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MARKETING RESEARCH FOR THE INTRODUCTION OF A NEW PRODUCT IN THE VENEZUELAN MARKET: SALTINE CRACKER WITH PARTIAL SUBSTITUTION OF WHEAT FLOUR BY TROPICAL TUBERS AND ROOTS

By

Belkys del Socorro Urbina Parra

A Research Paper

Submitted in Partial Fulfillment of the
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Approved for Completion of 3 Semester Credits
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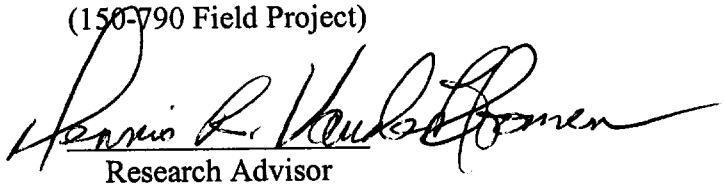

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ABSTRACT

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Title: Marketing Research for the Introduction of a New Product in the Venezuelan market: Saltine Cracker, With Partial Substitution of Wheat Flour by Tropical Tubers and Roots.

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ABSTRACT

It has been a challenge to promote U.S. food products in Venezuela during the last few years because this country has been struggling with an ongoing recession and changing macroeconomic policies. In April 1996, after one and a half years of foreign exchange controls, fixed exchange rates, and price controls, the Government of Venezuela (GOV) implemented a set of new economic policies that liberalized market operations and created a climate more conducive to expanding business. Due to fundamental conditions, such as its proximity to the United States and strong cultural ties to Venezuela will remain an important market for U.S. exporters, and we anticipate that demand for consumer-ready foods will increase. The prices for saltine crackers in the Venezuelan market are cheaper than U.S.

Wheat usage in South America by category is roughly as follows: bread (70%), pasta (18%) and cookies (4%). Quality is generally high.

Venezuela imports 100% of its wheat requirements, this leaded to do local research with the

purpose to create new possibilities for development new local starches with the use of *Xanthosoma saggitifolium, Colocassia esculenta* and *Ipomea batata*, plants that grow in tropical areas in artisan cultures. Like potato, these plants produce underground storage organs (tubers, aroids or corns) whose solid contents are mainly starch. They are grown in tropical areas and they are consumed mainly in home, boiled in soups or mashed. Tubers or aroids or these plants are potential sources of flour and industrial starch that had not been exploited. These tubers are perishable. This marketing research conduced to show a potential market for roots and tubers that actually are sub used in Venezuela, and at the same time these could replace 15% of the wheat used in the production of saltine crackers. This represents a saving of money invested in wheat imports and at the same time contributes to the development of the agricultural sector and the development of a new and potential industry.

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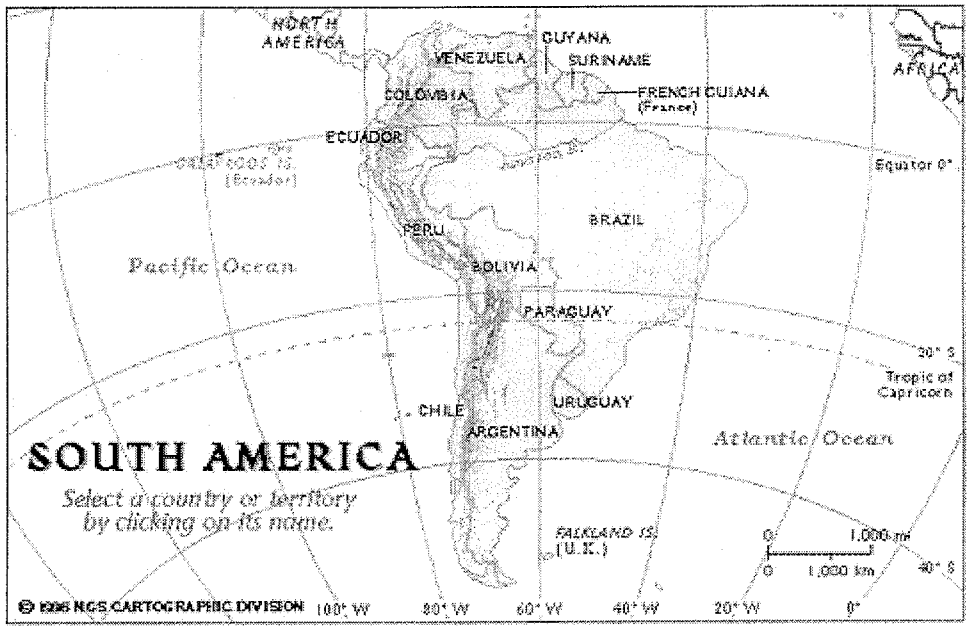
This research deals with consumption of wheat in Venezuela and U.S.A., developing a study for the development of a new product for the Venezuelan market, saltine cracker with partial substitution of wheat –15%- by tropical tubers and roots. Venezuela is located in the North of South America.

Figure 1. Map of Venezuela:

Figure 2. Regional Map –South America-:



OVERVIEW OF VENEZUELA

Background Information

Venezuela has a total land area of 912,050 square kilometers, divided into 22 states, one federal district and various dependencies. The country also claims all of Guyana west of the Esequibo River. There is a marine boundary dispute with Colombia in the Gulf of Venezuela. Major cities and most developed areas are located in regions accessible by water.

