a number of fiscal and other incentives in order to attract private investment into the production and service sectors of the economy. These include:

- guaranteed repatriation of investment as well as profits and returns from capital gains,
- preferential market access to the European market under the Lome Convention, to the U.S. under the Caribbean Basin Initiative (CBI) and to the Caribbean under CARICOM.
- exemption from import duties on machinery and equipment, as well as on raw materials where the final product is re-exported, and on spare parts for specialized machinery,
- tax holiday up to 15 years,
- exemption from taxes on dividends paid from profits during the tax holiday up to an amount equivalent to the shareholder's investment,
- carry forward of net losses incurred during the tax holiday is permitted upon expiration of the holiday,
- rental of factory shells in an industrial estate on concessionary terms.

The length and scope of a development concession is determined by the extent of local value added, the profitability of an enterprise, the foreign exchange earnings or savings, and employment opportunities created.

Special incentives are offered for the location of industries in the less developed rural areas of the country and for export oriented projects or projects utilizing technology not previously introduced into Belize.

In order to qualify for a development concession, a company must be locally incorporated in Belize. Application for a concession containing detailed information on the proposed activities of the company should be submitted to the Office of Economic Development. The entire process from the submission of a properly documented application to final approval is scheduled to take no more than 60 days, though in practice procedures take somewhat longer.

A well documented, clear cut presentation of facts that demonstrate the economic benefits to Belize that will be provided by the presence of a proposed agribusiness will do much to expedite negotiations for concessions. Particularly, if it is clear that the operation might accept a location in another Caribbean location.

F. Foreign Market Incentives

The Caribbean Basin Initiative (CBI) is a U.S. government program designed to stimulate export development in Caribbean nations by providing duty-free access to the U.S. market for most Caribbean products. Exceptions include textiles, petroleum products, footwear, and certain rubber, plastic, and leather products. Significant U.S. private investments have been made in Belize in citrus and shrimp farms under the program. Possible opportunities for growth and investment for export to the U.S. include citrus, beef, winter vegetables and fruits, aquaculture, timber and forest products, light manufacturing, and assembly operations.

Belize has privileged access to European Economic Community (EEC) markets through the Lome Convention. The convention comprises a set of provisions in trade and other measures of economic cooperation between the members of the EEC and the former colonies known as the African, Caribbean and Pacific States.

Belize is a member of the Caribbean Common Market which is comprised by the English speaking nations. As such, Belizean products have duty-free access to markets in other CARICOM countries provided that at least 40 percent of the value added is from Belize.

G. Investment Insurance

The Overseas Private Investment Corporation (OPIC), which has an agreement with the Government of Belize to permit the operation of its insurance and finance programs, is a self-sustaining U.S. Government agency which provides a variety of services to encourage private-sector investment in the growing markets of the developing world, including:

- Direct Investment Fund for loans up to \$4 million
- Loan Guarantees up to \$50 million on loans by U.S. financial institutions to U.S. sponsored projects.
- Insurance of currency convertibility affecting investments and earnings, and for losses due to expropriation and damage caused by political violence.
- Letter of Credit Insurance, as many countries require it of exporters and contractors doing business with them.

As of July 31, 1986, OPIC had seven insurance contracts with five U.S. investors with eight preliminary applications pending. Insured investments include agricultural and agro-chemical projects.

H. Taxes

Belize has an agreement with the United States to prevent double taxation of income earned in Belize.

Corporations are taxed at a fixed rate of 45%. However, many businesses may qualify for tax holidays under the Development Incentives Ordinance.

Estate duties are assessed only on estates valued at more than U.S. \$2,500. Duties range from 3% to a maximum of 25% of the estate value.

A land tax is levied by the central government on all land outside town limits. The tax differs according to the type of land and proximity of public roads. The classification of rates and type of land is as follows:

<u>Classification</u>	<u>Rate per Acre</u> (U.S. Dollars)
Savannah: Wet dry scrub swamp	.06
Savannah: Pasture land subject to inundation	.07
Pine Ridge 1st class	.10
Pine Ridge 2nd class	.08
Pine Ridge 3rd class	.08
Low Forest	.09
Medium Forest	.13
High Forest	.15

An additional tax of U.S. \$0.13 per acre is levied on land within 1 mile of a public road and U.S. \$0.15 per acre on land within 2 miles of any road. A tax is also levied on large rural landholdings which are idle.

A property transfer tax is assessed when property is sold, according to the schedule below:

	<u>Property Value</u> (U.S. Dollars)	<u>Tax Rate</u>
National	\$1,000-7,500	3%
	7,500 and over	5%
Non-national	\$1,000-7,500	6%
	7,500 and over	8%

The individual income taxes are high, as can be seen from the following schedule:

<u>Taxable Income</u> (U.S. Dollars)	<u>Tax</u>
less than \$500	5%
\$ 7,000	\$ 1,345 + 35% on next \$2,500
9,500	2,220 + 40% on next 5,000
14,500	4,220 + 45% on next 15,500
30,000	11,195 + 50% on remainder

I. Experience of Past and Present U.S. Investors

There are currently some fifty U.S. companies and investors doing business in Belize in the areas of tourism, agriculture and manufacturing. (For names, types of business and telephone numbers, see the listing in Appendix C.)

Experience has shown that where adequate financing was furnished by the investor along with management and technology, the Belizean environment has been found to be cooperative and encouraging. Growing pains and adaptation to the conditions have limited early profits. However, the way stands clear for producing good results.

The Coca-Cola Foods Division of Houston, Texas and the Government of Belize jointly announced in October 1985 Coca-Cola's purchase of 210,000 acres in north central Belize. Coca-Cola plans to establish 25,000 acres of orange groves there over the next five to seven years. Coca-Cola officials noted frost-free conditions and political stability among the factors that attracted their investment dollars to Belize.

Fresh fruits and vegetables also offer opportunities for investment and export. One American-financed packing house began shipping cucumbers and other produce to the United States in early 1985. 1986 has seen additional shipments of gourmet tomatoes. In early 1987, harvesting will start from an American investment in papayas.

Establishing its presence in Belize in 1979, the Hershey Foods Corporation in Pennsylvania now offers a guaranteed market for all cacao

produced in Belize. A local subsidiary, Hummingbird Hershey, operates a large cacao farm and research station south of Belmopan where irrigation, fertilization, and jungle-clearing techniques are scientifically tested. In cooperation with the Government of Belize, the Peace Corps, and USAID, Hershey is applying these research results to increase and improve cacao cultivation in Belize.

J. Summary and Conclusions

Belize is not unique among third world countries in its economic condition. However, Belize is unique among third world nations in that it is a free democracy, with a stable and efficient government that is making great strides to overcome present deficiencies. The British influence left the country a heritage of respect for the law and for education. Belize is friendly toward the United States and its Government is willing to make any reasonable adjustment or concession to U.S. investors that will promote the growth of the economy.

In the words of Emory King, a local author, Belize is a country located just south of paradise and just north of frustration.

A country that is free and democratic. A Government that is engrained with Westminster parliamentary procedure. A political climate that is peaceful and stable. A loving people who believe in government by law and not by man. A climate that is not harsh but gentle. A country that abounds in natural beauty and in fish and game. A country not overrun by lawyers...Therein lies the paradise.

A country that has few roads, scarcely affordable electric power, a relatively high cost of living for Americans, a brain drain incentive for its youth, and only 166,200 inhabitants....Therein lies the frustration.

V. AGRIBUSINESS SURVEY

A. Physical Conditions and Resources for Agriculture

1. Land. Located on the northern end of Central America, Belize joins the Yucatan Peninsula of Mexico on the Eastern Coast of the Caribbean. It is bordered by Mexico on the north and Guatemala to the west and south. Belize's land area covers 8,866 square miles or roughly the size of New Hampshire. It is 168 miles long and averages 67 miles wide.

Although about 2,000,000 acres or about 38% of total land area are considered potentially suitable for agricultural use, only about 10 to 15% is in use in any one year. About one-half of this is under pasture and the remainder in a variety of permanent and annual crops.

Roughly 70% of the land is hilly and rolling, with most of the rest made up of savannah, marshy areas and lagoons.

Elevations range from sea level to 3,680 feet, with two-thirds of the country below 500 feet. The Mountain Pine Ridge and Maya Mountains are located in the southwestern portion of the country. From sea level to 3,000 feet are found the areas considered suitable for farming.

Large amounts of land is available from government. As a rule Government does not sell its land outright, but provides arrangements whereby the lessee must first develop the land within a certain period with an option to purchase afterwards.

2. Climate, Rainfall, and Ground Water. The climate is sub-tropical with average mean temperatures ranging from 72 - 94 degrees Fahrenheit. Rainfall in the northern third of the country averages 60 inches per year, in the central third 80 inches, and in the south 100 plus inches. (See Appendix A for rainfall map) June through December is considered the rainy season with January to May being relatively dry.

The country has a number of rivers which flow across the country from west to east and provide potential for irrigation. In most areas ground water is available from 20 to 120 feet down, depending on the area and on the volume of water required.

3. Soils. Belize has a myriad of soils with the most beneficial ones lying along the beds of the larger rivers. A Provisional Soil Map, Potential Land Use Map and Natural Vegetation Map were obtained by the Reconnaissance Team from the Lands and Surveys Department, Ministry of Natural Resources in Belize City. These maps which are readily available from the Lands Department are recommended by the Team to a potential investor looking for an appropriate agricultural site. It has been estimated that 115,000 acres of choice farm land is available in portions of the Orange Walk and Cayo Districts and in all of the Corozal District where sugar cane is produced.

Soils in the other districts have some limitations. These limitations can and have been overcome by the selection of adaptable crops and by providing irrigation, drainage and a high degree of management. Some of the swampy areas in the Eastern portions of Belize, Orange Walk and Corozal Districts can be made useable with adequate drainage.

Substantial areas along the coast are suitable for aquaculture.

Thin soils and steep rocky terrain in the Stann Creek District require adapted crops and in limited areas supplemental irrigation with high inputs of fertilizers. The areas of Toledo and southeastern Stann Creek require adapted crops--bananas, cocoa, papaya, and aquaculture, which all require intensive management.

4. Irrigation Potential. Flood irrigation is available in most areas from wells and/or rivers. Ten thousand acres of irrigation was established for rice at the Big Falls Ranch. Drip irrigation for vegetables and fruits is possible in all districts as adequate ground water is available nearly everywhere. Overhead irrigation is feasible on some acreages of field crops where fields are large enough for efficiency.

B. Agricultural Production

The agricultural sector is dominated by the sugar industry which is concentrated in the Corozal and Orange Walk Districts to the north. Annual production of sugar is around 80,000 MT from 50,000 acres of sugar cane. Production comes from members of the Cane Farmers Association and Tate and Lyle of the U.K. own and operate the mill. As the industry is currently suffering from depressed prices on the world market and a shrinking quota into the U.S., efforts are being made to encourage the diversification of sugar lands. The U.S. Agency for International Development is working with the cane growers on a program initiated in 1986 to conduct trial plantings of such alternate crops as solo papaya, winter fruits and vegetables, and oil seeds.

The citrus industry, centered in the Stann Creek District, is the second major contributor to export earnings. The bulk of orange and grapefruit production from the Citrus Growers Association is processed by two companies (one owned by Nestle) for concentrate.

Bananas, grown in the Stann Creek and Toledo Districts, are the third export crop, are a growth industry with new plantings financed by the Commonwealth Development Corporation (U.K.) and the Caribbean Development Bank.

Cacao (cocoa) is becoming increasingly important as an export crop due to Hershey's Food Corporation which has established a commercial plantation in the Cayo District along the Hummingbird Highway.

The main food crops are corn, rice and red kidney beans. They are grown mainly for the domestic market, but may have export potential especially to the CARICOM nations which have received considerable amounts of rice from Belize in the past.

Beef cattle, hogs and poultry are raised throughout the country. Poultry and egg production, sufficient to meet domestic demand, comes mainly from the Mennonite farming community in western Belize. The

national beef cattle herd is estimated at 50,000 head and hogs at 20,000. Two or three meat processors are now producing sausages, bacon and ham for the local market, competing for the first time with imported processed products.

Belize Meat Co. exports frozen boxed and boneless beef to the CARICOM nations and has gained USDA approval for exports to the U.S. market.

A dairy plant--MACAL Milk Co-op--has been built in the Cayo District in the town of San Ignacio with USAID funding and has a daily processing capacity of 400 gallons/per day. Started up in July of 1986, it currently processes only 200 gallons per day.

Beekeeping is a well established activity with cooperatives operating all over the country. Honey production is increasing to supply lucrative markets in Europe with high quality product.

Fish products, principally rock lobster, accounted for US\$7.5 million dollars in exports to the United States in 1985. One of the four fishing cooperatives, Northern Fisheries Co-op, has a marketing arrangement with Red Lobster to market its catch. Shrimp and scale fish also form part of exports. To protect overfishing of lobster, the Government has established a closed season from March through June.

There has been some rejuvenation of the forestry industry with the reforestation and natural regeneration of the pine forests and the faster-growing tropical hardwood species.

The volume of agricultural production of the major commodities is shown below:

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Sugar Cane ('000 MT)	1,132	1,022	962
Oranges ('000 90 lb boxes)	750	1,124	1,043

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Grapefruit ('000 80 lb boxes)	178	316	476
Bananas ('000 boxes)	531	555	542
Paddy Rice (millions of lbs)	13.5	12.5	12.1
Corn (millions of lbs)	38.8	34.7	29.0
Red Kidney Beans (millions, lbs)	4.0	2.8	2.3
Beef (millions of lbs)	2.0	2.0	2.3
Honey ('000 lbs)	543	570	694

Source: Ministry of Economic Development

Production volumes from 1973 through 1985 for these commodities and others are given in Appendix E.

The main agro-industries process sugar, citrus, bananas and fish. Smaller enterprises include the production of flour and animal feed, the brewing of beer, an agricultural fertilizer plant, wood products, a meat packing plant and meat processing plants. Statistics on the major agro-industries are listed below:

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Sugar ('000 MT)	114.3	101.5	102.0
Molasses ('000 MT)	36.6	32.6	28.1
Beer ('000 gallons)	850	630	600
Wheat Flour ('000 lbs)	10,992	2,528	--
Fertilizer (MT)	3,080	4,641	3,670
Rum (gallons)	4,850	4,300	4,500
Citrus Concentrate ('000 gals)	965	1,056	1,030

Lucrative export markets have served as an incentive for the planting and export of new cash crops in Belize. The new crops and the more traditional ones grown for export are listed below alongside the crops currently produced only for the domestic market:

	<u>Export Market</u>	<u>Domestic Market</u>
Field Crops:	rice, sugar cane	corn, red kidney beans
Vegetables/Fruits:	tomatoes, sweet peppers hot peppers, squash, sweet corn, cucumbers, okra, snap beans, eggplant, melons, pineapple	root crops
Tree Crops:	oranges/grapefruit (for concentrate), papaya, bananas, cocoa	cashews
Livestock:	beef cattle	dairy cows, swine, poultry
Fishing:	lobster, crab, ocean fish, marine shrimp (fished and farmed)	
Forestry:	mahogany, secondary hardwoods, pine	

Of the food products imported into the country in considerable amounts, those that could be produced locally are feedstuffs for animals, processed meats, dairy products and cheese, fats/oils/lard, and peanuts.

Approximately US\$13 million of animal and vegetable fats are imported annually. Yearly imports of condensed milk and cheeses as well as milk powder also amount to some US\$13 million.

The principal export markets for Belizean agricultural products are, in order of importance: the United States, the United Kingdom, the CARICOM nations, and the European Community.

C. Critical Factors for a Potential Agribusiness

1. Land Lease and Purchase. Land and buildings may be purchased or leased from registered owners. Belize has no regulations constraining or barring acquisitions or takeovers. Land may be leased from the government at costs of about \$3.00/acre/year through a license agreement. To protect the license, the lease holder must accomplish a defined amount of development work on the land within a prescribed time period. Once the prescribed development functions are accomplished, the land may be purchased. The purchase price of government land under this arrangement would vary from \$25-\$200 per acre depending on the location and how accessible it is. In certain cases, the lease will provide that the lease holder may purchase the land at a previously agreed upon price after the prescribed time for development has been completed.

2. Good Managers, Technical People and Field Labor. Field labor is plentiful. The services of migratory workers from Honduras, El Salvador, and Guatemala may be obtained through an authorization of work permits by the Belizean Government. Seventy percent of the effective agricultural labor in the country comes from this source.

Managers and technical people must be recruited from outside Belize. Though Belize has a good two year curriculum at an agricultural school at Central Farms near the capital of Belmopan, the training received there is directed to the small farmer of Belize and the extension work necessary to improve the knowledge and technical skills of the smaller farmer.

Two junior colleges--one university preparatory and one technical--graduate able candidates that could prove to be a source of technical and administrative trainees for agribusiness.

Of the work force of approximately 51,000 workers, 30% are employed in agriculture. A large percentage are milpa (shifting cultivation) farmers who produce small plots of corn, rice and red beans, which comprise a large portion of the national diet. Because of the high literacy rate, the Belize work force has potential for training in

agribusiness. The Belize Institute of Management offers various training programs in an attempt to meet the needs of a growing private sector.

Wages for field labor are US\$7.50/day, for mechanics and drivers from US\$0.87-1.62/hour.

3. Agricultural Production Inputs. It is important to know if an agribusiness can get needed inputs such as seed, fertilizer, and farm chemicals on an economical basis.

Prosser Fertilizer Agrotec Co. Ltd. has a monopoly on fertilizers and agricultural chemicals which sell at high prices. However, concessions are granted by the Government, which allow the new investor to purchase these supplies from the world market and bring them into the country duty free. This concession can apply to seeds and other supplies.

A new agribusiness would be advised to negotiate with the Ministry of Economic Development for this concession as a part of the arrangements to initiate a new venture.

4. Transportation. Eleven shipping companies provide international service to Belize. Shipment of fresh or frozen product from Belize City, Dangriga and Big Creek appear to be routine. Tropical Shipping Company, recently established in Belize, has initiated weekly service out of these ports to West Palm Beach, Florida. Until recently, the shipping schedules were every ten days to two weeks. The advent of the need for weekly shipments of fresh tropical fruits has precipitated the weekly schedule.

There are some people who think that this service was instituted a bit prematurely as they believe that for at least two years the minimum requirements for numbers of containers cannot be met. Mr. John Nasley, sales representative of Tropical Shipping, indicated that the company's management understood the "growing pains" of the shipping business with Belize, and was prepared to keep the service available in anticipation of the substantial growth that is evident.

All electric power is provided by diesel powered generators, operated by the Belize Electricity Board. Cost of kilowatt hour is US\$0.205. All fuel is imported. The power distribution system is all but limited to the larger towns. The continuity of electric service has been estimated at 70-80%.

Private industry has proposed that Government offer an industrial rate. No decision has yet been taken.

One small privately owned hydroelectric plant supplies the needs of the village of Blue Creek in northwestern Belize. The economic advantage of small "low head" hydroelectric plants to agriculture and agro-industry deserves further evaluation.

7. Communications. An excellent telephone system which connects Belize City, Belmopan, Orange Walk, Corozal, Dangriga and other communities is in place. Other more remote areas have no phone service. Telex and telephone to the rest of the world is in place and fully functional, with direct dialing to many international locations. Satellite service brings in two U.S. television stations from New York and Chicago. Cable television is also available.

8. Living Conditions. Modern suitable housing is available in Belize City. A three bedroom home would rent in the area of \$1,000 per month. Belize is considered a safe place to live with few incidents of violent crime. However, marijuana growing and trafficking in rural areas might eventually present a problem if not controlled.

Most consumer goods and services are available in Belize City. Health care is available but all specialized medical attention would have to be obtained in the States. Private primary and secondary schools offer a good basic education.

9. Cost Competition. The production yields in some crops are less than in countries in direct competition with Belize. Energy transportation, labor and port handling costs are higher in Belize than in competitor nations, especially in the Caribbean Basin.

However, the factor of a safe country and stable democracy allows production to go on without interruption, and can be considered to compensate relatively higher costs.

10. Market Advantage. Another important factor that assists Belize in compensating for its relatively high cost of agricultural production and processing is its preferential access to the markets of the U.S., U.K. and English speaking nations of the Caribbean through the respective agreements of the CBI, Lome Convention and CARICOM. Citrus concentrate, bananas and beef are three important Belizean export products that enter the three markets competitively, because of the special tariff relief afforded Belize.

11. Long term commitment. There is a frustration that has been expressed in regard to American agricultural investors. It was stated that Americans are only seeking a guaranteed risk free investment climate where investments can be made with the expectation of a quick profit and a total liquidation within a two to three year period. Needless to say, this climate doesn't exist, not even in Iowa!

This observation was probably the result of the furtive efforts of a few "fast buck artists" who attempted to develop a project without adequate financing, management, or technology and without the necessary in depth feasibility analysis. This fast "in and out" philosophy can only result in disaster to the entrepreneur, his co-investors, and to the nation of Belize.

American investors are advised to be prepared for the long term commitment. In making this commitment they are exposing themselves to normal business risks. In addition, they are exposing themselves to extraordinary risks and/or costs that are consistent with the necessity of training and indoctrinating labor and middle management with new methods and new technology. Further, methods and technology must be adapted to the new environment. Because of these extraordinary circumstances, new investors are justly entitled to, and should in fact pursue vigorously, any and all possible concessions that can be granted by the Belizean Government so as to facilitate ultimate economic success.

VI. POTENTIAL PROJECT INVESTMENT OPPORTUNITIES

A. Selection Criteria

Over the course of three weeks, the Reconnaissance Team met with leaders of agriculture, commerce and industry as well as with many owners and operators of agribusinesses. Team members heard and discussed many project proposals. In making a preliminary evaluation of the investment potential of these projects, the team asked three basic questions: Is there a ready market for the product? Can the product be efficiently produced? And can an investor make a good return on his money? Other factors considered were the time required for payback and the potential for the utilization of U.S. goods and services in project development.

Based on these criteria, the team rated and ranked twenty potential agribusiness opportunities. They are listed and described below beginning with those offering the most potential:

B. Description and Ranking of Project Opportunities

1. Tropical Fruits: Papaya, Melons, Mango. While costs of establishment and maintenance during the development years are high, this enterprise offers the most attractive investment opportunity. Tropical fruits are more adaptable to the climate than any of the other available options. The infusion of U.S. management and technology into a fruit farming venture in Belize would bring the desired production levels.

The U.S. markets are becoming more and more oriented to tropical fruits with demand increasing. Therefore, this enterprise fills the requirements of a ready export demand and the ability to produce efficiently.

The advantage of the Caribbean Basin Initiative (CBI) protection from import tariff gives Belize a pricing advantage over much of the competition.

As a companion project to fresh tropical fruits, a processing plant to produce juice concentrate could be vital. From time to time, the fresh tropical fruit market may become saturated during the harvest season. As a protection against unfavorable price fluctuations, production would be processed and stored for marketing during off season periods.

Both fresh fruits and concentrates may be shipped via Tropical Shipping Company to West Palm Beach, Florida on a weekly basis. Some exportation to the CARICOM nations and the U.K. is probable, particularly the concentrates. Shipping costs to West Palm Beach are US 6.5 cents/lb with a minimum of 30,000 lbs for a 40' container and 20,000 lbs for a 20' container.

The most promising venture seems to be the production of 'solo' papaya. This papaya is relatively new to Belize with small commercial growers just coming into full production. Marketing is being handled by Caribe Farm Industries Ltd., shipping out one container per week. Groves that are to come on stream in the next year may easily double current production.

2. Citrus Production for Concentrate. Annual citrus production has increased from 1,124,000 boxes of oranges and 316,000 boxes of grapefruit in 1983-84 to an expected 2,400,000 boxes in 1986-87. All exports are in the form of concentrates.

Mr. Gerry Sharp of Citrus Company of Belize indicates a processing capacity of 2,000,000 boxes per year. He further indicated that his Board of Directors was in the process of reviewing further processing expansion. Another processor, Belize Foods Company, a Nestle subsidiary, handles roughly the same volume.

As citrus is an export crop (70% of which is shipped to the United States) and can be grown on considerable new acreages available in the Stann Creek, Cayo, and Belize Districts, the potential for investment continues to be excellent.

Combined production estimates for 1983-84 indicate yields of 300 boxes per acre. Current per acre estimates for the 1986-87 year indicate 450 boxes of oranges and 500 boxes of grapefruit. As groves mature and the input of management and technology increases, the yields per acre are expected to improve to 500 boxes of oranges and 600 boxes of grapefruit.

1984 estimates indicate a cost of US\$650 to \$1,000 for establishing an acre of citrus.

Annual costs for maintenance to the new grove are said to be an average of US\$240 per year from year 2 through year 5.

Total establishment and maintenance costs from years 1 through 5 are estimated to be from US\$1,600 to \$2,000.

The Citrus Growers Cooperative estimated a cost per box to produce oranges at US\$2.50 each and grapefruit at US\$2.25 each.

The market price per box of oranges for 1986-87 is estimated to be US\$4.00.

There is, at this time, plenty of available land to clear and plant citrus. Government land will cost from \$50 per acre and up depending on the location and its accessibility.

3. Winter Vegetables. The "dead of winter" window in fresh vegetables in the United States provides an attractive opportunity to produce and deliver these vegetables into the fresh market merchants in McAllen, Texas and other market channels in the U.S.

Mr. Thomas Garrity of Caribe Farm Industries Ltd. has been successful in shipping produce in refrigerated trucks across Mexico into McAllen. Caribe Farms has produced tomatoes (vine ripened), cucumbers, bell peppers, okra, watermelon, honeydew melons, pickling cucumbers and hot peppers.

There is plenty of room for expansion.

Again, winter vegetables are an export crop that will encourage all possible cooperation from the Belizean Government and will enjoy the price advantage of the CBI protection from tariffs.

Please see Appendix D for the Proforma Statement prepared by Caribe Farm Industries. The team believes that costs are overstated and can be brought down substantially by the infusion of good management and advanced technology.

Caribe Farms is now actively looking for an experienced farming partner that could also bring capital to expanding production.

4. Shrimp Farming. Mayan Mariculture of Belize Limited, located near Belize City, has been foremost among the pioneers of the still young shrimp industry of Belize. The development of adapted technology appears to have transitioned the "trial and error" phase. Production is expected to reach satisfactory levels of yield in the harvest of the current crop.

U.S. technology for shrimp farming - hatchery, feeds, and production management - has been developed to a level where its correct application in commercial farming ventures does produce good profits. Suitable sites for growing ponds are readily available along the Caribbean coast.

The U.S. market continues to expand in its demand for shrimp. The marketing advantage of CBI allows the Belizean producer better than equal footing with competitors from other nations.

Operating costs and revenues for a 200 acre grow out operation offer the potential of good profits, as indicated by the numbers provided the team by Maya Mariculture:

Ladyville Shrimp Farm Number 2

First Four Months of Operating Costs: (figures are US\$)

-PL's 30m/acre x 200 acres =6,000 m x \$12.50 =	\$75,000
-Feed 683 lbs/acre x 200 acres x 2 lbs==	
273,200 lbs. at 24 cents/lb==	65,568
-Fertilizer for 200 acres at \$25/acre==	5,000
-Supervisor for 4 months=	6,000
-Labor	4,560
-Watchmen, 4 men at \$300/month x 4 months=	4,800
-Harvesting	4,000
-Packing and Freezing of 136,660 lbs at \$.45/lb=	61,400
-Boxes: 2,732 at \$0.15 apiece and 273 at \$0.65 each	700
-Pumping Costs	<u>24,000</u>
	Sub-Total \$251,028

Management: 5% of gross profit= 16,646

Total Operating Cost \$267,674

Revenues from Sales:

--one crop on 200 acres	
--136,600 lbs of tails	
at \$4.50/lb selling price==	\$614,700
--less administration of 5%	<u>30,735</u>
Total Revenues=	\$583,965
Less operating costs	<u>251,028</u>
--Gross operating profit of	\$332,937

Maya Mariculture is encouraging U.S. entrepreneurs to invest in 200 acre grow out farming operations. The company controls approximately 1,000 acres of suitable land, and would supply grow out farmers with seed stock and technical assistance. The firm expressed an interest in a joint venture to establish a packing house facility.

5. Cacao Production (cocoa). Hummingbird Hershey Ltd. of Hershey, Pennsylvania guarantees to purchase all cacao produced in Belize. The

operating format of Hershey is commendable, efficient and equitable in every way. As they control the seed stock brought into Belize, they are able to maintain purity and disease control so as to keep the quality and yields at an optimum level.

In 1985, 142,125 lbs of fermented and dried cacao beans were exported.

Cacao is widely adaptable to Belize. However, the areas of Stann Creek and Toledo are the best suited for cacao as the rainfall and hours of sunlight are optimum for this crop.

Hershey estimates in 1984 of the cost of establishing an acre of cacao amount to US\$1,500. Costs of maintenance per acre for years 2-10 average US\$415 per year. Cash flow is expected to be negative through the fifth year. However, a cacao orchard lasts from 30-40 years. Gross income production will level off at US\$625-750 per acre per year beginning the sixth year.

To a local grower, Hershey provides the seed, the technical assistance and a guaranteed market. Both small and large scale growers in Belize have recently planted cacao under this system.

6. Banana Production. Suitable land in the Toledo and southern Stann Creek Districts, good climate, and a dependable export market in the U.K. constitute an attractive opportunity for investment. Government land is available at US\$25 to \$50 per acre. There are 2,600 acres in production at present. It is estimated that there are 8,000 acres available and suitable for banana production.

Production of bananas per acre has increased in recent years from 250 boxes per acre to 600 boxes.

Fyffes Company of the U.K. has a 10 year contract with Belize to purchase up to five million boxes of bananas per year. Current production amounts to about one million boxes.

The industry is in an expansion phase at this time. Current producers indicate that there are good margins in banana production, especially considering the above-international market price paid to Belizean producers under the existing special marketing arrangement.

7. Dairy and Dairy Processing. Belize imports in excess of US\$13 million of dairy products annually. For domestic use and potential export to CARICOM nations, Belize has ready markets for the production of modern dairies.

The team feels that the Belizean Government would support a preferred market and later a protected market for domestically produced dairy products. Smaller farmers are now engaged in dairying as a diversification. The regular milk check enhances their positive cash flow on a more regular basis. Indications are that the production from suitable dairy type or dual purpose animals would be economical.

As a companion to a dairy farm, a small processing and canning plant for condensed milk or UHT milk would do more to offset the problems of shelf life for fresh milk and provide a more stable price base. A product with a longer shelf life makes good market sense because in the Belizean and CARICOM markets the great majority of families do not have refrigerators. An export market to the Yucatan and Quintana Roo States of Mexico is also a possibility.

8. Ornamental Plants. Belize has excellent natural conditions for the production of ornamentals and there are several flights a day providing air cargo service to the U.S. On its 25 acre operation Galloway Farms (of Galloway Nurseries of Maryland) is currently the only large commercial producer of ornamentals to the States. Lower production costs in Belize and the year-round production season make a local venture in ornamentals economically attractive.

9. Hydroelectric Generating Plants. Currently, the cost of electric power in Belize is US\$0.205/kwh. Further, since all power in Belize is generated with diesel power, a renewed escalation of oil prices would be disastrous.

At present, one of the greatest deterrents to business growth in Belize is the cost of electric power. This applies to the processing of agribusiness products as well as to commerce in general.

There is an excellent opportunity for a qualified firm to design and construct small low-head turbine generating systems that would work in the streams adjacent to the areas that need electric energy. Ultimately, as the country continues to grow, these smaller systems could be networked into a power system serving the entire country.

Initially, an agribusiness venture would install the system in order to service its needs and the anticipated expansion of those needs, and sell surplus power to the community surrounding its operation.

It is quite possible that the Belizean Government would sanction and support electric power co-ops in growing areas.

10. Pineapple Production. The U.S. market is seeking additional sources of fresh and processed pineapple. Pineapple of excellent quality is currently being produced. Suitable lands are available. An importer of pineapple may wish to investigate the economics of production and integrate production with his market needs.

11. Rice Farming. Big Falls Ranch in the northeastern portion of the Cayo District on the west bank of the Belize River is for sale. Big Falls Ranch consists of some 27,000 acres of rich river bottom soil. Twenty years ago this ranch was developed by Mr. Bevis, formerly of the San Joaquin Valley of California. When the ranch was operated by him, it proved successful. It is the team's understanding that the property has changed hands several times since the original owner sold it. Successive groups of poor managers have allowed the property to deteriorate.

The team believes that this property could be bought at a reasonable price, and that efficient rice production could be restored.

Belize has exported rice to Jamaica and other CARICOM nations under the preferential market agreement. The favored position afforded by the

CARICOM Treaty will allow Belize to export rice to them at a competitive price and at a profit to the producer.

It is suggested that the operation of Big Falls be diversified. Tropical fruits, winter vegetables, rice, citrus production, and dairy/cattle farming could constitute a solid and commercially viable diversification.

12. Logging and Timber. Tropical pine and the secondary tropical hardwoods abound in the Belizean forests. Export of timber products can be attractive to a merchant of timber. Mahogany, the mainstay of then British Honduras, has been exploited in years gone by and so only is available in limited amounts.

13. Oil Seed Production. Belize imports substantially all of the fats and oils consumed (US\$13 million in 1985). A crop that would limit this import and help to regulate the balance of trade would be more than welcome to Belize. This is, of course, an enterprise that produces for domestic consumption.

Several new varieties of soybeans have been tested by the Caribbean Agricultural Research and Development Institute (CARDI). These varieties of soybeans are suited to the subtropical growth pattern. Average yields have been recorded at 2,700 lbs or 45 bushels/acre (June planting) and 1,500 lbs or 25 bushels/acre (for November planting).

Soybeans would only be successful as a domestic crop, and to market soybeans locally they would have to be processed. Therefore, an installation of a small crushing mill would be necessary to convert the soybeans to soy oil and soybean cake. Small crushing equipment is available at an affordable price.

A good domestic market for soy oil and soybean feed concentrate exists.

14. Deep Water Ocean Fishing. The Belizean fishermen have never commercially fished the deep waters beyond the barrier reef. They do not

have the boats, the fishing equipment or the know-how to do so. A good look at this opportunity might be attractive to the larger fishing companies of the U.S. One American company is presently conducting fishing trials in these waters in cooperation with the Northern Fishermen Cooperative Society Ltd.

15. Aquaculture Projects. Catfish, fresh water prawns and crawfish may be attractive alternatives to shrimp. The team was informed that crawfish were being produced at Burrell Boom by a Dr. Faulkner, a U.S. citizen.

16. Cashew Nut Production. Cashews are produced in limited quantities in Belize, as well as a cashew wine. No attempt at cashew production on a large scale commercial basis has been made in the country. There is a lucrative market, the product grows well in Belize. Someone in the food business might want to take a closer look.

17. Production of Herbs and Spices. There is a growing demand for fresh leafy herbs in the U.S. market. Many herbs and spices in demand could be economically produced in the year round Belizean environment. Multiple daily flights to the U.S. would provide needed cargo service to the fresh herb market. In 1985, Belize exported 2,126 pounds of thyme, saffron and other spices.

18. Sheep Production. It is believed that the demand for lamb in the United States is on the increase. Conversely, the domestic supply is waning. There is a significant opportunity to produce and export processed fresh lamb to the U.S. and to the CARICOM nations--especially for the tourist trade.

At least one knowledgeable investor is finalizing plans to begin sheep production in Belize.

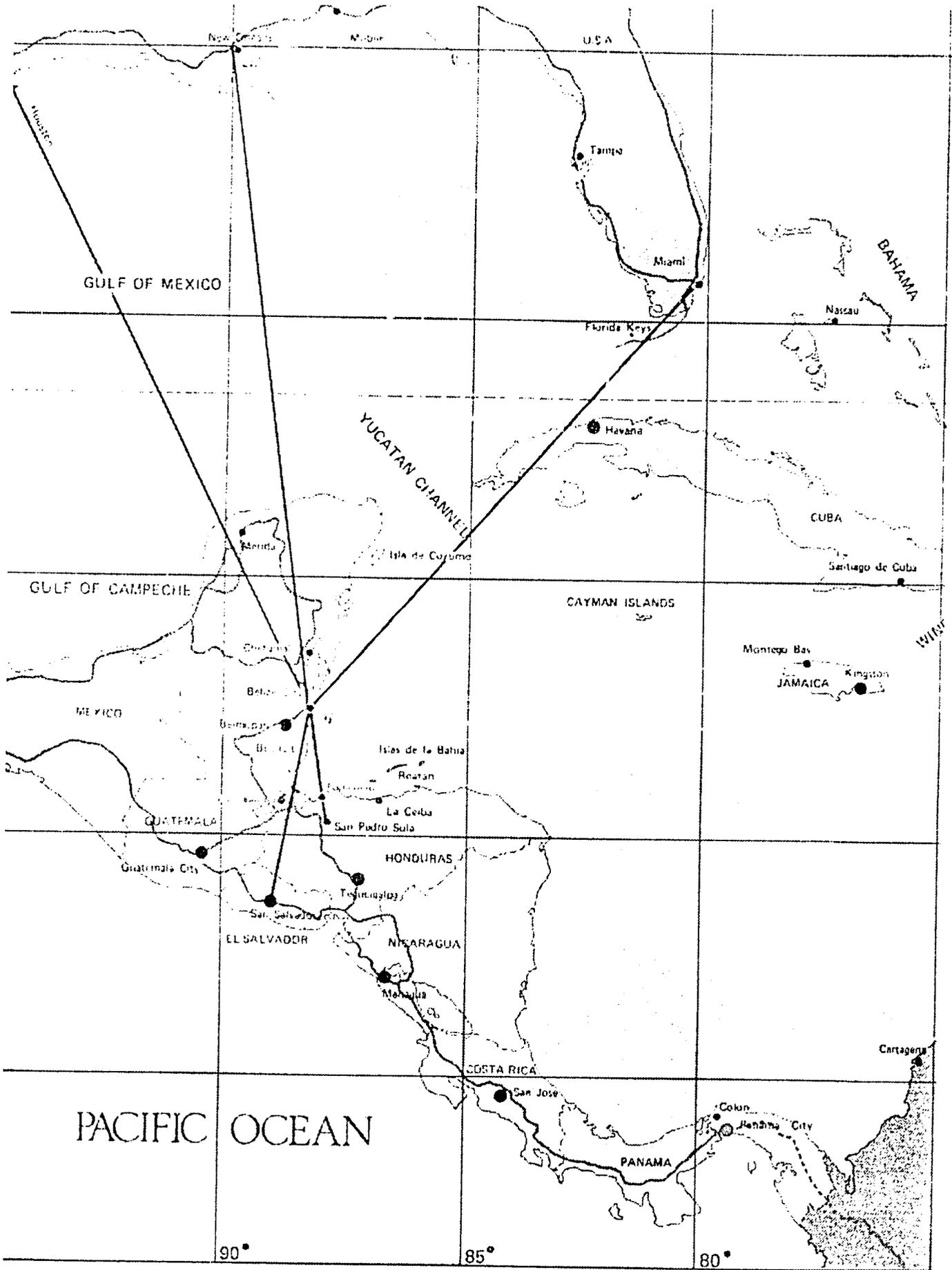
19. Beef Cattle Feeding. Belize Meats Co. has the capacity to kill 80 head of animals per day. At the present time, they are fortunate to kill 100 animals per week. There simply is not a sufficient quantity of quality animals to supply the need.

With the advent of dairy farm expansion that may use dual purpose cattle, there would be an increased supply of feeder calves. By adapted feeding technology, feeding citrus pulp, domestically produced soybean cake and the by products of the molasses industry in a modified feeding grazing program, cattle feeding could become profitable.

Currently, frozen boneless boxed beef is exported by Belize Meats to the CARICOM nations. This ready market could absorb all the production of the packing plant at full capacity. Under the CARICOM trade agreement, the cost of Belizean beef is very competitive.

20. Cogeneration of Electricity. With the high cost of electricity in Belize with total dependence on diesel fuel, the alternative source of bagasse from the sugar industry might prove attractive and economical. Producing surplus energy from the normal operation of the sugar mill in Orange Walk would require upgrading the boilers and generators currently in use.

APPENDIX A
MAPS OF BELIZE



CENTRAL AMERICA AND THE CARIBBEAN

MEXICO

CONDAL TOWN

GRAND FALLS

AMBERGHS CAYE

BELIZE CITY

TURNER ISLANDS

LIGHTHOUSE REEF

Western Highway

251 Miles

SAN IGNACIO

VENUE VIEJA DEL CARMEN

Humboldt St

Highway

DANGRIGA

MAYA MOUNTAINS

GLOVERS REEF

Southern Railway

PUNTA GORDA

BELIZE

SCALE 17 MILES TO 1 INCH

N

W

E

S

HONDURAS

GUATEMALA

11

16

17

17

16

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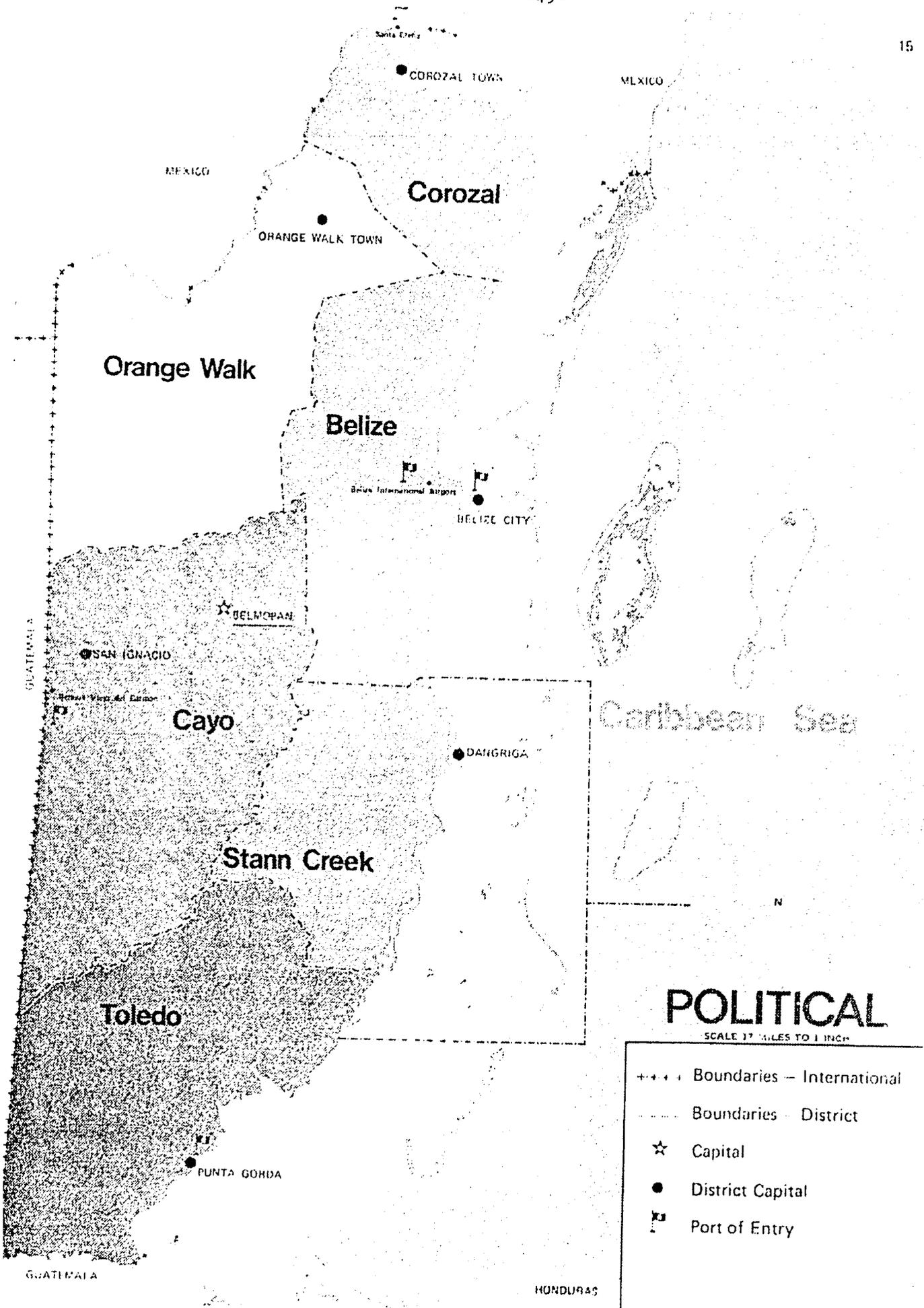
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West of Greenwich

88

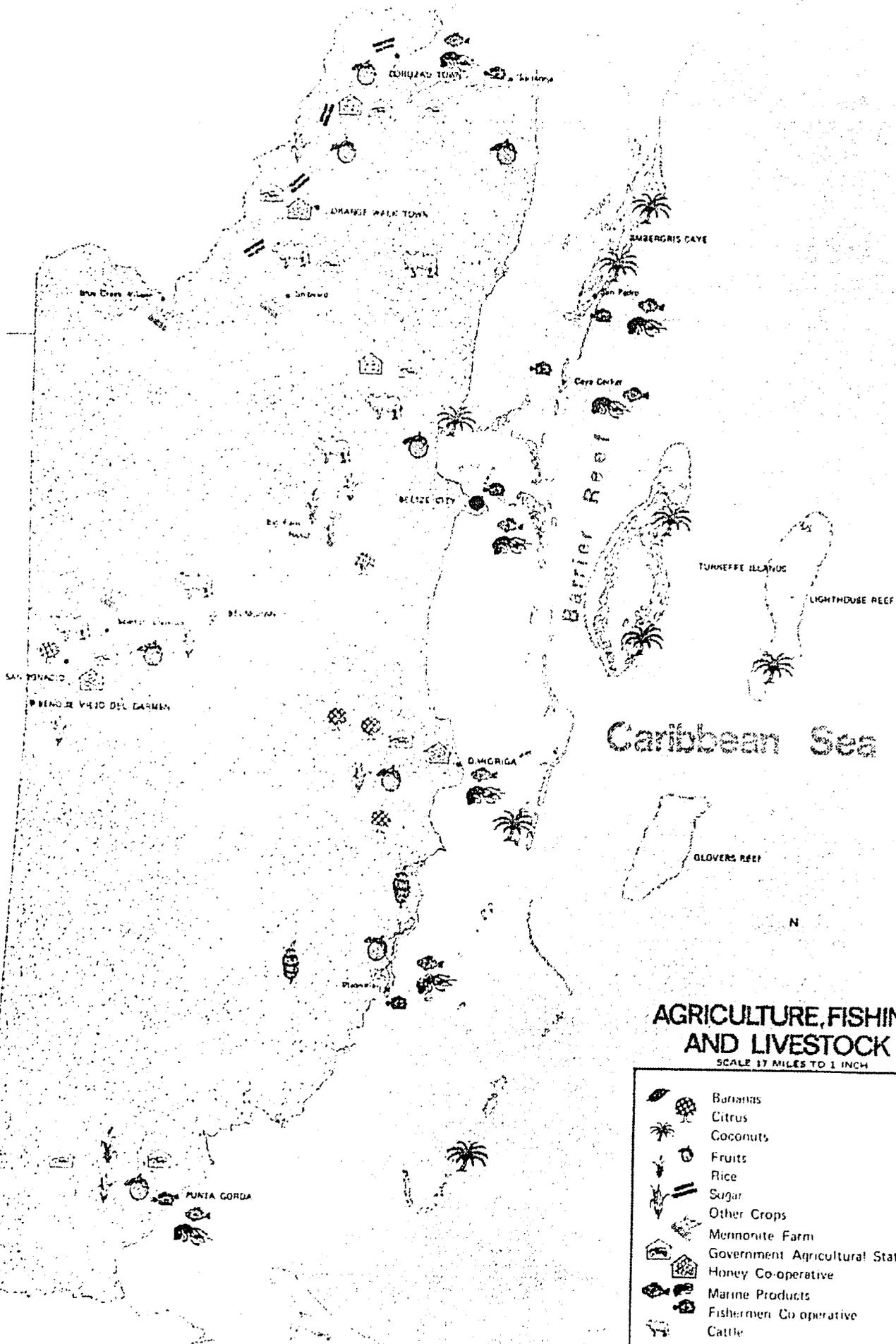
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POLITICAL