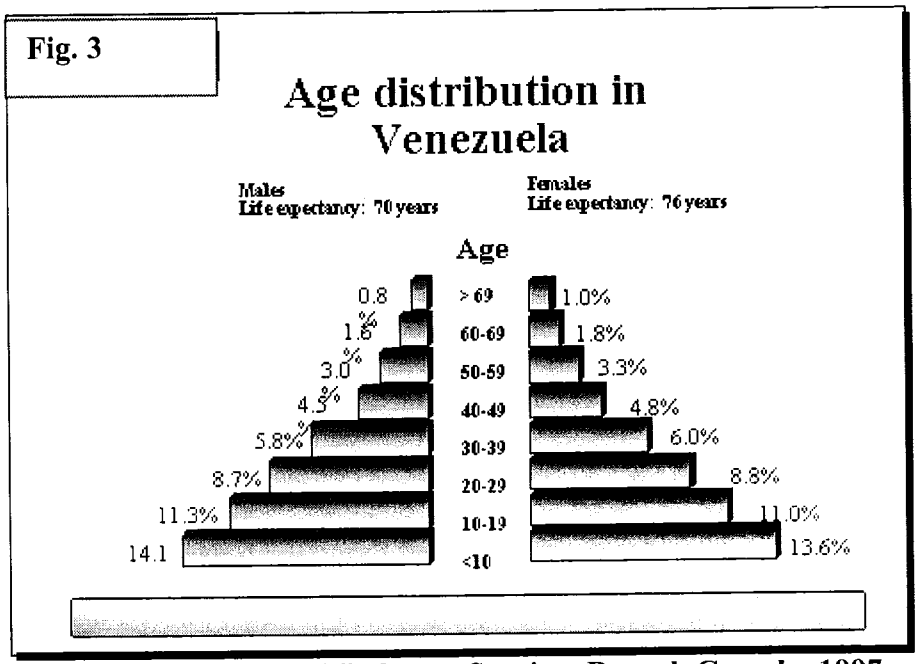
There are four different climate types: plains, jungle, mountains and coastal. The climate varies with the land elevation, from tropical in the low-lying coastal region to temperate in the highlands. There are only two seasons: the rainy season, from May to November, with heavy brief downpours and hot, humid temperatures; and the dry season, from December to April, with cloudless skies and slightly cooler temperatures. Venezuela is

outside the path of most Caribbean hurricanes. Caracas, the capital, is located in a mountain valley 900 meters above sea level and enjoys an average annual temperature of 22C, with low humidity. (1:p. 3)

Population and Demographics

Venezuela's population is just over 22 million and is growing at an annual rate of 2.35%, giving the country one of the highest birth rates in the hemisphere. About 37.3% of all Venezuelans are under 15 years of age. Life expectancy at birth is 76 years for women and 70 years for men. About 67% of the population is of mixed European, African, and Creole descendent, termed *mestizo*. The remainder of the population is approximately 21% white, 10% black, and 2% Aboriginal. (1:p. 4)

Fig. 3



Source: Market and Industry Services Branch Canada, 1997

There is a disparity of wealth between the very small upper class (1%) and the large lower income sector (78%) of the population. The small Venezuelan middle class (21%)

has one of the highest standards of living in Latin America, with a per capita income estimated at US$ 2,630 in 1996. (1:p. 4)

Roughly 85% of the population lives in urban areas, concentrated in the coastal region and in areas of petroleum, mining and industrial development. Approximately 2 million people live in the state of Zulia, a major center for the cattle and dairy industries.

Flight from the countryside has created serious overcrowding and housing shortages in urban areas, while large regions of the interior are virtually unpopulated. The main cities listed in table 1 below:

Table 1. List of the Main Cities in Venezuela

Caracas (capital) -North-	4,100,000	**Barquisimeto - North West-**	750,000
Maracaibo -North West-	1,500,000	**Maracay -Center-**	600,000
Valencia -Center-	1,000,000	**Puerto la Cruz -North-**	450,000

Source: Market and Industry Services Branch Canada, 1997

Language

Spanish is the official language. English is taught as a mandatory second language in schools, and many high-level executives and professionals speak it fluently. Some French is used, but to a lesser degree. For official purposes, all documents must be in Spanish or translated into Spanish by an official translator if the original is in a foreign language. (1:p. 4)

Brief History

Venezuela was discovered by Columbus in 1498. The country was a Spanish colony for three centuries until 1823, when the last Spanish forces, led by Simón Bolívar, were evicted from Venezuela. The second half of the 19th century and the beginning of the

20th century saw warfare among regional land barons or *caudillos*, which had a devastating effect on the civil and political society. The foundations of modern Venezuela were laid during the dictatorship of Juan Vicente Gómez (1908-1935). Gómez united the different sections of the country by breaking down the power of the *caudillos*. Gómez's tenure also coincided with the growth of the country's oil industry, which provided the financial resources for cementing the country. Venezuela has had democratically-elected civilian governments since 1958. Over the past 40 years, Venezuela has become one of the most actively democratic countries in Latin America. (1:p. 5)

Political System

Venezuela is a republic governed by a bicameral Congress. The 1961 constitution established a democratic system of government based on the principle of separation of powers between the executive, legislative, and judiciary branches of government. (1:p. 5) Presidential and legislative elections take place every five years and the last elections were in December 1998. Voting is compulsory, beginning at age 18. The President elected was Hugo Chavez Frias. The political system is divided in three branches: executive, Legislative, and Judiciary.