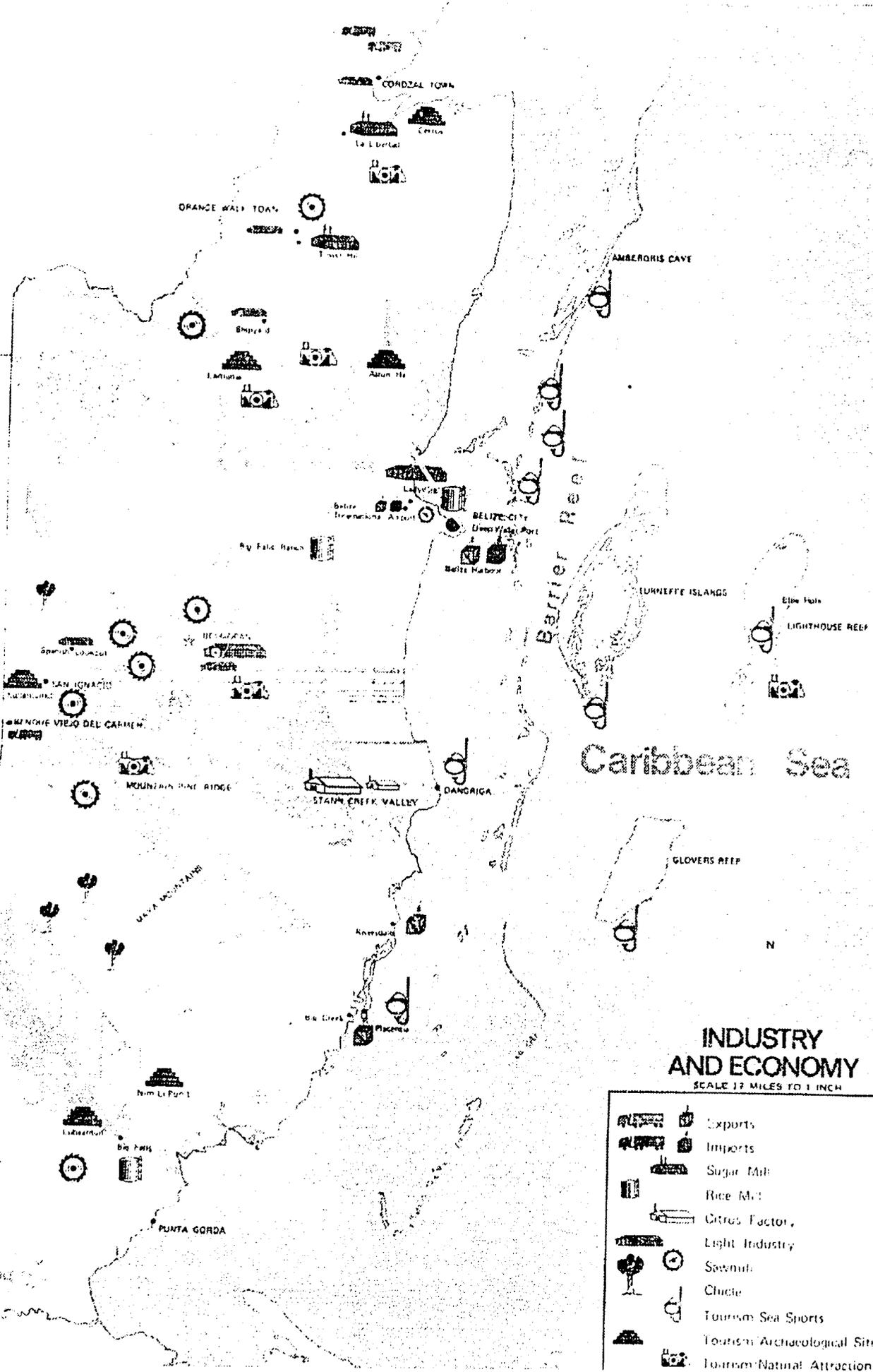
SCALE 17 MILES TO 1 INCH

- +++ International Boundaries
- District Boundaries
- ☆ Capital
- District Capital
- ✈ Port of Entry



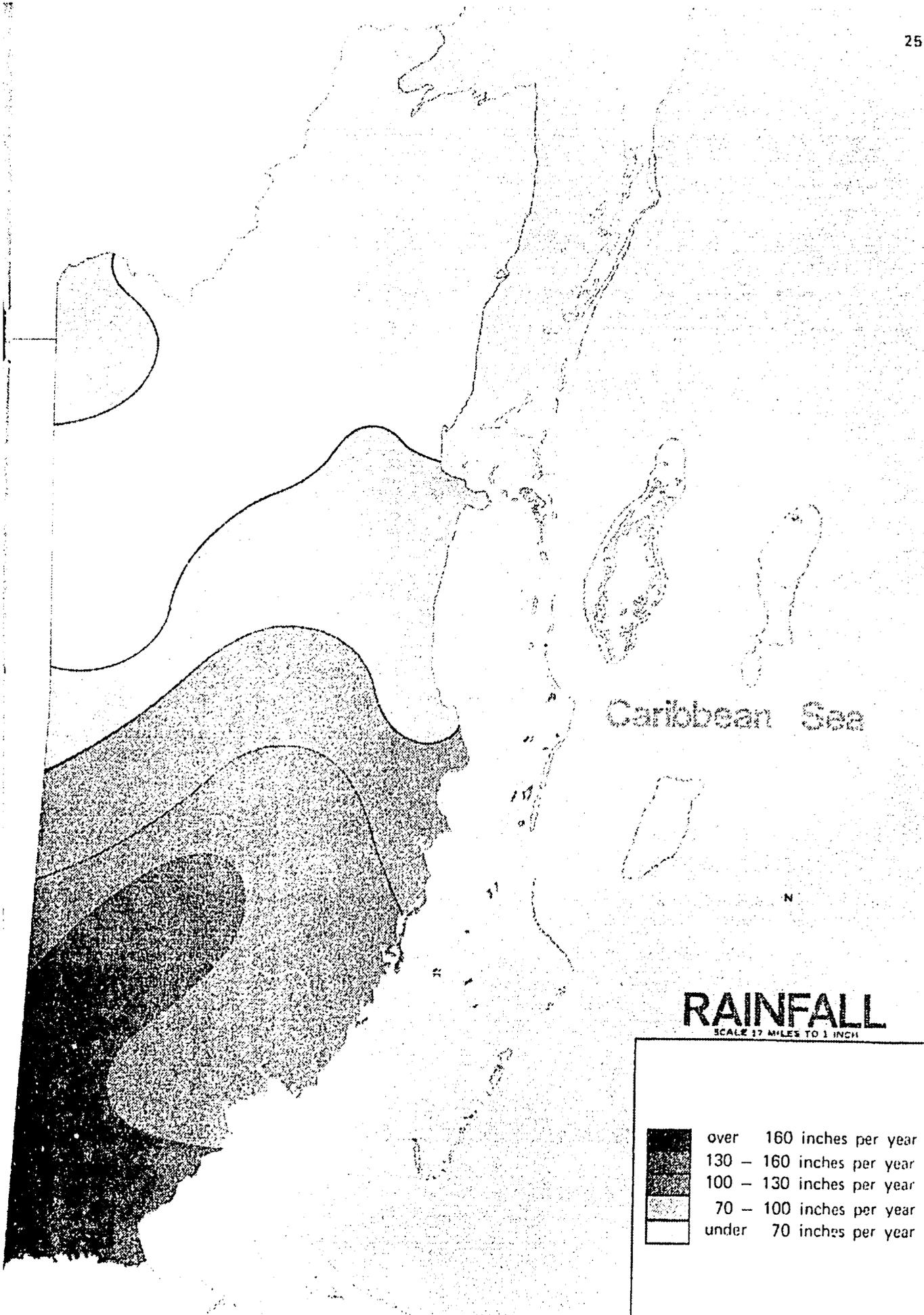
AGRICULTURE, FISHING AND LIVESTOCK
 SCALE 17 MILES TO 1 INCH

- Bananas
- Citrus
- Coconuts
- Fruits
- Rice
- Sugar
- Other Crops
- Mennonite Farm
- Government Agricultural Station
- Honey Co-operative
- Marine Products
- Fishermen Co-operative
- Cattle



INDUSTRY AND ECONOMY
SCALE 12 MILES TO 1 INCH

- Exports
- Imports
- Sugar Mill
- Rice Mill
- Citrus Factor
- Light Industry
- Sawmill
- Chicle
- Tourism Sea Sports
- Tourism Archaeological Site
- Tourism Natural Attraction



RAINFALL

SCALE 17 MILES TO 1 INCH

	over 160 inches per year
	130 - 160 inches per year
	100 - 130 inches per year
	70 - 100 inches per year
	under 70 inches per year

APPENDIX B
KEY ECONOMIC INDICATORS

BELIZE: KEY ECONOMIC INDICATORS

(Money values in millions of U. S. dollars except where noted)

<u>Income</u>	<u>1983</u>	<u>1984</u>	<u>1985*</u>
GDP at Factor Cost (current prices)	149.0	163.0	163.5
Per capita (dollars)	945.0	1,006.1	983.9
GDP at Factor Cost (constant 1984 prices)	156.5	163.0	152.1
Population	154,000	162,000	166,000
<u>Monetary Indicators</u>			
M1 Money Supply	22.6	28.5	30.9
M2 Money Supply	80.6	85.1	92.2
Interest Rates (Prime)	12.0%	12.0%	14.0%
International Reserves	5.0	-2.5	3.8
<u>Pub^r Sector</u>			
Expenditures as % of GDP	31.4%	28.9%	27.0%
Revenues as % of GDP	25.1%	29.4%	22.9%
External Public Debt	74.7	74.7	98.4
Debt Service as % of Exports	7.3%	3.3%	16.0%
<u>Trade Accounts</u>			
Total Exports	77.8	94.3	90.1
Re-Exports	12.7	23.2	25.7
Domestic Exports	65.1	71.7	64.4
U. S. Share	55.0%	57.8%	59.4%
Total Imports	112.9	129.2	128.1
U. S. Share	40.7%	43.6%	43.5%
Balance of Trade	-35.1	-34.9	-38.0
<u>Exports: Major Items</u>			
Sugar and Molasses	36.0	33.7	24.5
Clothing (Offshore Assembly)	9.3	14.8	15.7
Citrus	8.0	9.8	12.2
Seafood	6.2	5.9	7.4
Bananas	2.9	3.1	3.3
Wood and Wood Products	1.5	1.0	1.0
<u>Imports: Major Items</u>			
Consumer Goods & Building Materials	25.6	40.0	39.7
Food and Beverages	36.2	31.6	34.0
Vehicles and Machinery	21.7	26.0	22.6
Minerals, Fuels, and Lubricants	24.3	21.7	21.9
Chemicals and Pharmaceuticals	7.2	10.9	9.9

*1985 figures are only provisional and are subject to further revision.

Sources: Abstract of Statistics 1986, Central Bank of Belize Annual Report 1985

APPENDIX C
U.S. INVESTORS IN BELIZE

U.S. INVESTORS IN BELIZE
JUNE 22, 1987

NAME	STARTUP	BUSINESS	TELEPHONE	LOCATION
Ambergris Lodge	1977	hotel	026-2057	San Pedro
Atlantis Reef Resort	1976	hotel	026-2050	San Pedro, A.C.
Adventure Inn	1986	hotel	04-2187	Consejo Corozal
Barrier Reef, The	1978	hotel	026-2049	San Pedro, Ambergris Caye
Barrow Lumber	1977	lumber	02-3675	Belize City
Belize Meats Ltd.	1984	beef	025-2178	Ladyville, Belize
Big Creek Enterprise	1984	forestry		Stann Creek
Carr, John	1975	cattle ranch		Belmopan (Banana Bank)
Carver Tropical Ranch	1971	ranch/cattle	03-2188	Orange Walk District
Cemcol	1981	dealership Caterpillar/John Deere	025-2114	Ladyville, Belize
Chaa Creek Cottage	1981	hotel	092-2037	Cayo District
Challenge Airlines		aviation	02-45313	Belize City
Coca-Cola Foods		citrus	025-2155	N. W. Belize
Collier, John	1977	cattle ranch		Cayo District
Donald & Ruby LeBlanc	1984	hotel/condominium		San Pedro, Ambergris Caye
Esso		petroleum products	02-7324	Nationwide
El Pescador	1972	hotel		San Pedro, A.C.
Fido's Hotel		hotel	026-2056	San Pedro, Ambergris Caye
Flynn Furniture Co.	1984	furniture	08-2449	Belmopan
General Shrimp Ltd.	1980	shrimp farm	06-2030	Independence
Hide-A-Way Lodge	1977	hotel	026-2141	San Pedro, A.C.
Hummingbird Hershey	1963	cocoa farm	08-2626	Stann Creek
Hurley, Robert	1975	cattle		Cayo District Belize 484
Journey's End	1984	Club	026-2173	San Pedro, A.C.
Jungle View	1986	resort		Cayo District
Keller Caribbean Sports, Ltd.	1965	fishing lodge	025-2002	Belize District
Liquid Carbonic/Belize Steel		metals & gases	02-44478	Belize City
Manatee Lodge	1979	hotel	05-2087	Gales Point Belize
District Mariah Reef Resort		hotel		San Pedro, A.C.
Maya Mariculture	1984	shrimp farming	02-2206	Belize District
Maya Mountain	1984	lodge	092-2164	Cayo District
Mom's Inn	1970	restaurant and hotel	02-44523	Handiside Street, Belize

NAME	STARTUP	BUSINESS	TELEPHONE	LOCATION
Paradise Resort	1968	hotel	026-2083	San Pedro, A.C.
Placencia Cove	1976	hotel	06-2024	Placencia, Stann Creek
Prosser Fertilizer	1971	fertilizer mixing	02-44830	Belize District
Pyramid Island Resort	1970	hotel	02-44409	Caye Chapel
Rebco Limited	1972	diesel engine dealership	02-44703	Belize City
Renco Battery Factory	1966	manufacturing	02-44139	Belize City
Rum Point Inn	1980	hotel	06-2017	Placencia
Spanish Creek Lodge	1982	hotel		Belize District
St. George's Lodge	1978	hotel	02-44190	St. George's Caye
Stone, Cecil Albert	1975	ranch		Punta Gorda
Swingle, Dean		ranch		Cayo District
Tabony Industries		garments	02-2670	Belize City
Texaco		petroleum products	02-2605	Belize City
Turneffe Island Lodge	1960	resort		Turneffe Island
Turtle Inn	1986	hotel		Placencia
Victoria House		hotel	026-2023	San Pedro, A.C.
Williamson Industries Ltd.	1961	garment manufacturer	025-2189	Belize District
White Ridge Farms	1984	agriculture	02-2157	Gales Point Belize District
Whiteney, Harold	1981	lumber	07-2037	Punta Gorda
Yalbec	1986	ranch		Hillbank, P. O. Box 610 Belize City

Source: Foreign Commerical Service
U. S. Embassy
Belize

APPENDIX D
INVESTMENT INFORMATION SOURCES

INVESTMENT INFORMATION SOURCES

Further information on investment opportunities and procedures in Belize may be obtained from the following sources:

Belize Chamber of Commerce and Industry
Belize Export and Investment Promotion Unit (BEIPU)
Post Office Box 291
7 Cork Street
Belize City, Belize
Telephone (501) 44913/44138
Telex: 121 CHAMBER BZ
Cable: BZ CHAMBER

Office of Economic Development
Ministry of Foreign Affairs and Economic Development
Post Office Box 41
Unity Boulevard
Belmopan, Belize
Telephone (501) 08-2526/2527
Telex: 213 AMCONSL BZ

Office of Private Sector Development
U. S. Agency for International Development
Post Office Box 817
Gabourel Lane at Queen Street
Belize City, Belize
Telephone (501) 7162
Telex: 213 AMCONSL BZ

Embassy of Belize
1575 I Street, N. W.
Washington, D. C. 20005
Telephone (202) 289-1416

Caribbean Basin Information Center
U. S. Department of Commerce, Room H3020
Washington, D.C. 20230
Telephone (202) 377-0703

APPENDIX E
AGRICULTURAL STATISTICS

AGRICULTURE PRODUCTION FIGURES: DISTRICTS 1986

DISTRICT	CORN	RICE	RK BEAN	TOMATO	CABBAGE	S/PEPPER	CUCUMBER	DRY COCOA	PEANUTS	EXPORT DOMESTIC		HEAD DRESS		HEAD DRESS		MILK
										HONEY		CATTLE		PIGS		
Corozal	6,066,900	71,400	912,500	200,000	80,000	50,000	88,000	-	13,275	222,086	127,274	537	73,833	658	71,838	432,000
Orange Walk	7,715,000	1,005,000	550,000	1440,000	480,000	975,000	180,000	-	22,500	194,816	56,000	748	331,368	976	135880	315,630
Belize	1,317,900	2,854,800	80,000	152,400	30,000	610,800	1400,000	-	-	5,536	4,000	3,033	1272,420	1033	127164	-
Cayo	17,624,000	143,000	2,240,000	436,000	1520000	114,000	-	182299	301,000	128,963	42,000	2,470	667,500	2765	276500	1,543,946
Stann Creek	522,800	1,422,100	25,000	2,500	2,500	11,250	-	-	5,600	45,202	14,000	195	58,565	151	12,103	-
Toledo	7,500,000	4,215,549	200,000	400	-	-	-	-	-	51,867	16,000	108	37,066	561	36,556	3,172
TOTALS	40,746,600	9,711,849	4,007,500	2231,300	2112500	1761,050	1668000	182299	365,375	648,470	259,274	7,091	2440,752	6144	660011	2,294,748

Source: Ministry of Agriculture

2/1987

MAJOR CROP PRODUCTION - 1970 TO 1985

Year	Corn ('000 lbs)	Rice Paddy ('000 lbs)	Beans ('000 lbs)	Bananas (42 lb boxes)	Oranges <u>/</u> ('000 contract boxes)	Grapefruit <u>1/</u> ('000 contract boxes)
1970	35,000	7,700	5,174	**	558	257
1971	35,000	10,026	4,050	**	925	276
1972	32,209	12,785	2,490	**	894	421
1973	35,500	18,000	2,500	***	971	390
1974	28,200	16,600	2,750	***	1,101	427
1975	23,000	10,700	2,500	30,780	801	535
1976	40,000	13,798	2,400	357,736	802	407
1977	37,600	18,935	2,210	547,812	633	238
1978	43,000	14,000	2,160	519,668	686	301
1979	34,000	14,700	2,240	842,019	568	108
1980	41,500	19,000	3,073	784,385	1,109	408
1981	47,000	23,809	3,800	549,000	1,063	585
1982	47,000	17,500	3,900	524,000	1,065	703
1983	33,800	13,500	4,000	531,000	750	178
1984(r)	34,500	12,500	2,834	555,000	1,124	312
1985(p)	29,000	12,100	2,300	542,000	1,043	476

Source: Ministry of Agriculture

/ = 90 lb box 1/ = 80 lb box ** = Insignificant *** = Not Available

(r) = Revised (p) = Provisional

SUGAR CANE AND SUGAR PRODUCTION

Period*	Estimated Acreage Harvested	Tons Cane Reaped (Long Tons)	Tons Sugar Produced (Long Tons)	Tons Molasses Produced (Long Tons)	Tons Cane Per Acre	Tons Sugar Per Acre	Tons Cane Per Tons Sugar
1979/80	60,000(r)	1,013,500	103,300	32,278	16.89	1.69	9.81
1980/81	60,000(r)	970,100	97,724	31,980	16.17	1.60	9.92
1981/82	61,000(r)	1,095,500(r)	105,980	37,704	17.96	1.71	10.34
1982/83	59,300	1,131,986	114,278	37,470	19.08	1.93	9.91
1983/84(r)	59,000	1,022,202	101,525	32,600	17.33	1.72	10.07
1984/85(p)	59,000	961,599	102,018	28,099	16.30	1.73	9.43

(r) - Revised

(p) - Provisional

Source: Ministry of Agriculture

*Related to cropping year (December to June approx.)

FISH PRODUCTION BY COOPERATIVE - 1984 TO 1985

1 9 8 4
TYPE OF FISH

FISHING CO-OPS	Finfish ('000 lbs)	Fish Fillet ('000 lbs)	Lobster ('000 lbs)	Conch ('000 lbs)	Other (lbs)
National	148	13	226	301	-
Northern	201	2	298	105	5,274
Caribena	94	22	80	57	350
Placencia	91	30	33	61	25
Total	534	67	637	524	5,649

1 9 8 5
TYPE OF FISH

FISHING CO-OPS	Finfish ('000 lbs)	Fish Fillet ('000 lbs)	Lobster ('000 lbs)	Conch ('000 lbs)	Other (lbs)
National	90	33	215	182	7,435
Northern	166	3	395	104	4,135
Caribena	122	22	81	56	3,833
Placencia	122	27	31	72	201
Total	502	85	722	414	18,605

Source: FISHERIES DEPARTMENT

APPENDIX F
COSTS AND EXPENSES RELATIVE TO FARMING
OPERATIONS OF CARIBE RANCH NORTH

-66-

CARIBE FARM INDUSTRIES LTD.

No. 168 N. Front St., Belize City, Belize, C.A. • P.O. Box 332 • Phone 45819 • Telex: 144 "caribe bz"

CARIBE FARM INDUSTRIES LTD
TWELVE-MONTH FORECAST
JUNE 1987 - MAY 1988

UPDATED: 27 MAY 87

PAGE 1 OF 3

ASSUMPTIONS USED

THE FOLLOWING ASSUMPTIONS ARE BEING USED TO CALCULATE THE COSTS AND EXPENSES RELATIVE TO OUR FARMING OPERATIONS AT CARIBE RANCH NORTH.

1) FACTORS FOR 350 ACRES TO BE CULTIVATED:

A) WATER DRAINAGE: 21 DAYS WITH A GOOD 'BACK-HOE' AND OPERATOR.
14 DAYS WITH A 'GRADER' AND OPERATOR.
21 DAYS WITH A FIELD CREW OF 10 MEN.

B) POST HARVEST: 21 DAYS 'HAND-CLEAN-UP' WITH 15 MEN (POST HARVEST)
10 DAYS HEAVY DISCING WITH A 'DB-13A' AND 30 FT
HYDRALIC DOUBLE-ROW 'TOWNER' DISC.
10 DAYS LIGHT DISCING WITH SAME DB+TOWNER
350 HRS WITH 'WHEELED TRACTORS' TO PREPARE BEDS
(NEEDED FOR WATER CONTROL DURING RAINS)

C) PRE-PLANTING: 10 DAYS HEAVY DISCING (CULTIVATING)- DB+TOWNER DISC
10 DAYS LIGHT DISCING (REFINING)- DB+TOWNER DISCS
700 WHEELED TRACTOR HRS - LISTING (BEDING)/FUMIGATING
AND PRE-PLANT FERTILIZER IN 'ONE OPERATION'.

D) SEEDING: BELL PEPPERS AND PAPAYA WILL BE PLANTED IN THE NURSERY
AND TRANSPLANTED WHEN READY TO FIELDS. ALL OTHER CROPS
WILL BE DONE BY DIRECT SEEDING. PLANT POPULATIONS :

1) CUCUMBERS - 13,000/A 2) PICKLES 13,000/A 3) BELL PEPPERS 6,500/A
(12 X 40) 2 LBS/A (12 X 40) 2 LBS/A (24 X 40) 1/2 LB/A

4) OKRA - 13,000/A 5) SWEET MELONS - 6,500/A 6) SQUASH 6,500/A
(12 X 40) 6 LBS/A (12 X 80) 2 LBS/A (24 X 40) 3 LBS/A

7) PAPAYA (SOLO)- 825/A 8) NURSERY SEEDING: 800 PLANTS PER MAN DAY
(6 X 6 X 11) 1/4 LB/A IN 6 CUP CELL-PACKS

AA) DIRECT SEEDING WITH SINGLE ROW PLANTER PULLED BY A SMALL
DIESEL TRACTOR (JOHN DEERE 750 OR FORD 1210): 5 ACRES/DAY

BB) TRANSPLANTING BY HAND: PER CREW OF 5 MEN (SPACING/HOLE -
INSERTING FERTILIZER/FUMIGANT-PLANTING TRANSPLANT-COVERING
TRANSPLANT-WATERING TRANSPLANT): 550 PLANTS PER CREW HOUR

E) ACRES TO BE PLANTED OF EACH CROP AND EXPECTED YIELDS PER ACRE:

1) CUCUMBERS 120/A (X) 2 PLANTINGS FOR SEASON: 600 CTNS/A (POLED)
2) PICKLES 75/A (X) 2 PLANTINGS FOR SEASON: 300 CTNS/A (POLED)
3) B/PEPPERS 20/A (X) 1 PLANTING FOR SEASON: 450 CTNS/A
4) OKRA 30/A (X) 1 PLANTING FOR SEASON: 800 CTNS/A
5) HONEYDEW 25/A (X) 1 PLANTING FOR SEASON: 525 CTNS/A
6) CANTALOPE 25/A (X) 1 PLANTING FOR SEASON: 450 CTNS/A
7) SQUASH(SOFT)30/A (X) 1 PLANTING FOR SEASON: 650 CTNS/A
8) PAPAYA(SOLO)25/A (X) 1 PLANTING FOR 3 YEARS: 700 CTNS/A (1ST YR)

CARIBE FARM INDUSTRIES LTD.

No. 168 N. Front St., Belize City, Belize, C.A. • P.O. Box 332 • Phone 45819 • Telex: 144 "caribe bz"

CARIBE FARM INDUSTRIES LTD TWELVE-MONTH FORECAST JUNE 1987 - MAY 1988

UPDATED: 27 MAY 87

PAGE 2 OF 3

ASSUMPTIONS USED

E) ESTIMATED MARKET SELLING PRICE (CNF-USA PORT OF ENTRY):

- | | |
|-----------------------------|------------------------------|
| 1) CUCUMBERS: BZE 20.00 CTN | 5) HONEYDEW : BZE 19.00 CTN |
| 2) PICKLES : BZE 30.00 CTN | 6) CANTALOEPE: BZE 16.00 CTN |
| 3) B/PEPPER : BZE 18.00 CTN | 7) SQUASH : BZE 13.50 CTN |
| 4) OKRA : BZE 17.00 CTN | 8) PAPAYA : BZE 14.00 CTN |

F) DAYS FROM PLANTING TO HARVEST BASED ON BELIZE CLIMATE:

- | | |
|-----------------------|------------------------|
| 1) CUCUMBERS: 51 DAYS | 5) HONEYDEW : 84 DAYS |
| 2) PICKLES : 48 DAYS | 6) CANTALOEPE: 90 DAYS |
| 3) B/PEPPER : 72 DAYS | 7) SQUASH : 45 DAYS |
| 4) OKRA : 49 DAYS | 8) PAPAYA : 210 DAYS |

G) FERTILIZER COSTS: VARIOUS FORMULAS WILL BE USED BASED UPON SOIL SAMPLING BUT FOR COSTING WE ARE USING :

- | | | | |
|------------|---------|---------|----------------------------------|
| 1) 125 LBS | 225 LBS | 200 LBS | : PER ACRE OVER SEASON AT A COST |
| N | P | K | OF BZE 600.00 TON FOR MATERIALS |

H) CHEMICALS: HERBICIDES, INSECTICIDES, AND FUNGICIDES APPLIED ON SPRAYING : A 'PREVENTIVE BASIS' REQUIRE A RIGID PROGRAM OF SPRAYING EVERY 10 DAYS, OR IMMEDIATELY AFTER A RAIN FALL. BASED ON AERIAL SPRAYING FROM OUR SITE RUNWAY:

- 1) PLANE/PILOT COST: BZE 10.00 ACRE (X) 3 RUNS MONTHLY
- 2) CHEMICALS COSTS : MANZATE, KOCIDE, LANNATE, CARBARYL, DIAZONON, DITHANE, BRAVO 500 AND SIMILAR FOR PREVENTIVE:

(A) CHEMICALS : BZE 98.60/ACRE-MONTH (+) PLANE: 30.00/ACRE MONTH

I) LABOR COSTS: FIELD LABOR AT BZE 1.67 HOUR PLUS .23 HR TO COVER BENEFITS, SOC/SECURITY ETC: BZE 1.90 HR 'ALL-IN'.

EQUIP/OPERATORS, MAINTAINENCE, INDIRECT PERSONNEL AND SUPPORT FUNCTIONS : BZE 2.50 HR 'ALL-IN'.

J) POLING COSTS: BASED ON 195 ACRES OF CUCS AND PICKLES POLED USING 1500 POLES PER ACRE:: 292,500 POLES (IN-STOCK)

- 1) CONTRACT LABOR TO PLACE POLE IN FIELD : BZE .17 EACH POLE
- 2) COST OF POLES (HANDLING/PLACING ON LOCATION): BZE .05 EACH POLE

K) STRING: BASED ON 195 ACRES (X) 2 PLANTINGS = 390 ACRES (X) 19.40/A WIRE : BASED ON 195 ACRES : WE HAVE 75 ACRES IN STOCK FROM LAST SEASON AND REQUIRE : 125 ACRES (X) BZE 58.60/A LABOR : ONE ACRE PER 3 MAN DAYS : 195 (X) BZE 60.00/A

CARIBE FARM INDUSTRIES LTD

No. 168 N. Front St., Belize City, Belize, C.A. • P.O. Box 332 • Phone 45819 • Telex: 144 "caribe bz"

CARIBE FARM INDUSTRIES LTD TWELVE-MONTH FORECAST JUNE 1987 - MAY 1988

UPDATED: 27 MAY 87

PAGE 3 OF 3

ASSUMPTIONS USED

L) CULTIVATING: ASSUMING WE PLANT DOUBLE ROWS AT 80" WE WILL BE ABLE TO USE MINI-TRACTORS (FROD 1210/JD 750) FOR THE FIRST HALF OF THE GROWING SEASON (3 MONTHS):

- 1) TRACTORS: .65 HRS/A (X) 350/A = 227.5 TRACTOR HRS (X) 3 MONTHS
- 2) HAND WEEDING FOR 'BED TOPS' : 35 MEN (X) 6 MONTHS

M) IRRIGATION: WE NOW HAVE 13 DEEP WATER WELLS OPERATIVE AND 5 EACH MULTI-STAGE, RIGHT ANGLE GEAR DRIVEN, TURBINE DIESEL PUMPS CAPABLE OF DELIVERING 700 GLS PER MIN EACH. WE HAVE ALL HARDWARE AND 3 MORE 6 INCH BOOSTER PUMPS FOR DRIP IRRIGATING 250 ACRES. OUR MAINLINE PIPES WILL SUPPORT MORE THEN 400 ACRES AT PRESENT.

- 1) DRIP: CUCUMBERS-PICKLES-MELONS-PAPAYA-B/PEPPERS: 290 ACRES
(WE WILL PURCHASE ADDITIONAL SADDLES/TAPE FOR 40 ACRES)
(A) LABOR (12 MEN)-DIESEL FUEL-MAINTAINENCE-SPARES: BZE 650.00 DAY

- 2) FURROW IRRIGATION: 60 ACRES (X) 2 PUMPS (X) 6 MEN: BZE 250.00 DAY

2) SUMMARY OF TOTAL PRE-HARVEST EXPENSES BASED ON A 120 DAY SEASON:

DESCRIPTION	TOTAL COST	COST/ACRE
A) WATER DRAINAGE : (PRE-PLANT RAINS)	BZ 29,400 (350)	84.00
B) POST HARVEST : (CURRENT PROGRAM)	BZ 22,300 (350)	63.71
C) PRE-PLANT : (LAND PREPARATION)	BZ 30,000 (350)	85.71
D) SEEDING : (NURSERY N FIELD)	BZ 76,872 (545)	141.04
E) FERTILIZER : (MATERIAL COST)	BZ 75,600 (350)	216.00
F) CHEMICALS : (MATERIAL N SPRAYING)	BZ 180,040 (545)	330.34
G) POLES : (INSTALLED COST)	BZ 64,350 (390)	165.00
H) WIRE : (INSTALLED COST)	BZ 7,325 (390)	18.78
I) STRING : (INSTALLED COST)	BZ 7,566 (390)	19.40
J) CULTIVATING : (WHOLE SEASON)	BZ 18,200 (545)	33.39
K) IRRIGATION : (WHOLE SEASON)	BZ 77,880 (545)	142.89
M) MISC FIELD LABOR : (WHOLE SEASON)	BZ 303,945 (545)	557.69
1) IRRIGATION DEPT : (18 + 2 SUPV)	=====	=====
2) CULTIVATING : (35 + 2 SUPV)	BZ 893,478	1,857.95
3) GEN FIELD WORK : (125 + 5 SUPV)		
4) INDIRECT EMPLS : (30 + 3 SUPV)		

CONSIDERING ALL PRIMARY FACTORS WE ARE USING ONLY 350 ACRES OF LAND BUT WILL HAVE TWO PLANTINGS/HARVESTS FOR CUCUMBERS AND PICKLES WHICH IN EFFECT GIVES US 545 ACRES OF CROPS THIS COMING SEASON. SOME PRE-HARVEST COST FACTORS RELATE STRICTLY TO THE 350 ACRES LAND BEING USED, SOME TO THE 195 ACRES OF CUCS/PICKLES (X) 2 PLANTINGS FOR 390 EFFECTIVE FARMING ARCES AND SOME TO THE EFFECTIVE FARMING ACREAGE OF 545 ACRES. ON A WEIGHTED AVERAGE THE ABOVE PRE-HARVEST COSTS TO FARM THE MIXED CROPS COME TO : BZE 1,857.95

APPENDIX G

NAMES AND ADDRESSES OF PRIMARY PARTIES CONTACTED

PRIMARY PARTIES CONTACTED

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APPENDIX H

MEMBERS OF THE RECONNAISSANCE SURVEY TEAM

MEMBERS OF THE RECONNAISSANCE SURVEY TEAM

Glenn E. Taylor, D.V.M.

Dr. Taylor, team chairman, is President of Agro Financial Management, Oakdale, California. He is a consultant and management advisor for animal agriculture projects, and a member of management groups which can supply experienced assistance with crops, trees, vines and livestock. Dr. Taylor remains a practicing veterinarian.

Dr. Taylor has experience in production, processing and marketing of beef, lamb, pork and other meat and dairy products. Through the years he has organized and restructured integrated livestock enterprises, working in the Continental United States and in 24 foreign countries with projects in Central and South America, Africa, the Middle and Far East. He has a long time association with Belize, having worked in developing both the cattle and sugar industries there.

Dr. Taylor received his education as a Doctor of Veterinary Medicine from Washington State University as also his B.S. Degree in Agriculture. He is a long standing Associate Member of The American Society of Agricultural Consultants.

Roger Killingsworth

Mr. Killingsworth is President of Killingsworth and Associates, Baton Rouge, Louisiana, a firm which offers services in agricultural land selection and appraisal for domestic and foreign clients. The group manages farms for absentee owners/investors, handles trust management, estate planning and cash flow projections. Agricultural consulting services include soil and land use studies, land reclamation and development, drainage design and agronomic practices.

Mr. Killingsworth has been doing consulting work for ten years, backed by twenty-six years experience as farm manager of projects varying in size from 5,000 acres to 57,000 acres. His actual experience includes planning, performing and supervising activities in all facets of modern intensified agriculture and agribusiness ranging from large privately held farming interests to modern day corporate agriculture.

Mr. Killingsworth received his B.S. Degree in Agriculture with a major in Agronomy from Texas A. & M. University. He is a past Director of the National Board of Directors of the American Soybean Association. Mr. Killingsworth is a Certified Member of the American Society of Agricultural Consultants.

Michael W. Hurley

Mr. Hurley is the ASACI Director of International Agribusiness Teams, working under the 1985, 1986 and 1987 grant agreements with the U.S. Trade and Development Program. To date, he has directed teams to the Ivory Coast, the Dominican Republic, Ecuador, Grenada, Kenya, the Philippines, and Belize.

Mr. Hurley's previous experience includes nine years of work in Latin America as sales and marketing manager for an agricultural development company, and as project director for the design and installation of grain storage, handling, and processing facilities. His agricultural marketing and development work encompassed nearly all countries of Latin America.

Mr. Hurley has a Master's degree in Spanish with a concentration in Latin American studies. He is completely fluent in Spanish and has a working knowledge of Portuguese and French.

PN-ABH-380

AGRIBUSINESS INVESTMENT OPPORTUNITIES
IN BELIZE

VOLUME II: PROJECT PROFILE REPORT

PREPARED BY
THE
AMERICAN SOCIETY OF AGRICULTURAL CONSULTANTS INTERNATIONAL
UNDER A GRANT FROM
THE
U.S. TRADE AND DEVELOPMENT PROGRAM

DECEMBER 8, 1987

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I. INTRODUCTION

Working under a Grant Agreement with the U.S. Trade and Development Program (TDP), the American Society of Agricultural Consultants International (ASACI) sent a five-man Project Profile Team to Belize to examine project opportunities identified by an earlier Reconnaissance Survey Team (see: Agribusiness Investment Opportunities in Belize, Volume I: Reconnaissance Survey Report, August 4, 1987). The summary pages of the reconnaissance report form Section II of this document. The earlier Team identified twenty project areas for potential investment opportunities to be fully profiled.

From October 26 - November 13, 1987, the five-man team of consultants worked in Belize developing and preparing information leading to this present document Agribusiness Investment Opportunities in Belize, Volume II: Project Profile Report. The team was composed of the following members: Glenn E. Taylor, Team Chairman, Oakdale, California; Robert E. Ascheman, Des Moines, Iowa; Robert H. Fulton, Miami, Florida; Henry Winogron, Harrington Park, New Jersey; and Michael W. Hurley, McLean, Virginia. A professional profile of the team members appears in the Appendix section.

The project investment profiles prepared by the Team offer the prospective U.S. investor essential data on market potential, technical viability, investment costs, return on investment, and suitable local partners. All calculations are done in U.S. dollars unless otherwise noted. The selected profiles are summarized in Section II, and then fully presented in Section III of the report.

It should be noted that because the report is only a preliminary analysis of the different project opportunities, each potential investor must make his own independent investigation and assessment of a prospective venture before making any investment decision.

Potential investors should also be aware of certain U.S. trade laws that affect investment in any project designed to promote exports to the United States, and are advised to consult with their trade counsel to assess such concerns.

To facilitate follow-up on individual project opportunities, the report lists potential Belizean partners interviewed by team members. The ASACI consultants who prepared this report are available to the potential investor interested in following up on Belize project opportunities, as is the agricultural expertise of other consultants who are members of the American Society of Agricultural Consultants International.

The prospect investor may obtain the current study (and an earlier report) at a reasonable cost, as well as information on ASACI consultants by contacting the Society's headquarters at the following address:

American Society of Agricultural Consultants International
8301 Greensboro Drive
Suite 260
McLean, Virginia 22102

Telephone: (703) 893-8303/04
Telex: 704419 ASACI MCLN UD

AGRICULTURE AND RURAL DEVELOPMENT

SECTION II

SUMMARY OF AGRIBUSINESS
INVESTMENT CONDITIONS

Agribusiness Investment Opportunities in Belize,
Volume I: Reconnaissance Survey Report

COUNTRY BACKGROUND SUMMARY
BELIZE

Geography

Location: On the eastern or Caribbean coast of Central America, bordered on the north by Mexico and on the west and south by Guatemala.

Size: 168 miles long by 67 miles wide, roughly the size of New Hampshire.

Climate: Sub-tropical, with heat and humidity tempered by trade winds. Rainy and dry seasons, rains from 60-160 inches/year. Hurricanes in 1961 and 1978.

People

Population: 166,200 - most sparsely populated country in Central America. 50% in cities, 50% in rural areas.

Language: English is official language, Spanish also widely spoken. Functional literacy rate is over 80%.

Ethnic Groups: Multiracial with half being of African descent (Creoles) and one-fifth of Indian/European descent.

Work Force: 51,000 with 30% agriculture, 18% services, 11% trade, 10% manufacturing. Immigration of farm workers from El Salvador.

History and Government

History: Former British Colony, British Honduras.

Government: Parliamentary democracy, with Constitution and independence established September 21, 1981. Member of British Commonwealth. Prime minister and cabinet, bicameral legislature, law based on British legal system. Political party system since 1950. Peaceful transition of power in 1984 with second set of democratic elections (at least every 5 years).

Economy

GDP: US\$163.5 million (1985). Agriculture - 20%, trade - 17%, manufacturing - 15%, government - 11%, fishing - 4%.

Trade: Major exports are sugar, bananas, citrus concentrate, fish products, garments, timber, honey. Imports - food 20%. 1985 exports US\$73 million, imports \$112 million, deficit \$39 million. Major trading partners - U.S., U.K., CARICOM with preferential market access.

Exchange Rate: Belize dollar tied to the US dollar at a fixed rate of BZ\$2=US\$1.

Tourism:

Barrier reef - excellent diving/fishing, Mayan ruins.
Growing industry, real potential, hotel industry needed.

INVESTMENT CLIMATE SUMMARY - BELIZE

Country Stability

Political: Long tradition of respect for constitutional government. A Commonwealth nation and British Protectorate. British Army a deterrent. Peaceful atmosphere undisturbed by unrest in Central America motivated recent large U.S. agribusiness investments.

Economic: Versatile, diversified and still growing in agriculture and tourism. Considerable foreign development assistance from U.K., U.S. and Canada.

Social: Harmonious racial mix. Civil unrest unknown. Relatively high standard of living with employment prospects improving. Immigration needs monitoring and control.

Gov't Policy on Private Foreign Investment

Policy: Supports a strong unfettered private sector.

Foreign Investments: Welcome, especially those using Belizean raw materials, products for export market, projects upgrading skills of Belizeans. Focus on agriculture and tourism.

Foreign Ownership: 100% permitted, joint ventures encouraged.

Financing

Development Loans: Available from Development Finance Corporation and Caribbean Development Bank. 12 months processing, high collateral requirements, timing perhaps unacceptable, 12 1/2% interest.

Commercial Loans: Available from four banks, interest 16%. Belize Bank starting to work more with developing agribusinesses, has full-time agronomist.

Local Equity Capital: Not a likely source for new agribusinesses.

Establishing a Business

Registration: First requirement for a foreign investor is to establish/register a Belizean company, acceptable red tape.

Investment Incentives

Repatriation of investment and profits: Guaranteed, 100% of profits up to amount of original investment.

Tax Holiday: Up to 15 years, with exemption from import duties and raw materials where final product is exported.

Foreign Market Incentives

Tariff free access: To U.S., U.K. and CARICOM under CBI, Lome Convention and CARICOM market agreements.

Investment Insurance:

Available from OPIC for currency and political risks.

U.S. Investors' Experience

50 U.S. investors do business in Belize. Coca Cola/Hershey's have made recent substantial investments in agriculture.

SUMMARY OF AGRIBUSINESS SURVEY - BELIZE

Physical Conditions and Resources

Land: 2,000,000 acres of arable land, only 15% in use. Available from government or private owners--lease/purchase.

Climate and Water: Hot and humid, rainfall from north to south ranges 60-100 inches, dry/wet seasons. Water available for irrigation from rivers and wells.

Soils: Myriad, best along river beds, 115,000 acres prime land. Maps available. Limitations handled by crop selection.

Agricultural Production

Sugar: Main crop, 50% of exports, 80,000 MT/year, quota to U.S. Growers beginning diversification--solo papaya, etc.

Citrus Concentrate: Oranges/grapefruit, 1.5 million boxes/year, 1.1 million gallons/year, growing industry with exports to U.S.

Bananas: Exports of 1 million/boxes year, quota with U.K. for 5 million boxes.

Cacao (cocoa): Increasingly important export crop with Hershey's farm and contract growing. 142,000 lbs. in 1985.

Food Crops: Corn, rice and red kidney beans.

Livestock: Beef cattle, hogs and poultry--nearly self sufficient. Imports of some processed meats, and exports of boneless beef to CARICOM and cleared by USDA for U.S. market.

Small dairy industry--\$13 million/year imports/dairy product

Lard/fats/oils--\$13 million/year imports.

Fish Products: \$7.5 million/exports in 1985, mainly rock lobster. Young shrimp farming industry.

Honey: Growing export industry.

Forestry: Some rejuvenation of pine and secondary hardwoods

Critical Factors for a Potential Agribusiness

Land Lease/Purchase: Land leased from government averages US\$3/acre/year. Defined amount of work to be done to obtain option for purchase at cost of US\$25-200/acre.

Managers, Technical People, Field Labor: Managers and technical people need to be brought in with project. Local personnel training feasible. Low cost migrant labor.

Agricultural Production Inputs: One company has monopoly on fertilizers/ag chemicals sold at high cost. Concession needed from gov't for direct project imports is being done.

Disaster Factor: 1961, 1978 hurricanes, med fly clear, insects/molds/parasites of tropical climate--manageable.

Electric Energy: Expensive, US\$.205/kwh, diesel generators. Need and option available for project to supply its own electricity.

Communications: Good domestic/international phone/telex service.

Living Conditions Safe environment, suitable housing and consumer goods and primary/education available.

Cost Competition: Slightly higher production costs than some competitor countries, compensated by stable environment and tariff-free access to key foreign markets.

Market Advantage: Tariff free to U.S., U.K., and CARICOM.

Long Term Commitment: Needed for proper project development.

SUMMARY OF POTENTIAL PROJECT INVESTMENT OPPORTUNITIES
BELIZE

Selection Criteria

Interviews and Inspections: The Team spent three weeks with agribusiness owners and their operations, discussed project ideas.
Criteria: Is there a ready market for the product? Can the product be efficiently produced? And can the investor make a good return on his money?

Description and Ranking of Project Opportunities

Tropical Fruits: Papaya, Melons, Mango: Ready U.S. market, CBI advantage, good shipping, attractive margins.
Citrus Concentrate: Good market through CBI to U.S. Land available, good profits according to current producers.
Winter Vegetables: U.S. market in "dead of winter", good shipping, cucumbers, etc. exported now. Good profits.
Shrimp Farming: Good natural conditions, some farms starting to produce, U.S. market, weekly reefer shipping.
Cacao (cocoa) Production: Hershey's guarantees purchase, supplies seeds/technical assistance, low cost land available

Banana Production: 10 year market contract with Fyffes of U.K., premium price, quota of 5 million/boxes/year, current production, 1 million boxes, 6,000 acres of available land

Dairy and Dairy Processing: US\$13 million imports/year, Land/climate is available/suitable. Processing of UHT milk.

Ornamental Plants: U.S. market through CBI. Year round growing climate, one U.S. company producing for export.

Hydroelectric Generating Plants: High cost electricity, profitable project could supply hydro power at one half the cost. Would supply project needs and sell surplus to public utility.

Pineapple Production: Growing U.S. demand, CBI market advantage, good product currently grown, land available.

Rice Farming: Supply domestic market/CARICOM market as done before. 10,000 acre irrigated farm is for sale.

Logging and Timber: Rejuvenations offers opportunity.

Oil Seed Production/Processing: For import substitution.

Deep Water Ocean Fishing: Untapped potential.

Other Aquaculture Projects: Crawfish farming is done.

Cashew Nut Production: Cashews grown but not commercially.

Herbs and Spices: Grown for export, room for growth.

Sheep Production: Project for U.S. and CARICOM markets.

Beef Cattle Feeding: Using local raw materials, for processing for domestic and CARICOM and U.S. markets.

Cogeneration of Electricity: Using available bagasse to supply a lower cost electricity and save foreign exchange.

SECTION III
ONE PAGE SUMMARIES OF PROJECT
INVESTMENT PROFILES

Project Name: Vegetable Production for Export

Location: Belize, in the fertile northern sector

Project Proposal:

To participate in the lucrative winter vegetable market in the United States by establishing and operating a 1,000 acre farm with a packing plant.

Potential Profitability:

The capital investment required for a 1,000 acre farm and a packing plant would be \$3,150,000. This will create a company capable of earning nearly \$3,000,000/year after 3 years.

Project Viability:

Market: The winter vegetable market in the U.S. continues to be one of the most attractive opportunities in the fresh food business, since the growing areas that can competitively serve this market are limited.

Production: Northern Belize has a climate that is well suited to the vegetable business. Good sandy loam soils are available. There are two major rivers, and acceptable well water. Land can be purchased by foreigners without problem, \$150 per acre for uncleared, \$250 per acre for cleared. Transportation by truck to McAllen, Texas; biweekly reefer service to Florida; and by daily air freight is all available.

Personnel: While good middle level bilingual managers can be found in Belize, they would have to be trained in the vegetable business. There appears to be a ready supply of low cost migrant farm labor.

Local Investors:

There appears to be very few partners who could assist in the major capital commitment that this sort of venture requires. However, many families are land poor, and might be able to contribute land to the project while the U.S. investor would bring in the equipment and working capital.

Valuable information and assistance can be obtained by contacting the Belize Agribusiness Company (BABCO) and the Belize Export and Investment Promotion Unit (BEIPIU).

Project Name: Rice and Cattle Ranch

Location: Belize, in the Cayo District, 25 miles west of Belize City

Project Proposal:

To purchase the existing 7,000 cleared acres of the Big Falls Ranch, its milling facilities, and all existing buildings and equipment. To farm and mill 2,000 acres of rice rotated with red kidney bean, to lease another 2,000 acres to outsiders, mill their production, and use the remaining 3,000 acres of land for a cattle herd of 3,000 head.

The Belize government is actively involved in the sale of Big Falls Ranch.

Potential Profitability:

The required capital investment will be \$4,500,000, which should produce annual operating profits of \$2,388,000 after four years.

Project Viability:

- Market:** The local market which currently imports rice, and the CARICOM market where Belize has duty free access for its farm products. The CARICOM is a ready market also for beef and red kidney beans.
- Production:** The property was developed as a rice farm. The red kidney bean fixes nitrogen in the soil. Good pasture exists along with 1,700 head of cattle. A paved road to Belize City exists. Shipping to CARICOM is available.
- Personnel:** Big Falls is fortunate in having two fine resident managers who can probably be relied upon to be a part of the new management team. Mr. Godwin Hulse is overall ranch manager, and Ms. Pat Shaw manager of the cattle herd.

Credibility of Local Investors:

With his experience as an engineer, banker and manager of Big Falls Ranch Ltd., Mr. Godwin Hulse, receiver of the ranch property can offer valuable assistance and information to the potential U.S. investor.

Project Name: Cashew Growing and Processing for Export

Location: Belize, 30 miles west of Belize City

Project Proposal:

To establish a joint venture with an existing cashew grower with the goal of upgrading and expanding the farm to 400 acres.

Potential Profitability:

The project as prepared would entail a capital investment of \$1,000,000 which would generate an operating profit starting in year 5 and exceeding \$2,000,000/year in year 10.

Project Viability:

Market: The world cashew market grows steadily with prices ranging recently from \$2.50-\$3.50/lb.

Production: Sandy soils, requiring drip irrigation. Climate is suitable. Project program: (1) increase population of older acres, (2) establish a drip irrigation system, (3) begin regular farm practices of pruning, weeding, fertilizing, and pest control, (4) establish a nursery of superior trees for next expansion phase.

Personnel: Given the extent of the new investment targeted for the farm, a good general manager will be required who has an agronomic background and management experience. In addition, it will be necessary to provide top level advice for irrigation, fertilizer and pest management practices. A U.S. consultant should be employed, with visits to the farm at least every 6-8 weeks.

Credibility of the Local Investor:

The Sylvestre family began planting cashews in 1978, and the acreage has been built gradually since then. The family is well known and respected in Belize. They have learned a great deal about cashew cultivation but are interested in the establishment of a joint venture with a partner who will bring in capital for upgrading and expansion measures.

Project Name: Integrated Dairy

Location: Western Belize

Project Proposal:

To purchase a 2,000 acre farm to feed a herd of 800 milking cows with milk production to be packaged in UHT/aseptic containers.

Potential Profitability:

Based upon an assumed capital investment of \$3,951,000, the project will have a payback of 4.6 years, and operating profits of \$2,300,000 per year after ten years.

Project Viability:

Market: Belize is currently importing \$5,655,000/year of dairy products (at least 50% of total demand).