Political Situation

The last President, Dr. Rafael Caldera, has personally steered government policy since taking office in February 1994, with a mix of populism and interventionism. Although Caldera campaigned against economic reforms, deteriorating economic conditions and a banking crisis between 1993-1995 left the President with few alternatives. In 1996, the government initiated its own stabilization program known as Agenda Venezuela, and

later signed an agreement with the IMF. Under this agreement, foreign exchange controls were lifted, interest rates were freed of government control and gasoline prices, which had been set below the cost of production, now more closely reflect this cost. The public sector deficit was targeted at 1.5 percent of Gross Domestic Product (GDP) for 1996, down from 4.3 percent of GDP in 1995. The IMF agreement triggered disbursements from the World Bank (US $900 million) and the Inter-American Development Bank (US $1 billion).

The adjustment process has been eased greatly by higher than expected oil prices in 1996. The government's oil windfall amounted to about US $3 billion, and helped turn the central government's 1995 deficit into a small surplus. A comparable surplus of less than 1% of GDP is expected for 1997. The government will set up two funds into which it will direct some of the excess oil revenues. A macroeconomic stabilization fund will allow the government to stabilize finances when oil prices decline. A debt rescue fund will be financed by excess oil revenues as well as by privatization earnings. It is to be directed at reducing Venezuela's external debt burden. There is some risk that reform efforts could vary inversely with the success of the oil sector. Strong oil sector growth could reduce the urgency of the reform program. Higher than projected oil prices are estimated to have increased government revenue in 1996 by around 6.5% of GDP and the five-fold increase in domestic petroleum prices by at least 2% of GDP.

Fiscal mismanagement has been a chronic problem in Venezuela, where the public service is among the most overstaffed in Latin America. The government has made a commitment to reduce the size of the public service through its plan for Reform of Public

Administration; however, the government's failure to impose pay restraint on public-sector workers (pay awards average 75%, including bonuses, for 1997) raises doubts about the whole structural reform program. Depending on other wage settlements, 1997 inflation could be 40% or more. Other structural changes under the Reform of Public Administration plan include privatization and reform of severance payments. Unemployment in May 1997 was 13.8%, up 1.4% since 1996, according to a Data analysis survey, which also found that 52.9% of the labor force is employed by the informal economy. (1:p. 6)

Privatization

In 1996, the government raised about US $2 billion from privatization. More than half of this was derived from the sale of remaining government shares in the Telecommunications Company (CANTV) in November, which netted US $1.03 billion. Already privatized are a number of sugar mills, part of the dairy INDULAC (41.39% capital), a number of hotels, the airlines; and the transportation system Motonaves CAVN. As well, the banks that had been taken over by the government during the banking crisis in 1993-1995, have been re-privatized.

The main areas where the privatization process will be intensified are the aluminum, steel and iron sector companies of the basic industries' holding company "Corporación Venezolana de Guayana" (CVG), and the major electric utility companies. Privatization also continues for hotels and infrastructure companies. At the end of June 1997, the government stated that 10 Sucre State tourist facilities were slated for privatization that week.

The formal privatization program is managed by the Fondo de Inversiones de Venezuela (FIV). The manner in which the privatization move forward will be an important indication of the government's resolve with respect to implementing the politically more difficult reforms announced as part of Agenda Venezuela. (1:p. 7)

Political Outlook

Continued inflation, rising unemployment, falling living standards and personal security are concerns the Caldera administration must overcome. In the future, continued political calm, sustained popular support and a revival of national and international business confidence will depend on the government's ability to produce effective and coherent policies. (1:p. 7)

Economic Situation

In general, Venezuela has a free-market economy. Until the beginning of this century, the country's economy was based on agriculture (coffee, cocoa and livestock) with some commercial and handicraft activities. At the beginning of the century, petroleum became the principal factor in the economy and remains its driving force today. Currently, the oil and mining industries, under government control, make up the largest elements of the GDP.

The government is attempting to diversify the economy in an effort to reduce the country's heavy dependence on oil as a revenue generator. Nevertheless, petroleum still makes up 70% of GDP. Manufacturing accounts for 17% of GDP, while agriculture, which has historically been heavily subsidized, accounts for only 6%. The government has also placed emphasis on tourism as a way to diversify the economy.

Despite the country's economic challenges, Venezuela remains one of the richest developing countries and is recovering from its prolonged economic recession. According to the Central Bank of Venezuela, the economic outlook is expected to improve in 1997, with the anticipation of better oil prices and the continued implementation of Venezuela's economic reforms. The rate of price increases has also begun to decelerate significantly. The table 2 shows the key economic indicators for Venezuela. From 1992 to 1994, there are strong variations among key indicators from one year to other. Most of the key indicators in 1995 and 1996 improved compared with GDP percentages for 1992 through 1996. According the projections for most of the economic indicators for 1997 and 1998 the country will be improving. From 1992 to 1996 the inflation levels go up, except for 1995 when decreased. (1:p. 7)

Table 2. Key Economic Indicators for Venezuela.