Production: Brown Swiss will be the breed of choice, followed by Holsteins. Though all dairy cattle have to be carefully managed in a tropical environment, these breeds have been managed successfully under Belize conditions in many other locations. Good highways exist to major population centers of Belize City, Belmopan, and Orange Walk. Due to the absence of brucellosis in Belize, special negotiations will have to be conducted to bring in live animals.

Personnel: Needed will be one expatriate general manager, one expatriate dairy manager, and one expatriate creamery manager.

Prospective Partners:

The interested U.S. investor could obtain detailed information on suitable land availability and respectable landowners/prospective partners from the Belize Chamber of Commerce and Industry.

Project Name: Export Banana Production for the United Kingdom

Location: Southern Belize, Toledo District

Project Proposal:

To establish a joint venture with a local partner to install a 500 acre banana farm with all the fruit to be sold to the British company Fyffes.

Potential Profitability:

A 500 acre banana farm would have an investment cost of \$2,283,000 and would be expected to produce an operating profit of \$670,000 per year after three years.

Project Viability:

Market: Belize has a preferred quota of 5,000,000 boxes per year under a special marketing agreement with Fyffe, with 1988 production projected at 2,000,000 boxes. Prices with Fyffes considerably higher than international market.

Production: Soil survey of prospective land sites necessary. Some risk of chill damage but an acceptable risk. Irrigation necessary. Good chance of locating farm within 25 miles of port Big Creek. Migrant labor and Grand Nain seed stock available.

Personnel: An active and respectable local partner is a necessary part of this business. The banana industry is very management intensive, and the banana industry members in Belize are active in their support of industry requirements.

Credibility of Local Partner:

Interested investors wanting to contact potential local partners could contact Mr. Craig Griffith, Executive Chairman, Banana Control Board, Big Creek, Belize.

Project Name: Sheep Production for Export into CARICOM Market

Location: Western Belize, in the Cayo District, approximately 30 miles from the slaughtering and packing facility.

Project Proposal:

The raising of sheep on an established citrus farm, with responsible management and good feed available. Export of lamb and mutton to CARICOM market, using existing facility for slaughtering and packing.

Potential Profitability:

Assuming an investment of \$125,000, the project would produce an operating income of \$160,000 per year within three years.

Project Viability:

Market: The upscale sector of the CARICOM market, mainly the hotel and tourist industry. Economic advantage over direct competitive product, New Zealand grass fed sheep, because of lower transport costs and preferential market.

Production: Haired sheep are well suited to the climate and terrain in mind and pasture facilities are partially established. Project would bring in 30 sheep - St. Croix White Sheep - for breeding stock, and purchase 600 sheep locally - Barbados Black Belly and Mexican Yellow Sheep. Herd would be increased to 2,500 over 4-5 years. Grazed on kudzu and native grasses.

Personnel: An experienced sheep manager will need to be brought in to handle the direct work with the flock.

Credibility of Local Partner:

Parrot Hill Farm is a 9,000 acre farm, with over 400 acres currently planted to citrus, 50 acres in coconuts, and 60 acres in cashews. The American owners, Ralph and Glenn Huff, have invested substantially in the property and are committed to its long term viability.

Project Name: Cocoa Production

Location: Southern Belize, the Toledo District

Project Proposal:

To establish a 200-500 acre cocoa farm in cooperation with Hummingbird Hershey Ltd. which would supply planting stock, technical service, on the farm training, and guaranteed

Potential Profitability:

For the middle to long term investor, an investment of \$420,000 produces a positive cash flow in year seven and a sustained positive cash flow of \$85,000/year in year ten. Cocoa trees bear productively for 30-40 years.

Project Viability:

Market: Hershey has made a commitment to buy 80% of the cocoa produced in Belize, either in a dry or wet bean form.

Production: Cocoa is well adapted to Belize. Water, labor and available land are present. Use of fertilizers and pesticides is required. Hummingbird Hershey Ltd. has a complete growing and market program for participating growers.

Personnel: The cocoa production venture envisions a U.S. collaborator as a major investor with one to several Belizean counterparts at site for farm management, supervision and accounting control. Growing expertise will be provided by Hershey technicians.

Credibility of Local Partner:

Interested investors could contact Mr. Ricard L. Burn, General Manager, Hummingbird Hershey Ltd., P.O. Box 102, Belmopan, Belize.

SECTION IV
PROJECT INVESTMENT PROFILES

A. VEGETABLE PROJECT

1. SUMMARY

There is an opportunity to participate in the lucrative winter vegetable market in the United States by growing in the fertile northern sector of Belize. The proposed project is a 1,000 acre vegetable growing farm, with a packing plant.

The winter vegetable market in the U.S. is supplied primarily by Florida and Mexico with small quantities coming from Chile, and a few Caribbean countries. The uncertain weather and limited growing areas contribute to normally high prices in the winter, offering significant profit opportunities. Given the excellent U.S. transportation system, the market envisioned for this business is the U.S. market east of the Rocky Mountains.

Belize has the most important factors necessary to establish a presence in this business: good soil, climate, availability of inexpensive labor, good water, suitable local roads, and transportation access to the U.S. market. (The last is relatively recent.)

The capital investment required for a 1,000 acre farm and a packing plant would be \$3,150,000. This will create a company capable of earning a return on investment of \$3,000,000 per year after three years.

The Belize government is very favorably disposed toward a project such as this, as it is a large earner of foreign exchange, and employs a large number of people. As such, there are many government policies, including the duty free import of all materials required in the business, that contribute to the profitability of the project.

This project could be started with a U.S. partner, but it is not of critical importance. The growing and packing management will need to be

imported from the U.S. under any circumstances. However, the presence of an active and responsible joint venture partner will be a positive element for the success of the venture.

2. PROJECT DESCRIPTION

The Orange Walk district of Belize has been dominated by the sugar cane industry for several decades. The declining profitability of sugar has made a significant amount of acreage available for alternative crops. Several recent commercial and government trial plantings of winter vegetables have had a mixed record, but it appears that the cucurbits can be grown successfully in this area.

The proposed project would be to purchase 500 - 1,000 acres in this area, construct a packing plant, and establish a winter vegetable company for the U.S. market.

The initial planting would be concentrated in cucumbers, as this is the product that has been most successful in the area to date. However, trial plantings should be done in several other crops, and the long range goal would be to have a balance of products that would include approximately 50% cucumbers, 25% sweet peppers, and 25% other crops, including zucchini, egg plant, hot peppers, and possibly vine ripened tomatoes.

The project includes the purchase of the land, the construction of the packing plant, the installation of a first class irrigation system, and the staffing of well qualified managers who have expertise in growing vegetables under tropical conditions. The project asset commitment does not include transportation equipment (for export), as it would be more economical to rent this equipment, given the short term nature of the harvest season.

3. MARKET CONSIDERATIONS

The winter vegetable market in the United States continues to be one of the most attractive opportunities in the fresh food business,

since the growing areas that can competitively serve this market are limited. Climate represents the major limitation, eliminating all of the continental North American growing areas except Florida and Mexico. Cost of labor and transportation eliminate many of the Caribbean areas and Hawaii. And the availability of the required quantities of competitively priced labor again eliminates many Caribbean areas. However, Belize fits the required profile for all of the major elements of this business, and should be able to compete effectively in this market.

The U.S. winter vegetable market is both a broad and a deep market. The demographics of fresh vegetables in the U.S. are excellent, with per capita consumption rising each year. In addition, the market has widened greatly over the last decade with the average U.S. supermarket now handling over 200 produce items, in contrast to approximately 80 items less than ten years ago.

Due to deregulation the trucking industry has created a responsive, inexpensive network of refrigerated transportation, which gives product coming into ports such as Nogales, Arizona; McAllen, Texas; or Miami, Florida economic access to 50 - 75% of the U.S. population.

In addition, because of the uncertain winter weather in Florida and frequent crop damage in the Culiacan district of Mexico from fall hurricanes, winter vegetable prices will often be substantially greater than the prevailing level which is 25-75% higher than summer prices. These extraordinary prices represent the compensation for the farmers who commit themselves to growing superior crops in remote areas, which have high agricultural risks.

4. TECHNICAL/ECONOMIC CONSIDERATIONS

a. Climate

The Orange Walk/Corozal area of Belize located in the far north of the country near the Yucatan border of Mexico has a climate that is well

suited to the winter vegetable business. Temperatures never fall below 50° Fahrenheit during the growing season (November - April), and the median highs range from 83.9 to 91.7, median lows ranging from 63.5 to 73.6.

There is a distinct dry season during the bulk of the anticipated harvest period (February - April). Rainfall during the growing season is erratic, with very heavy rains occurring at times. Irrigation will be required, and pest management will be one of the top priorities of the farm manager.

b. Soils

There is a great deal of variability in the soils in the Orange Walk District, ranging from heavy clay to pure sand. (One of the first large vegetable ventures was located on an extended block that consisted of 6-15" of sand over heavy clay, making drainage a difficult problem.)

However there are large blocks of good soil, and one of the current American investments, Gourmet Produce, is located on an 800 acre block of good sandy loams. Given the great deal of land that was planted to sugar, it should not take long to locate 500 - 1,000 acres of first class vegetable land.

c. Water

The Orange Walk area has two major rivers going through it, and there is a substantial amount of good soil along these rivers. In addition, the quality of the well water in the area has been extensively tested by USAID technical teams, and was found to be acceptable in pH(6.5-7.4), acceptable in salinity (electrical conductivity of less than .8 mmho/cm), and generally low in iron. Therefore, though each site would have to be individually tested, all of the wells examined were suitable for drip irrigation.

d. Cost of Land

Land can be purchased by foreigners in Belize if it is intended for an acceptable economic project. The land cost in the Orange Walk area is currently in the range of \$100 - \$200 per acre for uncleared land and \$200 - \$300 for cleared land (former sugar land).

e. Labor Availability

Though Belize itself has a low population base, the government has established an accommodating attitude vis-a-vis the use of immigrant farm workers from Mexico, Guatemala, and El Salvador. A farm operator must keep records of the aliens and show that local labor was not available for the job.

Another benefit of working in Belize is that nearly everyone, with the exception of the most recent labor immigrants, appeared to be completely bilingual in Spanish and English.

f. Labor Cost

As wages in Belize are higher than in the home countries of the laborers, the workers are normally pleased with the prevailing minimum wage of approximately \$.80 per hour. Labor benefits are minimal and should not exceed 10-15%.

g. Government Incentives

The government of Belize offers many incentives to potential investors for export crops. Among them are the following:

- 1) Tax holiday of up to 15 years.
- 2) Guaranteed repatriation of investment, as well as profits from capital gains.
- 3) Preferential access to the U.S. market under the CBI, to the Caribbean market under CARICOM, and to the European Market under

the Lome Convention. The most important fact for this project is duty free access to the U.S. which offers a cost advantage compared to Mexico.

4) Exemption from duties on imported machinery and equipment needed for exported products, and from duties on spare parts for specialty equipment. Of particular importance for the vegetable business is the ability to bring in KDs (knock-down corrugated boxes) from the U.S., fertilizer and pesticides from the U.S. and Mexico, and trellis poles and twine from Mexico.

h. Transportation

Belize has three different ways to transport vegetables into the U.S. market.

1) Several vegetable growers successfully transported their produce overland to McAllen, Texas during the 1986-87 season. This represents a 40 to 48 hour journey, with independent Mexican truckers charging approximately \$2,100-2,300 for the trip for a 40 ft. reefer. (If the truckers were given steady back hauls of materials from McAllen, the rate could probably be renegotiated.) There was little or no problem with the Mexican customs authorities, but in the future, if a very large volume goes through the country in direct competition with their own vegetable industry it could pose a potential problem.

2) Refrigerated shipping is now available by vessel on a weekly basis, going from Belize City to West Palm Beach, Florida. The current rate being quoted by Tropical Shipping is \$0.0625 per lb., all inclusive. While this is more expensive than the trucking rate, there should be less transit damage to the product and it ends up closer to the large east coast markets.

3) Air freight is available daily via TACA or TAN flights to Miami for high value products. Ornamental flowers are currently going by air, as are papayas.

i. Management/Capital

Management and capital are the missing elements in the Belize equation. While good middle level bilingual managers can be found in Belize, they would have to be trained in the vegetable business. Therefore, any investor must plan to bring in all of the management that would be required for the first few years until local managers can assume more of the responsibility.

In addition, there appears to be very few partners who could assist in the major capital commitment that this sort of venture requires. However, many families are land poor, and might be able to contribute land to the project while the U.S. investor would bring in the equipment and working capital.

5. FINANCIAL CONSIDERATIONS:

a. Land Purchase. The purchase of 1,000 acres of land at \$250 per acre will be assumed. However, the planting program should be planned to proceed slowly, reaching the full production level of 1,000 acres by the third or fourth year.

b. Equipment		
1. Irrigation @ \$1,500 per acre	\$1,500,000	
2. Tractor/Implements	400,000	
3. Packing Plant/Equipment	500,000	
4. Vehicles	100,000	
5. Other	<u>100,000</u>	
Sub-Total		\$2,600,000

c. Other		
1. Buildings/Roads	50,000	
2. Working Capital	<u>250,000</u>	
Sub-Total		300,000

Capital Cost Summary

a. Land Purchase	250,000	
b. Equipment	2,600,000	
c. Other	<u>300,000</u>	
TOTAL		\$3,150,000

d. Operating Expenses

1) Field Expenses

As there is still little operating history of the vegetable business in the Orange Walk area, the operating cost data must be examined with caution. Cost estimates as based on best available data are as follows:

	<u>\$ per Acre</u>	
	<u>Cucumbers</u>	<u>Bell Peppers</u>
Labor	\$ 140	\$ 210
Land Prep/Seed	100	160
Fertilizer	100	200
Irrigation	170	210
Pest Control	140	200
Trellising	310	310
Other	<u>50</u>	<u>50</u>
TOTAL	\$1,010	\$1,340

2) Harvesting/Packing/Others

	<u>\$ per Carton</u>	
Picking/Packing	\$ 1.30	\$ 1.40
Carton	1.00 (1 1/2 bu)	.80 (1/2 bu)
Freight	3.00	3.00
Customs	.20	.20
Sales Commission	<u>1.00</u>	<u>1.00</u>
TOTAL	\$ 6.50	\$ 6.40

3) General and Administrative Expenses

Salaries/Benefits	\$100,000
Legal/Clerical/Accounting	25,000
Radio/Telephone/Telex	25,000
Security	15,000
Vehicles	35,000
Other	<u>100,000</u>
TOTAL	\$300,000

e. Operating Cost Summary

Boxes/acre	<u>Cucumbers</u>			<u>Bell Peppers</u>		
	<u>500</u>	<u>700</u>	<u>900</u>	<u>600</u>	<u>900</u>	<u>1,200</u>
Field Cost(/acre)	1,010	1,010	1,010	1,340	1,340	1,340
Cost/Box	2.02	1.44	1.12	2.23	1.49	1.12
Picking/Packing	1.30	1.30	1.30	1.40	1.40	1.40
Carton	1.00	1.00	1.00	.80	.80	.80
Freight	3.00	3.00	3.00	3.00	3.00	3.00
Customs	.20	.20	.20	.20	.20	.20
Commission	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
Total Cost	8.52	7.94	7.62	8.63	7.89	7.52

f. Estimated Profit

	<u>Cucumbers</u>	<u>Bell Peppers</u>
Acres Planted	500	500
Boxes/acre	700	900
Revenue/box	12.00	12.00
Operating Cost/box	<u>7.94</u>	<u>7.89</u>
Operating Profit	4.06	4.11
Gross Operating Profit	\$1,421,000	\$1,849,500
Total Operating Profit		\$3,270,500
General and Administration		<u>300,000</u>
Net Profit Before Debt Service		\$2,970,500

6. PROSPECTIVE PARTNERS

The potential U.S. investor interested in working with a local landowner or grower could obtain valuable information and assistance in identifying prospective partners by contacting two groups fostering new agribusiness ventures.

Belize Chamber of Commerce and Industry, BEIPU, P.O. Box 291, 7 Cork Street, Belize City, Belize, Telephone: (501) 44913/44138, Telex: 121 CHAMBER BZ, Cable: BZ CHAMBER

Belize Agribusiness Company (BABCO), Commercialization of Alternative Crops Project, G. Matthew Tokar, Chief of Party (Chemonics), Post Office Box 92, 1 Arthur Street, Orange Walk Town, Belize, Central America, Telephone: 03-2585

B. RICE AND CATTLE RANCH PROJECT

1. SUMMARY

A significant opportunity exists in Belize for an integrated rice and cattle operation.

There is a domestic shortage of rice. In addition Belize has both a market opportunity and market access to sell rice and meat into the CARICOM market.

The area proposed for the project, Big Falls Ranch in the Cayo District of Belize, has successfully produced both rice and cattle for many years. A large rice mill is part of the property, and adequate cattle slaughtering facilities exist in Belize.

The required capital investment will be \$4,500,000, which should produce annual operating profits of \$2,388,000 after four years.

The Belize government is currently actively involved in the sale of Big Falls Ranch, and is seeking increased rice and beef production in the country.

2. PROJECT DESCRIPTION

The Big Falls Ranch is located in the Cayo District of Belize approximately 25 miles west of Belize City (the site of the largest slaughtering facility). The total property is for sale and consists of 36,000 acres, of which 7,000 are currently cleared and prepared for either rice production or pasture land.

There is a large rice milling facility on the property, capable of milling 2-4 tons of paddy rice per hour. The facility has 36 storage tanks, all with automated loading access, capable of storing up to 13,000,000 pounds of rice.

Big Falls Ranch at one time farmed up to 9,000 crop acres of rice, though the herd of cattle was smaller than it is today (1,700 head). Refinanced several times due to problems of marketing and management, it is now in receivership, with the entire property for sale.

The proposed project would be to purchase the 7,000 cleared acres, the milling facilities, and all the existing buildings and equipment. The business goal would be to farm and mill 2,000 acres of rice (rotated with red kidney beans) lease another 2,000 acres of rice to outsiders, mill their production, and use the remaining 3,000 acres of land for a cattle herd, which will be built up to 3,000 head.

3. MARKET CONSIDERATIONS

The Big Falls Ranch has been one of the major rice suppliers of Belize for years, and its decline has contributed to a current shortage of rice in the country. Belize has recently been importing rice, while before it had been exporting bagged (consumer bags of 1-5 lbs.) rice to Jamaica. The current price of rice is \$500.00 per ton for bulk rice locally, and \$750 per ton for high grade bagged rice.

While exact numbers are not available, several sources confirm that cattle numbers in Belize have shrunk over the last decade. Some estimates have put the decline from 40,000 down to 20,000 head. Under any circumstances, all observers agree that there is a shortage of beef locally. In addition Belize has been exporting beef into the CARICOM market.

Red kidney beans represent one of the staple crops, both in Belize and in the CARICOM countries. They are grown successfully by the Mennonites in Belize, and 1986 was a very profitable year for both domestic and export sales. This product, therefore, has a large market both domestically and internationally and is an excellent choice for the crop to be rotated with rice.

4. TECHNICAL CONSIDERATIONS

a. Slaughtering Facilities

The largest slaughtering facility in Belize, Belize Meats, Ltd. (BML) is owned 51% by the Belize government and 49% by a private American investor. It is in an unusually strong position, in that it has a current USDA certification, making it the only slaughtering facility in the CARICOM market to have this certification. This is of critical importance, as USDA certification is required for shipping between CARICOM partners.

BML is currently shipping one container per week into Jamaica and Barbados. This is a total of 30,000 lbs. of boneless beef, or 100-120 head of live beef, given the current cattle that are being brought in for slaughter. The General Manager of BML estimates that they could ship 13 containers per month into Jamaica and 5 containers per month into Barbados. (This does not take into account the Trinidad market, which is estimated to be an additional 6 - 8 containers per month.)

This would mean a total of 4 1/2 containers per week for just Jamaica and Barbados, or 420 - 540 head per week. The capacity of the plant is approximately 560 per week, and the local market is currently taking 50 head per week. Therefore, BML appears as if it would be able to handle a great deal of the estimated Jamaican and Barbadian demand before it would reach its market saturation.

b. Management

Big Falls is particularly fortunate in having two fine resident managers, who can probably be relied upon to be a part of the new management team. This circumstance should be very appealing to investors.

Ms. Pat Shaw is the manager of the cattle herd, and has done a superior job in this area. The herd now stands as the largest in the country (1,700 head) and is in excellent condition.

Mr. Godwin Hulse came to the ranch from government service and has now been on the farm for eight years. He is the receiver, and the overall manager at present. He has both an engineering and financial background, knows all of the ranch and its equipment and would be a key member of a new team.

To contact Mr. Godwin Hulse write to: Big Falls Ranch Ltd., Post Office Box 938, Belize City, Belize, or telephone him at Belmopan 08-2632.

c. Pasture

Since the entire area planned for pasture was originally prepared for and planted to rice, unusually good pasture land has resulted. It is easily worked, can be irrigated and is drained. Therefore, given the annual budget of \$50,000 per year for pasture improvement, the pasture area should be able to support at least one cow per acre.

d. Transportation

Big Falls lies approximately ten miles off the principal east/west highway on a good secondary road. From there it is another 25 miles to the slaughtering facility. As a grader will be a necessary part of the farm equipment, the maintenance of the secondary road is not a major consideration. Local haulers are readily available for trucking cattle to market.

e. Disease

One of the major advantages of raising cattle in Belize is the absence of brucellosis. However vesicular stomatitis is present, which means that beef containing bones cannot be shipped to any place in the CARICOM market. This is taken into account in the market pricing.

f. Crop Rotation

The rotation of rice and red kidney beans offers several strategic advantages. Red kidney beans are legumes, and fix nitrogen in the soil. In rotating they will assist in weed control for the rice, particularly for control of red rice. In addition red kidney beans are very much in demand, both locally and in the CARICOM market, and are an easy crop to market.

g. Rice Mill

The mill in place in Big Falls is very large, with a capacity that substantially exceeds our production goals. However, if the rice is as successful as projected, the milling capacity will be in place for an expanded market opportunity for Belize.

h. Legal

There are two legal bodies handling the property in receivership. The Government of Belize is the owner of 11,113 acres of land, and Adela is the owner of an additional 26,000 acres, as well as having a lien on the cattle, rice mill, and all vehicles, buildings and equipment.

The Government's portion of the auction is being handled by Mr. Gian Ghandhi, the Solicitor General of Belize. Adela's portion is being handled by Attorney Glenn Godfrey.

There is no deadline for the bidding. There is an agreement between Adela and the Government to accept only a bid for the entire property. A reserve (minimum level) price has been set for the property.

5. FINANCIAL CONSIDERATIONS

a. Purchase of 7,000 acres of land; existing herd of 1,700; existing equipment, rice mill, and all building and supplies. (\$3,500,000)

b. Purchase of new farm equipment and rice milling equipment.
(\$800,000)

c. Working capital for business. (\$200,000)

a. Land	\$3,500,000
b. Equipment	800,000
c. Capital	<u>200,000</u>
Total	\$4,500,000

d. Production/Revenue

1) Rice

Rice will be grown once a year, to be harvested during the spring dry season. It will be alternated with red kidney beans. Current yields at Big Falls are 3,500 lbs. per acre compared to yields of 6,000 - 8,000 lbs. in the U.S. We will assume 3,500 lbs. per acre for year one, 4,000 lbs. per acre for year two, and 4,500 lbs. per acre for ongoing years. For the land leased to local farmers, yields will be assumed at 3,500 lbs. per acre.

The mill is currently yielding up 75% milled rice from the paddy. This milling rate will be maintained.

The following are the current prices for the various rice products as well as our assumed product mix giving the expected weighted average price for the rice:

<u>Product</u>	<u>Production Share</u>	<u>Price</u>
Bulk Rice	70%	\$.250 per lb.
Packaged Rice	18	.375 per lb.
Bran	7	.050 per lb.
Broken Rice	5	.060 per lb.

Weighted Average = \$.250 per lb.

2) Red Kidney Beans

Red kidney beans enjoyed very strong prices in 1986, selling for \$.50 - .75 per lb. into the CARICOM market, and at \$.40 per lb. for local sales. It is expected that there will be a substantial amount of additional acres planted in response to this and that the price will weaken. An average price of \$.40 per lb. will be assumed.

Normal production levels of red kidney beans are 1,000 - 1,200 lbs. per acre. (This should be a conservative estimate, given the residual fertilizer in the soil from the rice production.)

3) Cattle

There are currently 1,700 head on the farm, in very good condition. The goal will be to build the herd to 3,000 over a period of four years. We assume that 80% of the cows will bear calves each year, which will be ready for sale within 14 months, and weigh 1,000 lbs. when sold at \$.40 per lb. live weight.

Ten percent of the herd will be culled each year to be sold at a weight of 1,000 lbs., at \$.25 per lb. live weight.

e. Operating Cost Assumptions

1) Rice

The current management of Big Falls Ranch is growing and harvesting the rice at a cost of \$280 per acre. This is a fully loaded cost, including labor, farm chemicals, and depreciated equipment costs.

The current cost of milling is \$.03 per lb. and this will be maintained.

We will assume an additional \$.03 per lb. for packaging, transportation and marketing.

2) Red Kidney Beans

Normal production costs of red kidney beans in the Big Falls area are \$200 per acre. This is a fully loaded cost, including land preparation, plantings, field maintenance (labor and materials), and harvesting at the rate of 1,000 lbs. per acre. The current cost of \$200 per acre will be maintained for this study.

3) Cattle

- a) Medical expenses will be assumed at \$5.00 per head.
- b) No purchased feed is required, as Big Falls has very good pasture available.
- c) Five field hands will be assumed, at a total cost of \$25,000 per year.
- d) The annual cost of pasture work and improvement is assumed to be \$50,000 per year.
- e) We will assume an additional \$50,000 per year for fence work, corral and pen maintenance and other costs.

4) General and Administrative

- a) We will assume one General Manager, one Rice Manager and one Cattle Manager, at a total cost of \$150,000 per year. This will include all benefits, housing and other expenses.
- b) Accounting, legal and clerical costs will be assumed at \$25,000 per year.
- c) The cost of managing the maintenance shop will be assumed to be \$100,000 per year.

d) A contingency factor of \$100,000 per year will be assumed.

Table 1 - Rice Production/Revenue

(000)	1 year	2 year	3 year	4 year
Acres Farmed	2,000	2,000	3,000	2,000
Lbs. per Acre	3,500	4,000	4,500	4,500
Lbs. Produced (000)	7,000	8,000	9,000	9,000
Acres Leased	2,000	2,000	2,000	2,000
Lbs. per Acre	3,500	3,500	3,500	3,500
Total Paddy Rice (000)	14,000	15,000	16,000	16,000
Lbs. Produced (000)	7,000	7,000	7,000	7,000
Mill Yield	75.0%	75.0%	75.0%	75.0%
Total Milled Rice (000)	<u>10,500</u>	<u>11,250</u>	<u>12,000</u>	<u>12,000</u>
Total Revenue (\$000)	2,625	2,813	3,000	3,000

Table 2 - Rice Gross Operating Profit/Loss

	YEAR (\$000)			
	1	2	3	4
Gross Revenue				
Operating Expenses	2,625	2,813	3,000	3,000
Farm Cost (@\$280/acre)	560	560	560	560
Milling Cost (\$.03/lb/paddy)	420	450	480	480
Packing/Trans/Mkting (\$.03/lb)	<u>315</u>	<u>338</u>	<u>360</u>	<u>360</u>
Sub-Total	1,295	1,348	1,400	1,400
Gross Profit	1,330	1,465	1,600	1,600

Table 3 - Red Kidney Beans Gross Operating Profit

	YEAR (\$000)			
	1	2	3	4
Acres Planted	2,400	2,000	2,000	2,000
lbs/acre	1,000	1,000	1,000	1,000
lbs Produced (000)	2,000	2,000	2,000	2,000
Gross Revenue (@\$.40/lb.)	800	800	800	800
Operating Cost (000)	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
Gross Profit (000)	400	400	400	400

Table 4 - Cattle Production/Revenue

	YEAR (\$000)				
	0	1	2	3	4
Breeding Herd	1,700	2,210	2,700	3,000	3,000
Calves	1,350	1,750	2,150	2,400	2,400
Culls	170	220	270	300	300
Calves Saved	670	720	570	300	300
Calves Sold	0	680	1,030	1,580	2,100
Lbs. Sold (000)	0	680	1,030	1,580	2,100
Revenue (@\$.40) (000)	0	272	412	632	840
Culls Lbs. Sold (000)	170	220	270	300	300
Revenue (@\$.25)	<u>43</u>	<u>55</u>	<u>68</u>	<u>75</u>	<u>75</u>
Total Revenue (\$000)	43	327	480	707	915

Table 5 - Cattle Profit/Loss

	YEAR (\$000)			
	1	2	3	4
Revenue	327	480	707	915
Operating Expenses				
Medical (@\$.5.00)	20	24	27	27
Wages	25	25	25	25
Pasture Work	50	50	50	50
Other	50	50	50	50
Sub-Total	<u>145</u>	<u>149</u>	<u>152</u>	<u>152</u>
Gross Profit	182	331	555	763

Table 6 - Big Falls Funds Flow

	YEAR (\$000)				
	0	1	2	3	4
Capital Investment					
Ranch	(3,500)				
Equipment	(800)				
Working Capital	(200)				
Gross Profit Rice		1,030	1,465	1,600	1,600
" " " " Beans		400	400	400	400
" " " " Cattle		<u>182</u>	<u>331</u>	<u>555</u>	<u>763</u>
Sub-Total		1,912	2,196	2,555	2,763
<u>General and Administrative Expenses</u>					
Salaries		150	150	150	150
Legal/Acct/Clerical		25	25	25	25
Shop		100	100	100	100
Other		<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Sub-Total		375	375	375	375
Funds Flow	(4,500)	1,537	1,821	2,180	2,388

Table 7 - HERD ASSUMPTIONS

	0	1	2	3	4	YEAR 5	6	7	8	9	10
Beginning Herd	200	225	250	280	315	350	390	435	490	545	610
Pregnancies	160	180	200	220	250	280	310	350	390	440	490
Births	130	140	160	180	200	220	250	280	310	350	390
Males	65	70	80	90	100	110	125	140	155	175	195
Females	65	70	80	90	100	110	125	140	155	175	195
Culls	40	45	50	55	65	70	80	85	100	110	120
Ending Herd	225	250	280	315	350	390	435	490	545	610	685

Table 8 - BEEF PRODUCTION/REVENUE

		1	2	3	4	YEAR 5	6	7	8	9	10
Steers		65	70	80	90	100	110	125	140	155	175
Lbs. (000) @ 900		59	63	72	81	90	99	113	126	140	158
Revenues (000) @ \$0.40		24	25	29	32	36	40	45	50	56	63
Culls		40	45	50	55	65	70	80	85	100	114
Lbs. (000) @ 1300		52	59	65	71	85	91	104	111	130	142
Revenue (000) @ \$.25		<u>13</u>	<u>15</u>	<u>16</u>	<u>18</u>	<u>21</u>	<u>23</u>	<u>26</u>	<u>28</u>	<u>33</u>	<u>36</u>
Total Revenue		37	40	45	50	56	63	71	78	89	99

Table 9 - MILK PRODUCTION/REVENUE

		1	2	3	4	YEAR 5	6	7	8	9	10
Producing Herd		225	250	280	315	350	390	435	490	545	610
Gallons per Day/Cow		5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Gallons per Year/Cow		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Milk Produced (000)		450	500	560	630	700	780	870	980	1,090	1,220
Revenue (@ \$4.00)		1,800	2,000	2,240	2,520	2,800	3,120	3,680	3,920	4,360	4,880

Table 10 - DAIRY GROSS OPERATING PROFIT

	YEAR									
	1	2	3	4	5	6	7	8	9	10
Gross	1,800	2,000	2,240	2,525	2,800	3,120	3,480	3,920	4,360	4,880
Feed (@ 1.73/head/day = 63l/yr)	142	158	157	199	221	246	274	309	344	385
Labor (@ 5.00/man)	60	60	65	65	70	75	80	85	90	95
Dairy (@ .10/gallon)	45	50	56	63	70	78	87	98	109	122
Creamery (@ 1.00/gallon)	<u>450</u>	<u>500</u>	<u>560</u>	<u>630</u>	<u>700</u>	<u>780</u>	<u>870</u>	<u>980</u>	<u>1,090</u>	<u>1,220</u>
Subtotal	697	768	858	957	1,061	1,179	1,311	1,472	1,633	1,822
Operating Profit	1,103	1,232	1,382	1,563	1,739	1,941	2,169	2,448	2,727	3,058

Table 11 - CATTLE GROSS PROFIT

	YEAR									
	1	2	3	4	5	6	7	8	9	10
Gross Revenue	37	40	45	50	56	63	71	78	89	99
Feed @ .75 * 390 days = \$290/head	19	20	23	26	29	32	36	41	45	51
Gross Profit	18	20	22	24	27	31	35	37	44	48

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Table 12 - TOTAL OPERATING PROFIT

	YEAR									
	1	2	3	4	5	6	7	8	9	10
Gross Milk Profit	1,103	1,232	1,382	1,563	1,739	1,941	2,169	2,448	2,727	3,058
Gross Cattle Profit	<u>19</u>	<u>20</u>	<u>23</u>	<u>26</u>	<u>29</u>	<u>32</u>	<u>36</u>	<u>41</u>	<u>45</u>	<u>51</u>
Total Gross Profit	1,122	1,252	1,402	1,589	1,768	1,973	2,205	2,489	2,772	3,109
Expenses										
Shop	25	25	25	25	25	25	25	25	25	25
General and Administration	100	100	100	100	100	100	100	100	100	100
Sales/Marketing	180	200	224	252	280	312	348	392	436	488
Salaries	<u>200</u>									
Sub-total	505	525	549	577	605	637	673	717	761	813
Net Profit	617	727	853	1,102	1,163	1,336	1,532	1,772	2,011	2,296

6. PROSPECTIVE PARTNERS

As mentioned before, Mr. Godwin A. Hulse is the receiver for Big Falls Ranch, Ltd. As the Belize Government is interested in moving this property quickly, the potential U.S. investor would do well to contact Mr. Hulse directly to obtain further details on Big Falls and the latest information on its status.

Mr. Hulse's experience as an engineer, banker and operations manager of Big Falls also positions him as an excellent candidate to form part of the owner/manager team that would revitalize the Big Falls operations. He may be contacted at the following address:

Big Falls Ranch Ltd.
Post Office Box 938
Belize City, Belize
telex: 212 BZE
telephone: 02-44901/02, 08-2632

C. CASHEW PROJECT

1. SUMMARY

The project proposed is the establishment of a joint venture with an existing cashew grower, with a goal of upgrading and expanding the farm.

The market will be the world export market of cashew, in addition to some local sales.

The farm is already planted with 200 acres of cashews, and the area has shown itself to be suited to the crop. The owners of the farm are wellknown and respected in Belize.

The project as proposed would entail a capital investment of \$1,000,000 which will generate an operating profit beginning in year 5 of \$200,000 and increasing to more than \$2,000,000 in year 10.

As this project will generate significant export earnings, it will have the strong support of the Belize government, and will be eligible for the benefits available to all export businesses.

2. DESCRIPTION OF PROJECT

Cashew Grove Company, Ltd. is a Belize company which runs an 897 acre farm approximately 30 miles west of Belize City, immediately off the main highway. The farm is currently planted with 200 acres of cashews, 20 acres of citrus, 7 acres of pineapple and mangoes, and the balance of the land is in rolling pine ridge or thick brush.

The Sylvestre family began planting the cashews in 1978, and the acreage has been built gradually since then. They have learned a great deal about cashew cultivation but are interested in the establishment of a joint venture with a partner, who will bring in capital for the upgrading and rehabilitation of the existing acreage as well as an expansion into new areas.

The immediate goals of the new venture would be to:

- a) Increase the population of the older acres, planted to 100 trees per acre, after pruning the trees. (The oldest areas are in poor condition and need substantial rehabilitation)
- b) Establish a drip irrigation system.
- c) Begin regular farm practices of pruning, weeding, fertilizing, pest control, and irrigation.
- d) Establish a nursery of the superior trees for the next expansion phase.

3. MARKET CONSIDERATIONS

The world cashew market grows steadily even as some of the traditional suppliers have seen their shipments begin to falter. Brazil and India are some of the major producers with Mozambique beginning to drop off. In the Central American area, El Salvador and Guatemala have begun to make serious attempts to become established in the industry. However, there appears to be a definite market opportunity for a project in Belize.

World market prices have varied but have been in the range recently of \$2.00 - \$3.00 per lb. for processed nuts. The price is expected to soften in the next few years, but should remain in the \$1.50 - \$2.50 range.

4. TECHNICAL CONSIDERATIONS

a) Soil

The soil in the Pine Ridge areas of Belize is sandy, with little organic material. Cashews can be grown in these soils, but it will be necessary to provide the adequate irrigation and fertilization program to obtain desirable growth and yields.

b) Climate/Water

The temperatures in the Cayo District in Belize are well suited to the cashew business, with median monthly lows in the winter very rarely going below 60^o, and a great deal of heat and photointensity prevailing for most of the year.

However, the area has a distinct dry season with inadequate rainfall for several months. Therefore, a good drip irrigation system should be established, in order to produce the desired return from the new high population plantings.

Good ground water is available as the Sibun River is contiguous with one corner of the property, and the Colonel English Creek flows along the eastern boundary.

c) Management

Because of the substantial new investment targeted for the farm, a good General Manager will be required, who has an agronomic background and management experience.

In addition it will be necessary to provide top level advice for irrigation, fertilizer and pest management practices. A U.S. consultant should be employed, with visits to the farm at least every 6-8 weeks.

5. FINANCIAL CONSIDERATIONS

a) Population/Production

The most recent plantings in this farm have been in windrows of 2' X 20' or 1,089 per acre. However, modern planting techniques in other areas have increased these populations to 2,150 per acre, with substantial improvements in production. Old plantings locally have been producing 2,000 - 4,000 lbs. per acre. However, these new populations when accompanied by improved fertilization and pesticide practices, have increased the yields to 12,500 - 20,000 lbs. per acre.

b) Revenue

Since prices are expected to weaken over the next few years we will use a price of \$2.00 per lb. of processed nuts.

c) Capital Investment Assumptions

- 1) The population goal will be 2,180 trees per acre, with plants going in at 2' X 10'. This will allow an aisle which can be used for a small tractor to enter for mowing, spraying and harvesting. Therefore, the old farms will have an additional 2,000 trees per acre planted, at a cost of \$.25 per tree. The more recent planting will have an additional 1,000 trees per acre planted, at a cost of \$.25 per tree, in year two.
- 2) An additional 200 acres will be cleared at \$200 per acre for rough clearing and land preparation. This will then be planted to 2,180 trees per acre, at \$.25 per tree. 100 acres will be planted in year two and 100 more in year three, and 100 more in year four.
- 3) A drip irrigation system will be installed in the entire farm. The estimated cost of this system would be \$1,500 per acre.
- 4) Additional farm equipment will be needed for mowing, spraying and harvesting. This is estimated to be \$50,000.
- 5) Working capital for the farm, including the estimated preproduction cost for the new area will be \$100,000.

Capital Cost Summary

1) Replant old 100 acres	\$ 25,000
2) Replant newer 100 acres	50,000
3) Clear/plant 200 acres	150,000
4) Drip irrigation system	600,000
5) Farm Equipment	75,000
6) Working capital	<u>100,000</u>
TOTAL	\$1,000,000

d. Operating Cost Assumptions

- 1) There will be one pruning cycle per year at a cost of \$250 per acre. (5 trees per hour, 2,180 trees, \$.80 per hour)
- 2) There will be four Gramoxone (Paraquat) cycles per acre per year, at \$25.00 per cycle. Total of \$100.00 per acre.
- 3) There will be four mowing cycles per year with small tractors and a bush hog. The tractors will be able to mow 5 acres per hour, at a cost of \$20.00 per hour. Total cost will be \$17.00 per acre, including a driver.
- 4) The fertilizer application will have to be determined by a good research and leaf tissue and soil analysis program. For the purpose of this study, we will assume \$100 per acre.
- 5) Pesticide costs including insecticides and fungicides will be assumed at \$300 per acre per year.
- 6) Drip irrigation costs will have to be determined over time depending upon rainfall and the tree requirements. We will assume \$500 per acre.
- 7) Harvesting costs will be based upon three rounds per acre, one acre per hour, with tractor/trailer costs at \$20.00 per hour and labor costs at \$5.00 per hour for one driver and two laborers. Total cost would be \$22.50 per acre.
- 8) Other costs will be assumed at \$50.00 per acre.
- 9) Manual processing costs will be assumed at \$0.25 per lb.
- 10) General and administrative expenses including the General Manager, radio, telephone, telex, travel, legal, clerical and accounting expenses are assumed at \$100,000 per year.

Operating Cost Summary

Pruning	\$ 350	per acre
Herbicides	100	
Mowing	17	
Fertilizer	100	
Pesticides	300	
Irrigation	500	
Harvesting	23	
Other	<u>50</u>	
Total	\$1,440	

e. Production Forecast

Given the high populations, we will assume a maximum of 10 lbs. per tree per year, starting at four lbs. in the fourth year and increasing in a straight line.

We will assume a 25% yield of kernels from the raw nut, and a 90% yield of whole kernels from the manual shelling of nuts.

The older trees will be assumed to be producing at two lbs. per tree at the current time, with a graduated increase.

6. PROSPECTIVE PARTNERS

The potential U.S. investor can contact the Cashew Grove Company, Ltd. through its owner:

Hon. Louis Sylvestre
House of Representatives
Post Office Box 267
Belize City, Belize
Telephone: 44348

Another prospective local partner would be Parrot Hill Farms, owned and managed by two Americans, Glenn and Ralph Huff. On their largely undeveloped 9,000 acre farm, they have planted sixty acres to cashews and would be interested in expanding plantings to a commercial level. The Huffs can be reached by writing to:

Parrot Hill Farm
Post Office Box 720
Belize City, Belize

or to

Parrot Hill Corporation
190 East Paulson Avenue, #4
Wasilla, Alaska 99687

CASH FLOW STATEMENT - CASHEWS

Lbs/Acre	Year									
	1	2	3	4	5	6	7	8	9	10
First 100 Acres	200	400	800	8720	10900	13080	15060	17440	19620	21800
Second 100 Acr	1000	2000	4000	6000	8720	10900	13080	15060	17440	19620
100 New Acres	0	0	0	0	0	8720	10900	13080	15060	17440
100 New Acres	0	0	0	0	0	0	8720	10900	13080	15060
Total Lbs.(000)							8720	10900	13080	15060
First 100 Acres	20	40	80	872	1090	1308	1506	1744	1962	2180
2nd 100 Acres	100	200	400	600	872	1090	1308	1506	1744	1962
100 New Acres	0	0	0	0	0	872	1090	1308	1506	1744
100 New Acres	0	0	0	0	0	0	872	1090	1308	1506
Total lbs.	120	240	480	1472	1962	3270	4776	5648	6520	7392
Processed Lb. (@25%)	30	60	120	368	490.5	817.5	1194	1412	1630	1848
Revenue(000) (@\$2.00/Lb)	60	120	240	735	981	1635	2388	2824	3260	3696
Field Costs (@1390/acre)	278	417	556	556	556	556	556	556	556	556
Processing C (@\$0.25/Lb.)	7.5	15	30	92	122.625	204.375	298.5	353	407.5	462
G & A	50	75	100	100	100	100	100	100	100	100
Total Expen.	335.5	507	686	748	778.625	860.375	954.5	1009	1063.5	1118
Operating Pro (000)	(\$276)	(\$387)	(\$446)	(\$12)	\$202	\$775	\$1,434	\$1,815	\$2,197	\$2,573

D. DAIRY PROJECT

1. SUMMARY

The project is an integrated dairy, producing milk and certain by-products for the local market.

Belize is currently importing nearly \$5.7 million per year in dairy products, with only two small dairies serving a very underdeveloped local market. The climate is suitable to the breeds to be used, and the market will easily support the size of the proposed project.

Based upon an assumed capital investment of \$3,951,000, the project will have a payback of 4.6 years, and operating profits of \$2,300,000 per year after ten years.

2. PROJECT DESCRIPTION

A 2,000 acre farm will be purchased, which will be sufficient to feed a herd of 800 milking cows. The herd will be based on 200 springer (6 month pregnant) cows, which will be imported from the U.S. The herd will be built up to 800 over a period of 12 - 15 years.

It is assumed that each cow will give an average of 5.5 gallons of milk each day. The current price of whole milk BZ\$1.00 per pint, or US\$4.00 per gallon. (Two Belizean dollars, BZ\$, equal one U.S dollar.)

3. MARKET CONSIDERATIONS

Belize is currently importing annually the following quantities of dairy products:

Milk and cream	\$1,650,000
Powdered milk	1,225,000
Butter	500,000
Butterfat	<u>2,280,000</u>
TOTAL	\$5,655,000

This is estimated to be at least 50% of total demand. Numerous team contacts in Belize, including senior members of the Government felt that one of the most attractive opportunities available today exists in the dairy industry.

4. TECHNICAL CONSIDERATIONS

a. Breeds

Brown Swiss will be the breed of choice, followed by Holsteins. Though all dairy cattle have to be carefully managed in a tropical environment, these breeds have been managed successfully under Belize conditions in many other locations.

b. Government Regulations

Due to the absence of brucellosis in Belize, special negotiations will have to be conducted with the government to bring in live animals, which have had a Strain 19 Vaccination, a requirement in the U.S. for breeding animals. However, given the strong desire of the Belize Government to build the dairy industry, this is not anticipated to be a major problem.

c. Transportation

Good highways are available throughout most of the Cayo District, and paved highways exist nearly until the Guatemala border. Therefore, the dairy will have good access to the major population areas of Belmopan, Belize City, and Orange Walk.

d. Packaging

The goal of the project will be to package the milk in UHT/aseptic containers to be sold as "long life" milk. The economics of this process, which include the costs of bringing in the equipment and of a marketing survey to determine product acceptance, will have to be examined in detail.

5. FINANCIAL CONSIDERATIONS

- a. 2,000 acres of developed land will be purchased in the Cayo area at an assumed cost of \$300 per acre or a total cost of \$600,000.
- b. Farm equipment valued at \$300,000 will be needed, sufficient to farm 1,500 acres per year of the required feed crops for the herd, primarily milo and corn.
- c. The dairy processing equipment is anticipated to cost \$2,500,000. This will be sufficient to process and pack up to 5,000 gallons per day.
- d. 200 cows will be brought in at \$2,200 each and 5 bulls at \$2,200 a piece.
- e. The working capital requirements of the venture will be assumed to be \$100,000.

Capital Investment Summary

Land Purchase	\$ 600,000
Farm Equipment	300,000
Dairy Equipment	2,500,000
Dairy Herd	440,000
Bulls	11,000
Working Capital	<u>100,000</u>
TOTAL	\$3,951,000

f. Operating Assumptions

1) Herd Assumptions

- a) There will be an annual pregnancy rate of 80%.
- b) The settling rate (percent of live, viable births) assumed will be 80%.

- c) There will be a 50/50 male, female split.
- d) The males will be sold after 14 months, at an approximate weight of 900 lbs. at \$.40 per lb.
- e) Each year all of the female calves will be added to the herd until 800 producing cows are reached. In addition, 20% of the mature females will be culled and sold at \$.25 per lb., at an approximate weight of 1,300 lbs.

2) Operating Expenses

a) Feed

The dairy cattle will be fed a combination of 17 lbs. per day of cotton seed and hulls, 35 lbs. per day of bagged silage, 26 lbs. per day of milo (sorghum) or field corn.

The male calves will be fed on milk supplements after 30 days, and then lesser quantities of the dairy cattle feed until 14 months. The average cost per day will be \$.75.

The cotton seed and hulls will be purchased from Guatemala at a cost of \$60 per ton, CIF, ranch. The other feed costs will be assumed to be \$.02 per lb. The total of these costs is \$1.73 per head per day.

b) Staffing

There will be three expatriate managers; the General Manager, a Dairy Manager, and a Creamery Manager. Total annual assumed costs will be \$200,000 including housing, benefits, etc.

Eleven local employees will be hired initially. Two general farms hands will be needed for the herd, one dairy hand for every 50 milking cows, and 5 creamery hands. An annual cost of \$5,000 per employee per year will be assumed.

c) Dairy Operating Expense

Incremental dairy operating expenses including maintenance and repair, sanitation, etc, will be assumed to be \$.10 per gallon.

d) Creamery Operating Expenses and Containers

Incremental creamery operating expenses, including sanitation, power, maintenance and repair will be assumed to be \$1.00 per gallon.

e) Sales/Marketing

Sales and marketing expenses will be assumed to be 10% of gross milk revenue.

f) Shop

Mechanical expenses including all unabsorbed shop expenses will be assumed at \$25,000 per year.

g) Accounting, Legal and Clerical Work

Accounting, legal and clerical expenses will be assumed to be \$25,000 per year.

h) General and Administrative Expenses

General and administrative costs will be assumed to be \$100,000 per year. This will include radio, telephone, travel and entertainment, vehicles, contingency.

6. PROSPECTIVE PARTNERS

To learn more about land availability, prospective land owners/partners and the dairy industry in Belize, the potential U.S. investor can contact: Belize Chamber of Commerce and Industry, BEIPU, P.O. Box 291, 7 Cork Street, Belize City, Belize, Telephone: (501) 44913/44138, Telex: 121 CHAMBER BZ, Cable: BZ CHAMBER

E. BANANA PROJECT

1. SUMMARY

A significant profit opportunity exists in Belize for the plantings of bananas to be exported to the United Kingdom.

Belize, together with Jamaica, Surinam, and the Windward Islands, enjoys a preferred access to the market in the United Kingdom. Because of this "protected" market, industry prices are higher than in other locations. All the fruit produced in Belize would be sent to this preferential market.

There are now many capable producers of bananas in Belize and several other projects are currently being installed. Good land is available for plantings and Belize is still producing substantially less than its quota.

A 500 acre banana farm would have an investment cost of \$2,283,000, would be expected to produce an operating profit of \$670,000 per year after three years.