The values expressed in the next table are in US $billions.

Economic Indicator	1992	1993	1994	1995	1996	1997 (proj.)	1998 (proj.)
Real GDP (% growth)	6.1	0.3	-2.9	3.4	-1.6	4.3	3.3
Consumer Price Inflation (%)	32.0	46.0	70.8	56.8	103.2	40.8	26.8
Merchandise Exports (fob)	14.0	14.6	15.7	18.6	22.8	22.3	23.6
Merchandise Imports (fob)	12.7	11.4	8.1	11.4	10.6	13.3	16.2
Trade Balance	1.3	3.2	7.6	7.2	7.3	10.3	-
Current Account Balance	-3.8	-2.0	2.4	1.8	7.3	4.2	2.1
Reserves (months of imports)	5.8	5.7	6.0	4.0	8.0	8.7	-
External debt (over 1 year)	34.7	36.2	36.1	33.9	30.8	29.3	-
Short-term debt (under 1 year)	2.2	2.6	2.1	2.8	2.3	2.2	-
Debt service ratio (%)	25%	25%	23%	26%	26%	23%	-

Source: Export Development Corporation, 1997.

The Institutional Investor Rating in March 1997 was 33.1 (67th) compared with 32.0

(70th) in September 1996. Bank provisioning for potential losses is required by the Superintendent of Financial Institutions. (1:p. 8)

Currency

The Bolivar is the monetary unit and is designated by the symbol Bs. In December 1995, the government devalued the Bolivar by 41 percent against the US dollar and foreign exchange controls were maintained to protect the value of the currency. In April 1996, exchange controls were lifted, resulting in a further 50 percent decline of the bolivar. The exchange rate policy re-establishes the control of the Central Bank of Venezuela, which is managing the policy through two mechanisms: a floating exchange rate, and a band around a central rate movement of the exchange rate in relation to the inflation objective. The recovery of the free convertibility of the currency and the elimination of restrictions on exchange operations allows entrepreneurs and other users of foreign exchange to easily purchase foreign currency. It should also eliminate purchases in parallel markets, with its harmful effects on the costs of goods and imported services. (1:p. 8)

The exchange rate on May 12, 1999 was US $1.00 = 594,50 Bs. (2:p. 1)

Banking

The Venezuelan banking system is highly fragmented, with different types of financial institutions created to handle various kinds of lending:

- **Commercial banks** make short-term loans for working capital and similar needs. These banks hold the majority of assets, deposits and loans within the Venezuelan financial system.

Table 3 shows Venezuelan exchange rates from 1993 to 1998. The correspondent graph is

shown in figure 4. Looking at graph 4, there is a trend to keep increasing the Venezuelan exchange rates.

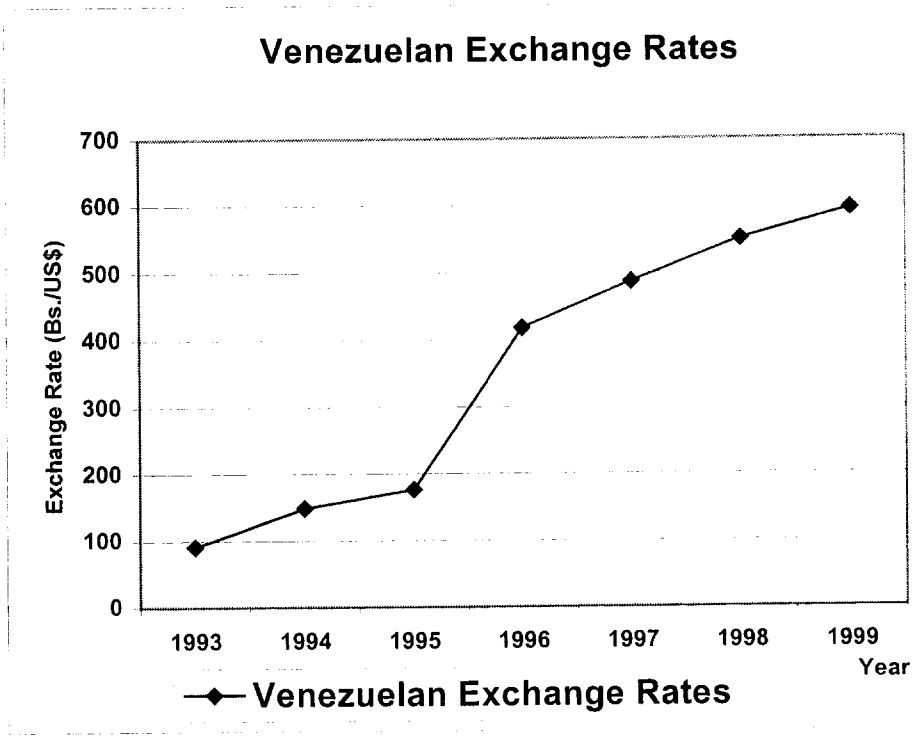
Table 3. Exchange Rates 1993-1997

Indicator / Indicador	1993	1994	1995	1996*	1997**	1997	1998***
Average Nominal Exchange Rate (Bs./US$) / Tipo de Cambio Nominal Promedio (Bs./US$)	90.8	148.9	176.8	418.0	487.0	550.0	594.5

* Preliminary ** 1st. Semester 1997 *** May 12, 1999

Source: Available at Internet: http://www.agroplan.simplenet.com/coyuntura/tasas_de_interes_activa_y_pasiva.htm Agroplan Calculation Based in the Venezuelan Central Bank -Cálculos de Agroplan con base en Banco Central de Venezuela-

Figure 4. Venezuelan Exchange Rates from 1993 to 1999, expressed in Bolivares per U.S. Dollars.



- **Finance companies** lend for fixed assets and consumer goods.
- **Mortgage banks and savings and loans institutions** are geared to longer-term lending, mostly for home purchases, improvements and construction.

Venezuela's banking system is undergoing a period of consolidation. As a result of a banking crisis in 1993-1995 that has cost the government approximately Bs. 1.7 trillion -- a sum equal to 17 percent of annual GDP -- the number of financial institutions dropped from 132 to 82. These can be broken down into 36 commercial banks, eight mortgage banks, 19 investment banks, and 19 financial leasing companies. There are also more than a dozen savings and loan companies. Mergers and acquisitions are expected to continue to reduce the number of banks.

The banking system, as a whole, remains undercapitalized. This situation should change with the arrival of foreign banks. Currently, approximately 50% of the banking industry is owned abroad.

In December 1996, Spain's Banco Santander purchased a controlling 94.5% stake in Banco de Venezuela, the country's third largest bank in terms of assets, but is planning to reduce this stake, while retaining control. In a private transaction in December, Spain's Banco Bilbao Vizcaya (BBV), which is competing aggressively with Banco Santander to increase its share of the Latin American market, agreed to purchase 40% of Banco Provincial, the country's first universal bank and largest financial institution, with over US $2.4 billion in assets.

Also in December, a Chilean investment group, Corp-Group, purchased 93.5% of Banco

Consolidado, the country's fourth largest bank. (Canada's La Banque Nationale, indirectly through Corp-Group, also now owns about 10% of this bank's shares). Banco Consolidado is planning to strengthen its corporate sector though technological innovations and will increase its capital market development.

Finally, Peru's Credicorp acquired 99% of Banco Tequendama. Banco Tequendama has its headquarters in Colombia, but has an office in Caracas. The last major bank to remain in state hands, Banco Latino, was sold to be sold in the first quarter of 1997.

In the summer of 1995, the government passed the Financial Emergency Law, that gives the president the power to declare a state of financial emergency without suspending constitutional guarantees. The president may appoint an emergency board with unlimited powers to restructure the banking sector. The board may also remove directors from financially troubled bank, acquire all or part of a troubled institution's shares and appoint supervisors to monitor a bank's compliance with board orders. (1:p. 8)

Foreign Banks

Foreign banks doing business in Venezuela include: Citibank, Internationale Nederlanden Group (ING), Banco do Brasil, Banco Extebandes, and Banco Tequendama. Citibank is the most active of the foreign banks offering full commercial services, with savings and checking accounts and a full-service money desk. Citibank is also one of the major foreign debt negotiators. (1:p. 9)

Lending Rates

Lending rates remain near the top level permitted by the central bank. As of April 1997, most banks were charging customers between 36% and 42.5% on all loans. Given the

state of the economy, lending has suffered. Today, banks have more of their funds invested in government securities than in loans; however, loans are beginning to increase. There are no restrictions for non-residents borrowing either locally or abroad. However, because of current interest rates, most companies tend to finance purchases through their earnings or borrow from abroad, if possible. (1: p.9)

Lending rates are suffering variations, according a local newspaper dated July 17, 1999 (El Universal), these values are between 30% and 49%. Citibank has a lending rate of 30%, Banco de Venezuela 45%, Provincial Bank 44%, and Conferedado Bank has the highest lending rate 49%. (3: p. 2)

Foreign Investment

Early in the 1990s, Venezuela began opening its economy and fostering private investment. As part of this process, it has now become an open market. The government is encouraging foreign investment through tax exemptions, and tax investment credits are available to investors. There is a fiscal credit equivalent to 20% of the investment in the agro-industrial, agricultural, fishery, livestock and tourist sectors. (1: p. 10)

Investment Protection

There are various mechanisms in force for the protection of private investment in Venezuela (1: p. 10):

- **The Multilateral Investment Guarantee Agency (MIGA)**, a subsidiary of the World Bank, grants insurance policies against non-commercial risks, such as non-exchangeable currencies, expropriation, war and civil disturbances and breach of contract by the country where the investment is being made.

- **The International Center for the Arbitration of Investment Disputes** helps with conciliation and arbitration in cases related to investment disputes arising between the contracting states and the foreign investor.
- **The New York Convention for the Recognition of Arbitration Rulings** This organization guarantees the international effectiveness of arbitration clauses.