As banana farms are significant earners of foreign exchange and large employers, the growth of the banana industry has the full support of the Belize government.

2. PROJECT DESCRIPTION

The banana industry of Belize has a long term market agreement with a British company, Fyffes, which buys all of the bananas produced by Belize, loaded onto their boats, at a price which is negotiated yearly.

Therefore, this project would be for the installation of a 500 acre banana farm with all of the fruit to be sold to Fyffes at a new wharf now planned to be built in 1988. Project funds would be for the purchase of the land, the clearing and planting of the farm, the installation of all the appropriate technology for a modern banana farm

and for the costs of maintaining the farm until production begins approximately nine months after plantings.

The farm should be located as near to the port of Big Creek as possible. Industry members assured the profile team that several thousand acres of good banana land is available within 25 miles of the port, an acceptable trucking distance.

This company should be established as a joint venture with a local partner. The banana industry is very management intensive, and the banana industry members in Belize are active in their support of the industry requirements. An active and respectable local partner is a necessary part of this business.

3. MARKET CONSIDERATIONS

For many years former colonial areas of the United Kingdom have been given preferential marketing rights for bananas. However, until recently the industry in the Caribbean area has been characterized by low productivity, little technical innovation/advancement, poor profitability, and declining production. (Jamaica's production fell from 300,000 tons in the 1930's to 12,000 tons in 1984.)

However, recent changes have contributed to an increasing profitability in the industry, and a corresponding increase in production. Market prices in the United Kingdom have been strong, and the industry has seen an influx of new farms with increased investment raising the productivity levels of the farms. The industry in Belize has gone from just a few farms producing approximately 500,000 40 lb. boxes per year in the early 1980's to several farms now, with 7,900 acres in production. 2,200 more acres are being planted now, and production is expected to increase to 2,000,000 boxes by 1988, and double that by 1990. This will still be short of Belize's preferred quota of 5,000,000 boxes.

Therefore, the project is unusually attractive since the transportation and marketing are assured, the productivity of the area is proven and the market price is currently at a comfortable profitable level and should remain there unless the British Government makes some major (and unexpected) policy changes.

4. TECHNICAL CONSIDERATIONS

a) Soil

Bananas are the most demanding of all the tropical food products in terms of soil. They should ideally be planted into fine sandy loam, which is at least 48" deep. A portion of the bananas in Belize were planted in soil that was too heavy or had poor chemical characteristics for bananas (low pH, CA/MG unbalance, low CEX, and ZN deficiency). A good detailed soil survey must be done to assure the investors that the soil is acceptable.

b) Climate

Belize is relatively far north for a banana farm and the area has suffered chill damage (temperatures below 54^o Fahrenheit) in the recent past. However, given the other advantages in Belize, this is an acceptable risk.

The area does receive 80 to 120" of rain per year. However, a superior irrigation system will have to be installed. A detailed study should be made to determine if the area and economics best suit an undertree, drip, or overhead system.

c) Transportation

While the main roads in the Big Creek area are poorly maintained concrete roads, there seems to be a good possibility of locating the farm within 25 miles of Big Creek. Given the very likely possibility of the new wharf being constructed in Big Creek and the ready availability

of independent trucks to haul the fruit to the wharf, local transportation should not be a major financial commitment, nor a major management problem.

d) Government Regulations

Given the export nature of the banana business, favorable government rulings are readily available, including the import of KDs (knockdown boxes), import of materials and equipment, and tax concessions.

e) Labor Availability

The government of Belize has allowed the banana industry sufficient freedom to employ Honduran and Salvadorean workers for the field work. Certain government regulations must be complied with, but labor availability is not a problem.

f) Seed

There is now a sufficient amount of the Grand Nain variety planted locally to provide a seed source. If any problem is found in this area, seed can be imported from Honduras.

5. FINANCIAL CONSIDERATIONS

a) Preproduction

The first harvest of bananas comes 9-12 months after planting, with another harvesting peak coming 18-20 months after planting. The costs of maintaining the farm until fall production is reached after 10-11 months is shown in the Capital Investment section, under "Preproduction".

b) Revenue Assumptions

The revenue assumption of BZ\$12.35 is based on the current price being paid for the fruit. However the BZ\$1.76 charge for the cost of shipping the fruit in barges to Puerto Cortes, Honduras is reduced to BZ\$.50 per box for an assumed amortization charge for the cost of building the new wharf. In addition, the box cost is reduced to BZ\$1.20 per box, assuming that the KDs can be bought directly from the United Kingdom on the direct backhaul.

c) Capital Investment

	<u>Total</u>	<u>Per Acre</u>
Land	\$ 25,000	\$ 50.00
Land Preparation	42,800	85.60
Cableway	390,500	781.00
Cable Propping	100,000	200.00
Irrigation	431,250	862.50
Packing Plant	280,000	560.00
Drainage	77,400	154.80
Roads	11,500	23.00
Buildings	25,000	50.00
Vehicles	41,650	83.30
Other Equipment	21,500	43.00
Planting	425,500	851.00
Pre-Production	<u>411,400</u>	<u>822.80</u>
TOTAL	\$2,283,500	\$4,567.00

d) Cost of Production

	<u>Cost per Acre</u>
Fertilizer	\$ 350.00
Herbicide	50.00
Nematacide	225.00
Sigatoka Control	350.00
Irrigation	250.00
Wages	525.00
Packing/Trucking	325.00
Maintenance	200.00
Administration	150.00
Miscellaneous	<u>50.00</u>
TOTAL	\$2,475.00

e) Revenue Breakdown

	<u>Belize \$</u>
Selling Price/bcx	\$12.35
Wharf Charge	.50
Box	1.20
Control Board	<u>.50</u>
Growers Revenue (1st Class)	\$10.15
Growers Revenue (2nd Class)	5.08

(Assuming 85% of the fruit is 1st class, the average price will be BZ\$9.40 or US\$4.70.)

f) Production Assumptions

	Year		
	<u>1</u>	<u>2</u>	<u>3 and ongoing</u>
Population	800	800	800
Stems/mat	1.3	1.1	1.1
Stems/acre	1,040	880	880
Losses (%)	2.0	2.0	2.0
Stems harvested	1,019	862	862
Stem weight	40	45	50
Shrink	28	25	22
Boxes/stem	0.70	0.82	0.95
Boxes per acre	713	705	836

g) Bananas Profit/Loss

	Year (000)		
	<u>1</u>	<u>2</u>	<u>3</u>
Boxes Produced	357	353	418
Gross Revenue (@ \$4.70 per box)	\$1,678	\$1,659	\$1,965
Acre Variables (@ 1285/acre)	643	643	643
Volume Variables (@ .90/box)	<u>321</u>	<u>318</u>	<u>376</u>
Sub-Total	964	961	1,019
Gross Profit	714	698	946
Administration	50	50	50
Depreciation (@ 13 years)	111	111	111
Amortization (@ 7.5 years)	<u>112</u>	<u>112</u>	<u>112</u>
Sub-Total	273	273	273
Operating Income before Debt Service	\$ <u>441</u>	\$ <u>425</u>	\$ <u>673</u>
Cash Flow Before Debt Service	\$ 664	\$ 648	\$ 896

6. PROSPECTIVE PARTNERS

To learn about the availability of suitable land and to inquire about respectable local partners, interested U.S. potential investors should contact Mr. Craig Griffith, Executive Chairman, Banana Central Board, Big Creek, Belize, telephone: 03-2000, cable: BANCON.

F. SHEEP RAISING PROJECT

1. PROJECT DESCRIPTION

With the increasing viability of the CARICOM market, there has been a steady growth in the flow of goods among the members. Meat in particular is in demand in the countries with higher population, and limited production areas, and an opportunity exists to raise sheep for export to CARICOM members such as Jamaica and Barbados.

The local market for sheep is very limited, as lamb is not a prime meat source. However it is anticipated that there will be a steady growth in demand as production becomes available at competitive prices, particularly since beef and swine are currently in short supply and due to increased tourism.

The Belize River Valley has a great deal of available land that is suitable for sheep production, and the climate is well suited to breed's of haired sheep.

Land can be economically purchased or rented. However, it is proposed that a joint venture be formed with Glenn and Ralph Huff, American brothers who own the 9,000 acre Parrot Hill Farm.

The proposal would be to bring in 30 sheep for breeding stock, and purchase 600 sheep locally. The herd would be increased to 2,500 over a four to five year period.

An existing slaughtering facility, Belize Meats, Ltd., exists which is already processing, packaging and shipping meat into the CARICOM market. The animals would be sold live at this facility.

2. MARKET CONSIDERATIONS

New Zealand lamb has the majority share of the tourist and hotel business in the CARICOM market. The U.S. has a significantly minor share of the same market represented by the following export statistics:

	<u>Sheep Carcass and Prime Cuts</u>	<u>Value</u>
1985	177 MT	\$773,000
1986	174 MT	775,000

	<u>Lamb and Mutton</u>	<u>Value</u>
1985	113 MT	245,000
1986	59 MT	112,200

The grass fed sheep of the current project would compete directly with the grass fed sheep product of New Zealand with economic advantage, given the duty free access to CARICOM and lower transportation costs.

Belizean sheep would also be introduced into the significantly larger "popular" market of CARICOM countries, especially Barbados and Bermuda where a larger consumer base exists.

There is currently very little mutton or lamb sold locally in Belize, and the market will always be limited with Belize's population (currently at 166,200). However, there is presently a shortage of beef in the country and swine production is very limited, offering a market opportunity.

3. TECHNICAL CONSIDERATIONS

a. The breed to be brought in from the U.S. - St. Croix White Sheep - and the breeds to be purchased locally - Barbados Black Belly and Mexican yellow sheep - are all well suited to the local terrain and climate.

b. The area chosen for the sheep on Parrot Hill Farm is currently planted in citrus, with kudzu interplanted under the citrus. This legume is a vine that is high in protein and will provide, when combined with the other native grasses, an adequate diet sufficient to pasture sheep.

The sheep are not anticipated to cause any harm to the citrus while grazing the orchards, as they will not climb the trees as goats will do.

c. Slaughtering Facilities

Belize Meats, Ltd. (BML) is located approximately 30 miles from the farm, nearly all by paved highway. BML is the only facility in the CARICOM market to have a USDA clearance, a requirement for shipment to other CARICOM members.

BML management felt that some changes would have to be made in the slaughtering procedures, as the mechanical equipment now in place for cattle and hogs would need some adjustments. However, it is not anticipated that this would be a major problem.

Due to the presence of Vesicular Stomatitis in Belize, the meat will all have to go into the CARICOM market deboned. This may require some additional equipment, but should not present a significant problem.

d. Management

Glenn and Ralph Huff have a great deal of experience in management. Glenn Huff is a design and contracting engineer and Ralph Huff has a long background in horticulture, nursery, and field agricultural work. An experienced sheep manager will need to be brought in to handle the direct work with the flock. However, the local partners in this case represent a solid asset in terms of experience, local knowledge, and reliability.

e. Transportation

Parrot Hill Farm lies less than one mile off the principal east/west highway, and less than 30 miles from the slaughtering facility. Transportation of the animals will be easily managed.

f. Feed

While the kudzu and native grasses will provide the great majority of the nutritional requirements of the sheep, certain micro-nutrients will be needed to be added to the diet. The cost of this will be covered in the General and Administrative (other) Costs.

4. FINANCIAL CONSIDERATIONS

a. Capital Investment

Trailer for Manager	\$ 25,000
Fencing/pens/corrals	25,000
Pickup	15,000
30 U.S. sheep @ \$500	15,000
600 local sheep @ \$25	15,000
Other (including dogs & horses)	<u>30,000</u>
Total	\$ 125,000

(Note: All farm equipment needed for pasture improvement is currently available on Parrot Hill Farm.)

b. Operating Expenses

1) Personnel	
U.S. Manager	\$ 30,000
Local Hands (2)	<u>15,000</u>
Sub-Total	\$ 45,000
2) Medical Expenses	\$ 4.00 per head
3) Pasture Work	\$ 10,000
4) Maintenance of Facilities	\$ 5,000
5) General & Administrative(other)	\$ 25,000

Note: Other includes: telephone, radio, stock upgrading, travel, benefits, livestock maintenance.

c. Herd/Revenue Assumptions

Each ewe should produce 2.5 lambs per year, with a total of approximately 10% mortality. The lambs will be sold at 7 months of age, at an average weight of 90 lbs., at an average price of \$.60 per lb., live at BML.

(Note: The herd is built to 2,500 head as quickly as is feasible. If cash flow or market prices dictate otherwise, the herd could be built more slowly, which would increase the cash flow in the early years, improving the early rate of return on investment of the project.)

<u>Year</u>	<u>Herd</u>	<u>Herd Status</u>		
		<u>Lambs Produced</u>	<u>Lambs Kept</u>	<u>Lambs Sold</u>
1	600	1,350	500	850
2	1,100	2,500	1,000	1,500
3	2,100	4,700	400	4,300
4 ongoing	2,500	5,600	---	5,600

Profit and Loss Statement (US\$)

	<u>YEAR</u>					
	0	1	2	3	4	5
Capital Exp. (\$125,000)						
Revenue		\$46,000	\$81,000	\$232,000	\$302,000	\$302,000
Expenses:						
Personnel		45,000	45,000	45,000	45,000	45,000
Pasture		10,000	10,000	10,000	10,000	10,000
M & R		5,000	5,000	5,000	5,000	5,000
Medical		8,000	14,000	27,000	56,000	56,000
G & A (other)		<u>25,000</u>	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>	<u>5,000</u>
Total		93,000	99,000	112,000	141,000	141,000
Net Funds Flow (\$125,000)	(47,000)	(18,000)	120,000	161,000	161,000	

5. PROSPECTIVE PARTNERS

The Huffs can be reached by writing to Parrot Hill Farm, Post Office Box 720, Belize City, Belize or to Parrot Hill Corporation, 190 E. Paulson Avenue, #4, Wasilla, Alaska 99687.

G. COCOA (CACAO) PRODUCTION

1. SUMMARY

An unusual opportunity exists in Belize for planting cocoa. Hershey, one of the world's largest chocolate companies has established a high technology cocoa farm in the country. The company supplies planting stock, technical service, and on farm training in cocoa production.

Hershey has made a commitment to buy all of the cocoa produced in Belize either in a dry or wet bean form.

Cocoa is well adapted to Belize. The ingredients for the investment - available land, water and labor - are present. The use of fertilizer and pesticides are required. Overall, cocoa production is a long term commitment, with positive cash flow initiating in years six to eight.

2. PROJECT DESCRIPTION

For centuries cocoa has been grown in the world's tropical belt, but today several of these areas have become politically instable and are in need of extensive rehabilitation because of tree age. For Belize, however, cocoa is a young window of opportunity as a venture investment.

The price of cocoa has maintained a good degree of market stability for the past several years. Ivory Coast and Brazil are the largest producers; and the United States and Germany the largest consumers. This and other market data is given in the table, World Cocoa Production and Grindings Data, on the following page.

In Belize, new technology for production is supplied by Hummingbird Hershey Ltd. (referred to as HHL). HHL represents the cocoa buyer for the ventures end product - "the bean". The project venture, in its best

WORLD COCOA PRODUCTION AND GRINDINGS DATA

Reproduced from Gill and Duffus Market Report 325

Dated April 1987
(all figures in thousand metric tonnes)

Production	<u>1983/4</u>	<u>1984/5</u>	<u>1985/6</u> (estimate)	<u>1986/7</u> (forecast)
WORLD TOTAL	1517	1950	1961	1932
Africa	861	1080	1102	1065
S.America	463	655	606	582
W.Indies	52	53	54	50
Asia & Oceania	141	162	199	235
PRINCIPAL COUNTRIES				
Cameroon	108	120	118	125
Ghana	159	175	219	230
Equatorial Guinea	8	8	6	6
Ivory Coast	411	565	585	570
Nigeria	115	151	120	80
Brazil	302	412	376	372
Colombia	38	41	43	45
Ecuador	48	121	103	80
Mexico	35	42	40	40
Venezuela	16	15	18	18
Dominican Republic	39	39	40	36
Malaysia	80	93	125	150
Papua New Guinea	28	31	30	30
GRINDINGS				
	<u>1984</u>	<u>1985</u>	<u>1986</u> (estimate)	<u>1987*</u>
WORLD TOTAL	1750	1830	1823	
Western Europe	663	686	683	
Eastern Europe & USSR	894	930	913	
N.America	231	226	223	
Central & S.America	355	394	383	
Australia & N.Zealand	11	7	6	
Asia	98	109	140	
Africa	161	164	158	
PRINCIPAL COUNTRIES				
United States	209	205	203	
Germany (FR)	194	207	201	
Netherlands	161	167	183	
USSR	150	160	150	
United Kingdom	90	91	89	
France	52	42	40	
Brazil	214	234	215	
Ivory Coast	85	90	90	

* forecast
not included
in Market
Report 325

form, is for 200 to 500 acres. This size is recommended for the Toledo district, the Hummingbird Highway zone, as well as for varied "niche soil" locations in the Cayo District. The cocoa bean can be sold to HHL either as the "wet bean" (direct from the cocoa pod) or as the "fermented dry bean" ready for export. The fermentation expertise is supplied by the HHL technicians.

The cocoa production venture envisions a U.S. collaborator as a major investor with one to several Belizean counterparts at site for farm management/supervision/accounting control.

3. MARKET CONSIDERATIONS

All cocoa producing countries in the CARICOM market import finished cocoa products. No small scale cocoa bean processing facilities exist. Nonetheless, the ready market outlet for Belizean cocoa beans is Hummingbird Hershey, Ltd. of Belize, the local cocoa bean production and purchasing facility of Hershey Foods Corporation, Hershey, Pennsylvania. HHL will buy all properly fermented and dried cocoa at a contract price paying \$.85 per lb. (1987) placed at the HHL plant. Wet beans can also be sold to HHL at a delivered price of \$.33 per lb. (1987).

The annual prices received at the farm for export beans is determined by the world cocoa commodity markets (i.e. London, New York). Based on world demographics and present product demand, the cocoa market is expected to continue strong into the future. The other cocoa producing countries in the CARICOM export to London or Japan. Neighbors such as Venezuela ship cocoa to Colombia which consumes all its local production and more. Costa Rica produced for local consumption until the disease "Monilia" moved in, necessitating the actual importation of "cocoa liquor/butter fat" products to supply their chocolate confectionary demands.

The strict quarantine methods of cocoa hybrid seed and planting stock in the CARICOM/Central American zone negate rapid spread of the

"Monilia" disease. Belize is "free" of this serious fungal pathogen and also of "Witches' Broom," and two of the three most critical diseases. This pest fact alone enhances Belize as a cocoa production center, since either Monilia or Witches' Broom increases fungicide cost by 50% and can reduce pod yields by 30 to 70% (reference Cocoa, R.A. Lass).

The finished product, the fermented dried cocoa bean, is packed in 110 pound woven plastic bags and moved by truck to the HHL warehouse for export.

4. TECHNICAL CONSIDERATIONS

Since the early 1900's, cocoa has been grown in the tropical Americas as a peasant crop under low input systems. This has resulted in wide spacing of the trees, zero pruning and low fertilizer use. As a result, until the late 1970's cocoa areas production came from collectors of pods not from professional cocoa farmers. The yields of many of these areas is still in a range from 200 to 300 lbs. per acre.

- a. Growing Conditions: Cocoa is a traditional crop in Belize due to suitability of climate and soils. There is available land, along rivers and their alluvial plains in the Toledo and Cayo Districts and adjacent to the Hummingbird Highway zone.
- b. Available Labor: Adequate labor is available for high input production. In addition, training is given by HHL technical services. In fact, Belize is the only member of CARICOM that has such an "in-service" program for cocoa.
- c. Schedules Input Availability: Early returns are dependent upon the rapid establishment of the plantation. Thus the need for formulated fertilizers and specific pesticides following the program for high input systems. All are available in Belize.

d. Shade Stock: Cocoa is grown under shade from the nursery to mature plantations. There are a series of shade options. At the time of initial planting, plantain and papaya can be used. Simultaneously permanent legume or tropical fruit tree shade would also be started. The initial shade fruits can supply early cash flow to the venture.

e. Planting Stock: For the past ten years "hybrid seed" from the CATIE research program in Costa Rica has served as the germ plasma for new cocoa planting. However, continued research at HHL, Malaysia and elsewhere has further pushed the potential for yields beyond an expected 1,200 lbs. per acre to 3,000 lbs. per acre which points out the value of good nursery care for planting material in the first phases of the project.

5. FINANCIAL CONSIDERATIONS

a. Land

While land costs vary in the Hummingbird area, good quality land in high bush can still be purchased for \$50 per acre.

b. Equipment

Small wheeled tractors will be required, as well as spray equipment, mowing machinery, the fermenting box and miscellaneous tools. In addition, a pick-up will be needed for the farm manager. Other equipment required for the initial land development and for hauling the dried beans can be rented. Total equipment costs should be \$35,000.

c. Building

A small office, shop and warehouse will be needed, as well as some housing for security staff and possibly a few workers - \$15,000 will be assumed.

d. Working Capital

Inventory and accounts receivable requirements will be minimal - \$10,000 will be assumed.

e. Pre-Production/Operating Losses

The cost of clearing the farm, planting, and maintaining it until a positive cash flow begins in the seventh year will be \$350,000.

Capital Cost Summary

Land	\$ 10,000
Equipment	35,000
Buildings	15,000
Working Capital	10,000
Pre-Production	<u>350,000</u>
Total	\$420,000

f. Operating Cost Assumptions

1) Field Maintenance

Hummingbird Hershey has supplied the following cost estimates:

	Year - Cost/Acre/Year (Belize \$)			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u> ongoing
Fertilizer	68	136	136	136
Herbicide (contact)	38	29	19	19
Herbicide (broadleaf)	126	42	21	21
Fungicide	84	84	84	84
Insecticide (systemic)	30	20	20	20
Insecticide (foliar)	44	44	44	88
Insecticide (foliar)	36	32	32	64
Ant bait	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
Total	432	397	366	484
Total US\$	216	199	183	242
Est. Labor Cost	<u>180</u>	<u>176</u>	<u>230</u>	<u>153</u>
Total US\$	396	375	413	395

(Note: Labor costs are estimated at HHL's cost of BZ\$2.25 per hour.)

2) Harvesting/Breaking/Fermenting

HHL estimates the labor requirement of harvesting and breaking at 150 lbs. of dry beans per day. Fermenting and drying is estimated to be 500 lbs. per day. Total cost will be assumed at \$.10 per lb.

3) Bagging/Hauling

Dried beans are packed in 110-lb. bags, and then must be trucked to HHL. Bagging (labor and material) and hauling costs are estimated to be \$.05 per lb. (Bags are currently imported from the Dominican Republic at \$1.00 per bag)

4) General and Administration

General and administration expenses, including the General Manager, radio, legal, clerical, accounting, security, etc. will be estimated to be \$50,000 per year.

g. Profitability Potential

The preliminary cash flow statement indicates that the project will earn a cash flow of \$85,000 per year by the tenth year. The long term of payback and the limited return on investment are due primarily to the low yields assumed. As mentioned above, other production areas are achieving yields more than double those assumed here. In addition, no credit has been taken for cash crops that can (and) should be used for shade crops in the first several years, such as plantains, carabola, and certain citrus varieties.

6. PROSPECTIVE PARTNERS

To pursue this investment opportunity in greater detail, interested parties can contact Richard L. Burn, General Manager, Hummingbird Hershey, Ltd., Mile 37, Hummingbird Highway, Post Office Box 102, Belmopan, Belize.

TABLE 1 COCOA (COCOA)

	PER ACRE									
	1	2	3	4	5	6	7	8	9	10
Dry lbs.	0	0	200	300	400	600	800	1,000	1,000	1,200
Revenue (@ \$.85/lb.)	0	0	170	255	340	510	680	850	850	1,020
Cost										
Planting	200	---	---	---	---	---	---	---	---	---
Materials	216	199	183	242	242	242	242	242	242	242
Labor	<u>180</u>	<u>176</u>	<u>230</u>	<u>153</u>						
Subtotal	596	375	413	395	395	395	395	395	395	395
Harv./Break./Ferment. (@\$.10/lb.)	0	0	20	30	40	60	80	100	100	200
Bagging/Hauling (@\$.03/lb.)	<u>0</u>	<u>0</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>18</u>	<u>24</u>	<u>30</u>	<u>30</u>	<u>30</u>
Total expenses	596	375	439	434	447	473	499	525	525	545
Operating Profit	(596)	(375)	(269)	(179)	(107)	37	181	325	325	475
General and Admin. Expenses	<u>25</u>	<u>35</u>	<u>50</u>							
Net Profit	(621)	(410)	(319)	(229)	(157)	(13)	131	275	275	425
NET PROFIT TOTAL (\$000)	(124)	(82)	(64)	(46)	(31)	(3)	26	55	55	85

SECTION V

PROJECT DESCRIPTIONS

A. SEED INCREASE

Belize provides appropriate climate, soil and physical conditions for the production of inbred lines or hybrids of seed corn, sorghum and other materials, and an opportunity for seed and biotechnology companies.

Advantages offered by Belize as a location for this purpose are:

- One of the most stable democratic governments in the Caribbean Basin.
- Bilingual English-Spanish (or German) speaking growers and workers with row crop experience.
- Alternate low-cost location for seed or biotechnology companies presently increasing seed supplies in the subtropics.
- Relative isolation from commercial corn/grain sorghum production can be readily arranged.
- Current or recent corn/grain sorghum producers include:

1. Several Mennonite farmers near Spanish Lookout in Western Belize with row crop dryland/irrigation experience equipment.
2. Big Falls Ranch - A previous owner, Bevis Brothers, provided this service on a contract basis. Land is available for winter or double crop at \$20 per acre per year. Isolated areas are available for confidentiality. The ranch provides excellent communications and expansion to 10,000 or more acres is possible. The property consists of dryland or irrigated and leveled rice land.
3. Belize Agribusiness Company, (BABCO), cooperators in the Orange Walk district are currently doing trial plantings for Garrison Seed Co., Texas. Available resources and options include low cost sugar cane land for lease or purchase or controlled/contract production by small cane growers with vegetable and fruit crop experience.

It is essential that a "pull-through" rather than a "push-through" approach be used for this project. A U.S. seed or biotechnology company should integrate any Belizean production with its present and anticipated needs for seed stock. Under the current U.S. farm program with over 25% reduction in seed grain production acreage, current seed demand is substantially reduced. However, it would be prudent for a prospective U.S. cooperator or representative to investigate the benefits and possibilities of trial plantings and commercial production in Belize in January or February as well as in September or October of 1988.

Note the compatibility of seed corn/sorghum planting and harvest dates with the U.S. dates, thus permitting rapid increases of seed or biotechnology planting stock if and when the need arises.

AN OPPORTUNITY FOR PROFESSIONAL SOIL ANALYSIS

Many of the agribusiness failures in Belize have been due to a lack of recognition or understanding of the importance of a thorough inventory of soil properties prior to extensive investment in new enterprises. The suitability of the site chosen for new businesses is often overlooked due to the low cost of land and the absence of a local provider of site specific soils services.

An excellent opportunity exists for an experienced soil specialist to establish a consulting practice in Belize. Prospective clients would be new and existing farming, ranching, agribusiness, aquaculture and construction ventures as well as government entities.

The consultant/manager should have a broad agricultural, business and professional soils background with some specific experience in the tropics and/or subtropics. In addition to the traditional soil classification and mapping expertise, the person(s) should have a general knowledge of tropical agriculture including irrigation, drainage, fertilizers, crop production and animal husbandry.

Failed agricultural ventures in tropical areas often result in serious soil erosion and eventual desertification. Lenders and agribusiness clients would (once informed and convinced of their value) likely utilize these services on a regular basis if available at going professional rates. Retainer fees with large operations could logically be arranged.

A key part of the proposed consultancy is the follow-up of the discovery information with interpretation and alternative recommendations.

There is substantial variability in soil properties throughout Belize and especially in the Orange Walk and Corozal Districts. Detailed soils mapping in those areas is not planned and funded due largely to this variability and the subsequent cost.

Formal soil mapping is in progress and is funded by the Kellogg Foundation for the other four districts in south and central Belize. The mapping will be somewhat generalized and will utilize the British system of soil classification (with U.S.A. equivalents) or be based on mapping procedures by ACS Wright, et. al. This original classic work was based to a great extent on native and existing vegetation.

An "old dog and young pup" combination might be used, i.e.: an experienced industry soils professional and a young, less experienced but ambitious recent graduate could form a joint practice. Both should be in good health, compatible and be business oriented. On the job training or internship for sub-professionals might also be utilized as a means of securing staff replacements or additions.

A business sense is critical for this practice to be successful. Funding for start up might be arranged by quasi government entities such as USAID, International Executive Service Corps (IESC), foundations such as Kellogg or large local organizations such as sugar, banana, cocoa or citrus producers.

This is a joint business venture viewed from a "service" rather than "product" perspective. It will provide a sorely needed service to Belize, reduce the heartache of failed business ventures, and help expose successful economic and social development in Belize.

B. OTHER TROPICAL FRUIT PROJECT POTENTIALS

There is an increasing worldwide demand for exotic edibles. This is the beginning of a rapidly developing tropical global cuisine. Those countries whose agricultural expertise will be able to adjust most rapidly to these specialty crop changes will indeed increase their exports sales.

Several tropical fruit project potentials encountered in Belize but not formalized into specific proposals are described below. Nonetheless, we feel brief descriptions of these projects do portend the sense of opportunities in Belize.

1. Exotic Tropical Fruits:

Over time, many tropical crop fruits have been introduced into Belize and are growing well. Though the key factors of land, labor and water are available such a project will require in-service training and the necessity of making long term commitments since tropical fruits similar to mango or citrus take five to seven years to attain positive cash flow.

It is suggested that such a venture "spread the risk" by diversifying into several tropical fruit groups such as those listed below. This will enable participants to gain additional pomological expertise, explore marketing outlets and examine quality control and transport parameters.

<u>Fruits</u>	<u>Probable Market Niches</u>
Carambola	Salads, Desserts
Jakfruit	Ice Cream
Lychee	Fresh, Desserts
Mamey	Fresh, Ice Cream
Mangosteen	Fresh, Desserts
Plantain	Fresh, Chips
Rambotan	Fresh, Desserts

2. Tropical Tree Fruit Nursery:

In the establishment and/or proposals for projects in the tropical Americas, tree fruits are quoted frequently as serious potentials. However, a major drawback is the lack of nurseries capable of producing commercial quantities of certified clonal planting stock. Today, local nurseries exist but their stock is limited to one or two crops with little varietal selection.

The "lid" on nursery expansion has been due to limited knowledge of budwood sourcing, propagation expertise and distance. Investing in a tropical fruit nursery would entail U.S. capital, budwood sourcing, nursery operations management and propagation expertise. Liaison with the Belize Ministry of Agriculture is essential to assure local stock certification as well as viable handling of imported fruit "budwood" and tree export through their quarantine facilities.

3. Mangoes

The fresh mango business has shown a steady growth in the United States, and is predicted to continue to grow at a rate of 5 - 10% per year. The main problem has been a lack of consistent high quality supply, particularly for fruit that is available at times other than the peak of the mid-summer soft fruit season in the U.S. This has been complicated by the recent inability of growers to continue to fumigate with EDB, necessitating the establishment of an expensive hot water bath trial and treatment facility.

Tropical Produce Company is located in the Big Creek area of Belize and has 1,000 acres of mangoes, 15-18 years old. The varieties include 350 acres of Tommy Atkins, 300 acres of Sills, 200 acres of Hadens, 150 acres of Keitts, as well as a small quantity of local varieties. They also have the equipment to make mango puree.

The trees were in poor condition until Tropical Produce took over in early 1986, when they began extensive rehabilitation work. However,

a great deal of work remains. They are also beginning a program of planting 600 additional acres of Tommy Atkins.

Tropical Produce appears well financed, as they have plans of planting 1,000 acres of bananas, 1,000 acres of pink grapefruit, and a substantial amount of additional citrus (primarily Tahitian limes) on another 1,000 acre piece of property near the Belize International Airport. However, they have been unsuccessful to this point in shipping fresh mangoes, and are willing to discuss potential ventures with firms that would assist them in establishing the hot water bath treatment. This represents an unusual opportunity, as this is one of the largest blocks of mangoes cultivated by an individual company in the hemisphere.

For the prospective U.S. investor, the following facts about Tropical Produce Company operations would prove useful:

- a. The company is located on the southern highway (toward Punta Gorda) outside of Big Creek. The bulk of the farm is south of Big Creek.
- b. The farm consists of 3,800 owned acres, and 6,000 leased acres. There is 1,000 acres planted in old (20-30 years) mangoes with 600 acres newly cleared and ready for new mangoes.
- c. They have 100 acres planted now to a banana seed bed and are in the process of planting 500 acres of commercial bananas. Their goal is to have 1,000 acres.
- d. They have a nursery operating with a large area under good shade and with a mist irrigation system. They develop the mango, citrus, lime, planting stock and cocoa seedlings there for themselves and for local sale.
- e. There is 1,000 acres cleared now that will be planted soon with pink grapefruit.

f. The company is owned by a Grand Cayman Company, Tropical Farming, which started the farm in early 1986. The manager, Mr. Sorensen, is Danish, as are most of his senior staff.

g. The old mangoes are about 30% Tommy Atkins, with a balance being Hadens, Sills, and Keitts. The Tommy Atkins are in fair condition, but the whole farm badly needed pruning and substantial rehabilitation when they arrived. Some of this has been done.

The new mangoes will be mostly Tommy Atkins, together with some local varieties.

h. They have not yet begun farming the mangoes. The old populations are 25 per acre, with new populations at 30 per acre. They have tried to become fruit fly free but had shipments turned back at the U.S. border. They also had a severe anthrognose outbreak in a European shipment. They have for the present, rejected the hot water trials as being too expensive. The mango yields have been very low. One 1987 harvest was only 2,000 pounds per acre, but this was due partially to the heavy pruning in 1986.

i. They do have a puree plant which appears to be good, basic stainless steel equipment. The puree is not concentrated but is shipped at a natural 15^o brix. They said that this is the product the market requires.

j. The entire area appears to have major soil problems including low pH, CA/MG imbalance, aluminum toxicity, low cation exchange rate, and zinc deficiency. This will be deadly to the bananas and cannot be good for the trees.

k. To contact the Tropical Produce Company write to Post Office Box 450, Gabourel Lane, Belize City, Lelize, or call 02-2240, or 06-2004.

4. Papaya

The Project Profile Team saw some small blocks of papaya, planted by members of the sugar growers cooperative. With the help of Belize

Agribusiness Company, (BABCO) a USAID sponsored firm, the cooperators/growers had planted stands of the solo variety (Strawberry and Sunrise) which were drip irrigated and well managed.

This next year, they will have 1,500 boxes per week with peaks of 4,000 per week in March and November. Their current marketing contract is with Trans Gulf International which is paying them \$3.25 per box and KD, FOB, Belize Airport.

They are eager to develop an additional marketing contract. A prospective U.S. investor should contact the Secretary of the Cooperative, Pedro Perez at the following address:

Pedro W. Perez, Jr.
Secretary
Belize Cane Farmers Association
Post Office Box 28
Corozal Town, Belize
telephone: 04-2611/2092

5. Fresh Pineapple

An opportunity exists to supply fresh pineapple to the U.K. the company purchasing all of the bananas in Belize, Fyffes, has expressed a serious interest in the purchase of fresh pineapple. Per capita consumption in the U.K. is still very low (compared to the U.S.), high quality supplies are limited, and the prices are firm.

However, this is a project filled with many serious obstacles.

a) Pineapple is oversupplied in the world, and the processed business is dominated by two very large companies in the branded market (Dole and Del Monte), and by Thailand in the generic market. Therefore, the canning or the offgrade product is a remote possibility. (There could be an opportunity, however, to put in a simple juice plant for all of the offgrade product. There is a strong demand for the concentrated juice.)

b) Pineapples are capital intensive, and a very substantial investment will be required for the necessary equipment and working capital. In addition, pineapples have not been cultivated successfully previously in Belize, and the history of the industry indicates that two crops (or six years) are required before adequate yields are achieved in new areas. This again raises the capital requirements.

c) Very large new plantings are being established in Costa Rica and the Dominican Republic, which means that the competitive environment for Belize will be very difficult in anything other than a preferred U.K. market.

C. ORNAMENTAL PLANTS

Belize has some of the elements available for the establishment of an ornamental plant or foliage plant business. Inexpensive land is available, the climate is suitable, and labor cost availability and quality are suitable. In addition, there are daily flights to Miami for shipment.

Galloway Farms on the northern highway, owned by Mr. Murdock from eastern Pennsylvania, has 30 acres under shade cloth with sprinklers, and a great deal more land with a developed irrigation system which is not being utilized.

The primary product is Sanseveria (Mother-in-law tongue), which accounts for 90% of the shipments. In addition, they ship Sanderiana and some Emerald plants.

While the foliage/ornamental business was not examined in detail, it is apparent that an opportunity would definitely exist for someone with an established market who needs a good production source of specific stock. Belize has a large genetic bank of many exotic tropical plants. Given the very favorable government treatment of export business, this opportunity should be looked into closely by someone who is currently in the business and wishes to expand.

D. SWINE PROJECT

The local market in Belize for pork products is supplied mostly by imports. Belize currently imports more than \$4,000,000 of pork products, primarily from the U.S., with Denmark being a secondary supplier. A good opportunity exists for the establishment of a swine production facility. However, due to the presence of hog cholera, Belize is prohibited from exporting its swine products in the CARICOM market.

The opportunity in swine looks particularly interesting in the Big Creek area, due to the presence of a very substantial quantity of reject bananas, which can be used as a source of low cost feed. One of the largest banana growers, Mr. M. Dunker, currently has a swine herd of over 200 head, which is being fed a combination of bananas and bone meal/blood meal purchased from the slaughtering facility, Belize Meats, Ltd. Several other sources of feed supplements are also available locally. Assistance in obtaining improved breeding stock, rations and disease control will be needed.

While detailed numbers were not gathered for this project, all observers agreed that it seems to present an unusually good opportunity particularly if the project included the manufacture of end products, i.e.: lard, bacon, ham, and sausage.

E. MARINE SHRIMP PROJECT DESCRIPTION

The Belizean shrimp farming industry is still in the preliminary stages leading to successful, commercial operations.

Many factors favor the success of an export shrimp industry in Belize: good natural growing conditions, available state-of-the-art U.S. technology, preferential access to the U.S. market under the CBI, and weekly reefer service to the U.S. eastern seaboard.

Some constraints are also present: the ongoing adaptation of technology to the Belize environment, import duties on feed and seed stock, the high cost of electricity, and an export duty on frozen shrimp.

In making his investment decision, a prospective U.S. partner would need to make his own benefit/risk analysis of the specific opportunities presented by the present marine farming industry in Belize.

Operating costs and financial results are available from the two shrimp companies which the Profile Team met with during its work in Belize. Both companies would be interested in exploring joint venture arrangements. They may be contacted through their respective managers:

Mr. Russ Allen
Allen Farms, Ltd.
c/o Pelikan Beach Hotel
Dangriga, Belize
tel. 05-2044

Mr. James Hyde
Maya Mariculture of Belize Ltd.
P.O. Box 854
Belize City, Belize
tel. 02-2206
telex: 133 Maya Mar

Allen Farms which now has 140 acres in ponds imports its seed stock and feeds from Ecuador, Panama and the U.S.

Maya Mariculture operates a large hatchery producing an indigenous white shrimp variety. The company controls approximately 1,000 acres of suitable land and is encouraging U.S. entrepreneurs to invest in 200 acres grow-out farming operations. The company would supply grow-out farmers with seed stock and technical assistance.

SECTION VI

APPENDICES

A. HYDE SHIPPING

1. The current run has a visit to Belize every ten days, with the run being Miami - Belize - Roatan - Miami.
2. The vessel carries the equivalent of 140 20' containers. They handle both 20' and 40', reefer and dry. Most of the reefers are electric, but some are diesel.
3. Their five other vessels also go to the Caymans, Costa Rica, Queyis, and the Bahamas. They do not go to Jamaica.
4. The basic rates for the reefers are \$140-170 per ton, or \$.070-.085 per pound. However, they say that they will match any of Tropical's quotes.
5. The dry container rates are \$730, Belize - Miami, for a 20' dry and \$250 for Miami - Belize. 40' dries are double this.
6. The weight limit in the 40' reefer is 47,000 lbs.
7. There is no problem taking the containers to the farms in Belize for reasonable time periods. However, the reefers cannot leave the port in Miami, necessitating expensive rehandling for long distance forward shipping.
8. The suggestion was made to Hyde Shipping that they reverse the run, and go Miami - Roatan - Belize - Miami. The reasoning was that the current five day run to Miami would be too long for the produce business. They said that they would examine the proposal.

B. TROPICAL SHIPPING

Tropical Shipping, based in Riviera Beach, Florida, has been conducting an aggressive marketing campaign in the Caribbean. They are currently providing weekly container service from Belize to Florida Quoting a rate of \$.0625 per lb., from the farm to West Palm Beach. They have six vessels, and will stop in Belize City and Big Creek, providing the best service to the U.S.

The U.S. contact is: John Nasby
(305) 881-3914
(800) 367-6200

MEMBERS OF THE PROJECT PROFILE SURVEY TEAM

Glenn E. Taylor, D.V.M.

Dr. Taylor, team chairman, is President of Agro Financial Management, Oakdale, California. He is a consultant and management advisor for animal agriculture projects, and a member of management groups which can supply experienced assistance with crops, trees, vines and livestock. Dr. Taylor remains a practicing veterinarian.

Dr. Taylor has experience in production, processing and marketing of beef, lamb, pork and other meat and dairy products. Through the years he has organized and restructured integrated livestock enterprises, working in the Continental United States and in 24 foreign countries with projects in Central and South America, Africa, the Middle and Far East. He has a long time association with Belize, having worked in developing both the cattle and sugar industries there.

Dr. Taylor received his education as a Doctor of Veterinary Medicine from Washington State University as also his B.S. Degree in Agriculture. He is a long standing Associate Member of The American Society of Agricultural Consultants.

Robert E. Ascheman, Ph.D.

Dr. Ascheman established Ascheman Associates Consulting in 1979. The firm provides crop scouting, soil testing, contract research, and consulting services to grower, dealer, and manufacturer clients. consulting activities include these areas as well as claims investigation and expert witness testimony. A junior executive training program is also available.

Dr. Ascheman has agriculture chemical research and development experience in all major crop production areas in the U.S. through various aspects of the introduction of Treflan, Basagran, and experimental pesticides. He and his firm have conducted research with herbicides, growth regulators, soil sterilants, insecticides, fungicides, seed, equipment, and soil fertility. He has wide range consulting experience in claims investigation, expert witness testimony, and in litigation about crops and soils related matters in areas throughout the U.S.

Dr. Ascheman received his B.S. and M.A. from the University of Minnesota and his Ph.D. degree from Ohio State University. He has been an active member and has served in elected or appointed offices in several professional organizations including the following: American Society of Agricultural Consultants, National Alliance of Independent Crop Consultants, American Society of Agronomy, Weed Science Society of America, North Central Weed Control conference, and the advisory board for the Cooperative Extension Service in both Iowa and Minnesota. Dr. Ascheman is the current President of ASAC and was elected to the Crop Professionals Hall of Fame. he is an ARCPACS Certified Professional Agronomist/Crop Specialist.

Robert H. Fulton, Ph.D.

Dr. Fulton, tropical crop specialist, is a private consultant for production and pest management of exotic tropical fruits and plantation crops - banana, cocoa, cashew, and coffee. The services are embodied in a Program Package Approach, which integrates skilled on-site fact finding and implementation that results in effective cash flow of diversified fruit crop production.

Dr. Fulton has been doing tropical crop management problems for the last 29 years. This has encompassed living in several Latin Countries while directing team research - production efforts leading to cost - savings for clients and profit makers for the agricultural chemical industry. Today he is considered as instrumental in low-volume spraying as well as exploiting pest life cycles to enhance effective - cheap management.

Dr. Fulton's educational background includes a B.S., Master's and Ph.D. degrees in horticulture, Chemistry and Plant Pathology from Michigan State University. He is an author of over 80 scientific papers and has implemented a host of training manuals for use in pesticide safety/pest management/extension training. He is a member of the professional organizations of AFS, ALAF, Sigma Xi and ASAC.

H.R. Winogron

Mr. Winogron is President of HRW Associates, Inc., Harrington Park, New Jersey. The firm provides marketing, financial, production, and overall project consulting services to the fruit and vegetable industry. Both domestic and international consulting are done, with a concentration in the tropical fruits and high value vegetables.

Mr. Winogron has had extensive experience in the fruit and vegetable business, having worked for Castle and Cooke for nearly fifteen years in both the tropics and California. He spent twelve years in Central America, the Philippines, and Thailand, and was the Manager of large Banana and Pineapple operations. He then worked in the vegetable business while based in California. In addition, Mr. Winogron managed a produce marketing company, specializing in the sales and marketing of branded produce.

Mr. Winogron received his MBA Degree from Stanford University, where he specialized in Finance. He also received his B.A. Degree from the University of Wisconsin, where he majored in Philosophy and Languages. He is currently a Certified Member of the American Society of Agricultural Consultants, and is a member of the Board of Governors of the American Society of Agricultural Consultants International.

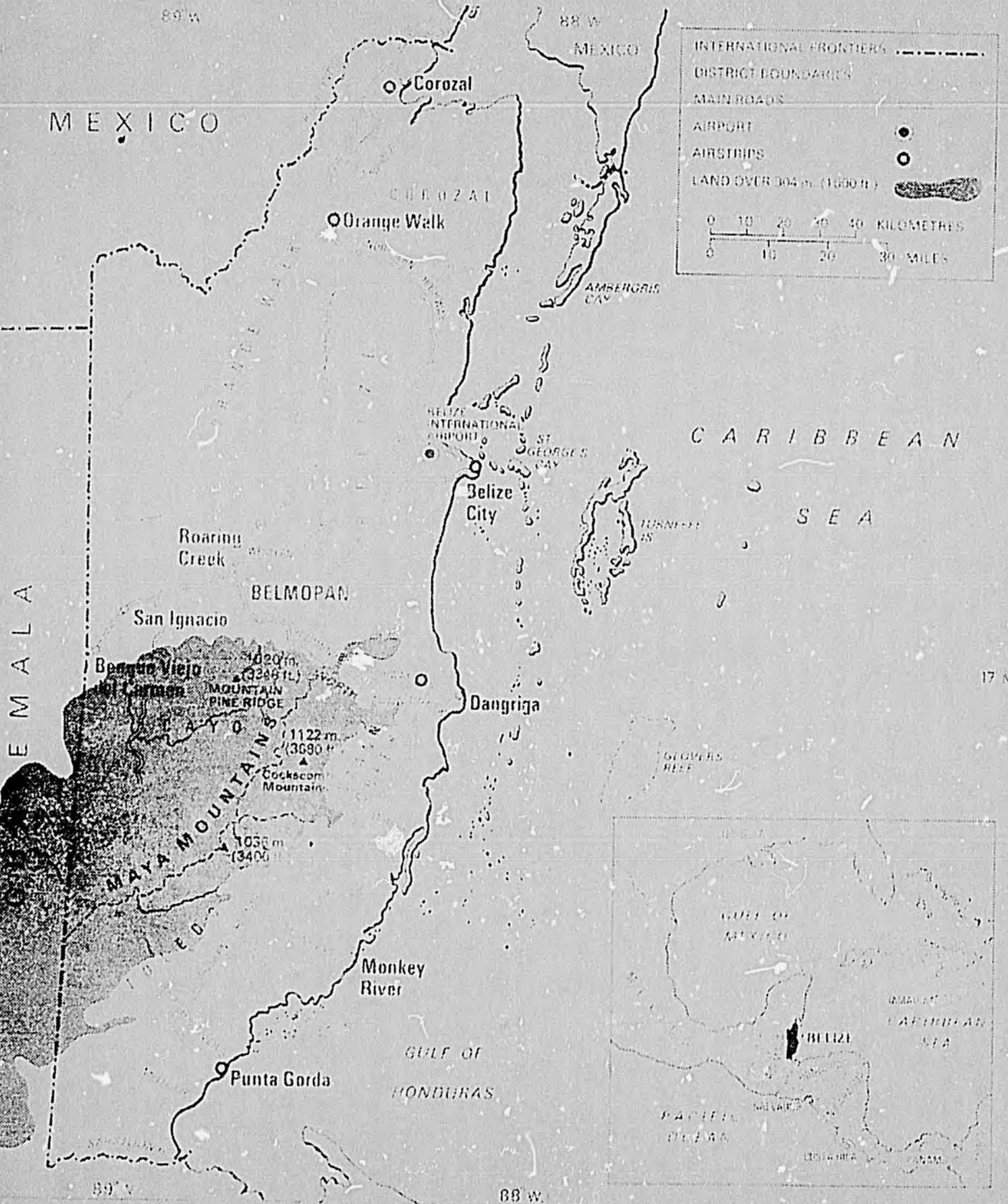
Michael W. Hurley

Mr. Hurley is the ASACI Director of International Agribusiness Teams, working under the 1985, 1986 and 1987 grant agreements with the U.S. Trade and Development Program. To date, he has directed teams to the Ivory Coast, the Dominican Republic, Ecuador, Malaysia, Grenada, Kenya, the Philippines, Belize, Guatemala, and Haiti.

Mr. Hurley's previous experience includes nine years of work in Latin America as sales and marketing manager for an agricultural development company, and as project director for the design and installation of grain storage, handling, and processing facilities. His agricultural marketing and development work encompassed nearly all countries of Latin America.

Mr. Hurley has a Master's degree in Spanish with a concentration in Latin American studies. He is completely fluent in Spanish and has a working knowledge of Portuguese and French.

Belize



INTERNATIONAL FRONTIERS - - - - -

DISTRICT BOUNDARIES ————

MAIN ROADS ————

AIRPORT ●

AIRSTRIPS ○

LAND OVER 304 m (1000 ft) [shaded area]

0 10 20 30 40 KILOMETRES

0 10 20 30 MILES