Wheat Usage in North America and Venezuela

Wheat Usage in North America

Most of the wheat currently grown in North America consists of three species of the genus *Tritacum. T. aestivum* L., a hexaploid, dominates world production. Hard Red Winter and Hard Red Spring classes used primarily for leavened bread production. Soft Red Winter and Common White wheat classes are used primarily for pastries, crackers and cookies. *T. compactum* Host, a club wheat, also a hexaploid type, is used for pastries in a similar manner as the Soft Red Winter wheats. Durum wheat, *T. durum* Dest., is a tetraploid species with extremely hard grain, which is used for macaroni, spaghetti, and other pasta products.

To facilitate marketing, U.S. plant breeders have kept distinctive combinations of grain protein and hardness. The common wheat can be produced with a wide combination of common hardness and protein. However to complement their normal and uses, bread wheats are selected to have a desired combination of hardness, protein level, and protein quality. Soft wheat hexaploids are selected to have soft endosperm texture and low

protein. Production in areas of high rainfall helps to promote the soft texture and low protein content. (4: p. 1)

The North Dakota Wheat Commission compiles and retains data on many aspects of the North Dakota, U.S. and world wheat industries including plantings and production, supply and demand, producer and export prices, as well as imports and exports by market and by class. (4: p. 1)

Wheat Standards and Grades

As the grain trade developed in the United States, there was a need for a reliable commercial language to allow buyers and sellers at separate locations to trade without an exchange of samples. Grain trade organizations took the lead in setting standards. According to the U.S. Standards for Wheat, wheat is defined as a grain that, before the removal of dockage, consists of 50 percent or more common wheat (*Triticum aestivum* L.), club wheat (*T. compactum* Host.), and durum wheat (*T. durum* Desf.) and no more than 10 percent of other grains for which standards have been established under the United State Grain Standards Act.

Wheat is divided into seven classes based on color, kernel, and varietal characteristics. The seven classes are: Hard Red Spring wheat, Hard Red Winter wheat, Soft Red Winter wheat, durum wheat, White wheat, Unclassified wheat, and Mixed wheat. Special grades are provided to emphasize special qualities or conditions affecting the value of wheat and are added to and make a part of the grade designation. (4: p. 2) This information is showed in table 4.

The United States offers six distinct classes of wheat to customers worldwide: hard red spring, hard red winter, hard white, soft red winter, soft white, and durum. These classifications are based on kernel hardness, kernel color, and time of planting. Each class has its own uniform characteristics related to milling, baking and other food uses. North Dakota leads the nation in the production of two of these classes: hard red spring and durum. The state's farmers grow 46 percent of the nation's hard red spring - 260 million bushels (7.1 million tons) - and 73 percent of its durum, 70 million bushels (1.9 million tons). (5: p. 1)

Market for U.S. wheat

There was no clear trend in export demand for United States wheat in the 1980s. From 1970 to 1991, annual disappearance of U.S. wheat for food use increased 50%, from 517 million bus to 775 million bus. Utilization as animal feed, seed and residual varied from year to year. Per capita consumption of flour reached its nadir of 110 lbs. in 1972, a year that marked the start of climbing trend, reaching 136 lbs. in 1992. Recent annual variation in the volume of world wheat trade most often has reflected fluctuations in export shipments to what was the Soviet Union and to China. The loss of U.S. share of world trade in wheat and flour has been the direct result of intense competition with the European Community for markets. The U.S. wheat production as is shown in figure 5, has increased since 1921, with some characteristic peak variations. With the recent slippage in U.S. exports and rise in domestic use, greater importance is shifting to the milling and baking quality of wheat. However a substantial and expanded export business is necessary to assure that farmers will grow sufficient quantities of the

classes and qualities of wheat needed by bread-stuffs manufacturers. (4: p. 13)

Table 4. Official U.S. Grades and Grade Requirements

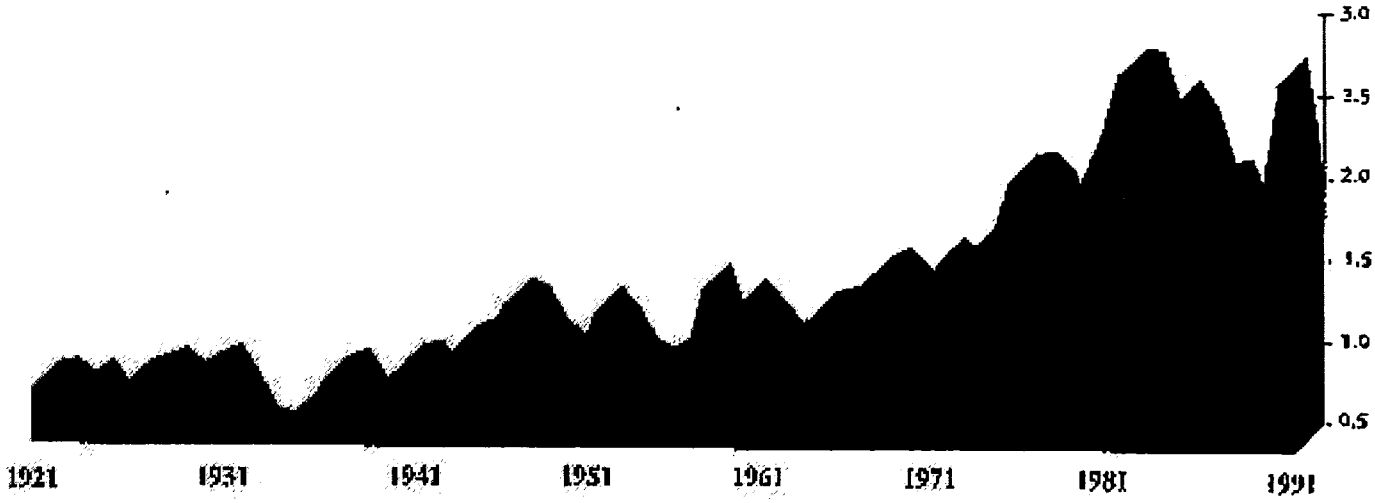
Grade	Minimum Limits of Test Weight per Bushel: Hard Red Spring wheat or White Club wheat[a] (lb)	Minimum Limits of Test Weight per Bushel: All other classes and subclasses (lb)	Maximum Limits of Damaged Kernels: Heat-Damaged Kernels (%)	Maximum Limits of Damaged Kernels: Total[b] (%)	Maximum Limits of Foreign Material (%)	Maximum Limits of Shrunken and Broken Kernels (%)	Maximum Limits of Defects[c] (%)	Maximum Limits of Wheat of Other Classes[d]: Contrasting Classes (%)	Maximum Limits of Wheat of Other Classes[d]: Total[e] (%)
U.S. No. 1	58.0	60.0	0.2	2.0	0.5	3.0	3.0	1.0	3.0
U.S. No. 2	57.0	58.0	0.2	4.0	1.0	5.0	5.0	2.0	5.0
U.S. No. 3	55.0	56.0	0.5	7.0	2.0	8.0	8.0	3.0	10.0
U.S. No. 4	53.0	54.0	1.0	10.0	3.0	12.0	12.0	10.0	10.0
U.S. No. 5	50.0	52.0	3.0	15.0	5.0	20.0	20.0	10.0	10.0

U.S. Sample grade is wheat that:
1) Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, 4, or 5; or
2) Contains 32 or more insect-damaged kernels per 100 grams of wheat; or
3) Contains 8 or more stones or any number of stones which have an aggregate weight in excess of 0.2 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 2 or more rodent pellets, bird droppings, or equivalent quantity of other animal filth per 1,000 grams of wheat; or
4) Has a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor); or
5) Is heating or otherwise of distinctly low quality.

[1] These requirements also apply when Hard Red Spring or White Club wheat predominate in a sample of Mixed wheat.
[2] Includes heat-damaged kernels.
[3] Defects include damaged kernels (total), foreign material, and shrunken and broken kernels. The sum of these three factors may not exceed the limit of defects for each numerical grade.
[4] Unclassed wheat of any grade may contain not more than 10.0 percent of wheat of other classes.
[5] Includes contrasting classes.

Source: Federal Register, 1967

Figure 5. U.S. Wheat Production in Billions of Bushels, 1921-1991



The marketing average price per bushel of wheat had decreased from 1995 to 1997 almost 25%, and the value production was increased between 1995 and 1996. In 1997 the value of production was inferior to the value in 1995 and 1996, this is the result of the strong reduction in the average price of wheat per bushel. Table 5, shows this variation by state.

Table 5. Wheat: Marketing Year Average Price and Value, by States, Crop of 95-97.

State	Marketing year average price per bushel			Value of production		
	1995	1996	1997[1]	1995	1996	1997[1]
	Dollars	Dollars	Dollars	1,000 dollars	1,000 dollars	1,000 dollars
AL	3.90	4.50	3.80	11,232	15,840	13,44
AZ	4.54	5.00	4.70	47,036	79,320	40,74
AR	3.61	4.39	3.60	169,670	299,295	137,75
CA	4.33	4.98	3.90	141,249	255,897	172,14
CO	4.54	4.25	3.30	488,928	320,855	307,95
DE	4.10	4.33	3.10	17,843	17,900	16,68
FL	3.15	4.40	3.40	1,210	1,672	1,98
GA	3.30	4.38	3.20	38,646	73,594	60,69
ID	4.45	3.95	3.40	480,046	473,088	378,82
IL	3.89	4.12	3.15	254,948	172,216	220,97
IN	3.98	4.06	3.20	156,816	111,082	122,49
IA	4.05	4.10	3.20	4,961	6,468	3,62
KS	4.59	4.69	3.20	1,312,740	1,191,576	1,619,20
KY	3.84	4.33	3.30	93,619	121,680	94,44
LA	3.70	4.20	3.60	10,656	23,478	14,89
MD	4.15	4.31	3.15	69,760	80,975	46,05
MI	4.10	3.91	3.30	152,520	93,505	110,48
MN	4.71	4.25	3.65	338,652	463,024	289,67
MS	4.40	4.35	3.60	27,588	49,137	28,33
MO	3.84	4.12	3.10	184,205	200,850	177,32
MT	4.53	4.24	3.60	904,112	751,048	682,82
NE	4.56	4.29	3.25	392,616	315,315	228,47
NV	4.42	4.30	3.60	3,760	5,773	5,49
NJ	3.80	4.80	3.20	6,931	9,360	6,62
NM	4.50	5.10	3.30	14,850	20,757	32,91
NY	4.20	4.15	3.35	28,675	25,788	25,32
NC	3.65	4.20	3.00	102,784	109,032	104,52
ND	5.05	4.19	4.00	1,496,226	1,836,379	1,031,65
OH	3.96	3.94	3.25	292,268	204,368	223,17
OK	4.41	4.73	3.25	481,572	440,363	579,15
OR	4.79	4.20	3.75	299,119	283,749	238,22
PA	4.25	4.57	3.40	43,244	41,878	30,94
SC	3.50	4.35	3.20	32,295	52,853	48,00
SD	4.69	4.07	3.50	420,039	585,979	346,60
TN	3.90	4.40	3.30	62,322	77,440	54,94
TX	4.19	4.98	3.25	316,764	375,492	386,42
UT	4.74	4.40	3.60	42,415	34,448	32,76
VA	3.70	4.15	3.40	55,120	60,466	57,80
WA	4.83	4.14	3.60	742,500	755,680	602,69
WV	4.00	4.21	3.25	2,496	2,084	1,58
WI	3.65	3.95	3.10	29,486	22,614	25,03
WY	4.60	4.00	3.30	36,540	24,003	27,31
US	4.55	4.30	3.46	9,787,213	9,814,961	8,511,69

[1] Preliminary.

NASS, Crops Branch, (202) 720-2127.

The table 6 shows the U.S. wheat and flour imports from 1987 to 1996.

Since 1987 to 1996 – excluding 1995-- U.S. imports of wheat and flour increased. In 1996 the volume of imports it was more than six times the volume of imports in 1987. Imports were almost doubled during 1988, 1992 and 1993. This means that local production can not cover the demand.

Table 6. Wheat and flour: United States imports, 1987-1996.

Year beginning June	Wheat grain [1]	Flour (wheat equivalent)	Other products (wheat equivalent) [2]	Total wheat, flour, and other products
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1987	9,999	755	5,342	16,096
1988	15,851	550	6,251	22,652
1989	12,683	602	9,382	22,467
1990	25,540	901	9,932	36,373
1991	30,924	923	8,751	40,598
1992	56,869	3,122	9,435	69,416
1993	91,297	6,486	11,086	108,860
1994	70,561	8,073	13,313	91,947
1995	47,763	6,687	13,493	67,933
1996	71,727	6,366	14,220	92,333

[1] Starting January 1999, Census ceased reporting wheat suitable for milling and unfit for human consumption. [2] Includes macaroni, semolina, and similar products. Beginning in 1988/89 total wheat grain is reported under the suitable for milling column.

ERS, Market and Trade Economics Division, (202) 694-5311.

Table 7 shows the international trade of wheat and flour. The principal export countries from 1994 to 1997 are the United States, Canada, European Union, Australia, and Argentina. Most of the variations in the level of exportation among these countries were negative. Australia is the only country where the level of exports increased, and the variation in 1996/97 compared with 1994/1995 was more than double --approximately 2.3 times--. U.S. covered almost 50% of the total export. U.S. imports decreased almost one-third part between 1996 and 1994.

Table 7. Wheat and Flour: International Trade, 1994/95-1996/97

Country	1994/95	1995/96	1996/97 [2]
	1,000 metric tons	1,000 metric tons	1,000 metric tons
Principal exporters:			
Argentina	7,644	4,416	5,700
Australia	7,784	12,086	17,945
Canada	21,809	16,850	18,135
India	77	1,606	730
Kazakstan	3,500	4,366	2,250
Saudi Arabia	1,651	181	0
Turkey	1,690	969	1,000
European Union	17,110	13,250	16,600
Eastern Europe	2,696	4,000	664
Others	1,712	3,334	2,850
Subtotal	65,623	61,842	69,089
United States	32,583	33,695	27,089
Total	98,168	95,537	96,708
Principal importers:			
Algeria	5,653	3,401	3,107
Bangladesh	1,732	1,210	1,100
Bolivia	435	320	400
Brazil	6,645	5,470	5,178
Chile	622	783	409
China	10,241	12,822	2,600
Columbia	829	994	907
Cuba	1,058	726	947
Ecuador	420	391	441
Egypt	6,856	6,919	7,000
Ethiopia	256	221	250
Georgia	560	456	600
India	29	50	1,600
Indonesia	3,818	3,812	4,195
Iran	3,192	2,764	6,949
Iraq	598	509	1,200
Israel	991	839	671
Japan	5,310	5,101	5,384
Jordan	740	669	672
Korea, North	124	235	200
Korea, South	4,292	2,664	3,455
Lebanon	391	479	450
Libya	1,191	941	1,125
Malaysia	1,167	1,055	1,120
Mexico	1,374	1,661	1,936
Morocco	1,921	2,431	1,464
Nigeria	660	573	947
Pakistan	2,123	1,908	3,612
Peru	1,203	943	1,937
Philippines	2,051	1,964	2,156
Russia	1,679	4,991	1,980
South Africa	759	702	951
Sri Lanka	942	937	800
Taiwan	895	1,092	1,015
Thailand	636	785	664
Tunisia	1,511	936	869
Turkey	444	2,060	2,325
UAE	295	874	575
Ukraine	274	800	800
Uzbekistan	2,000	1,600	1,200
Venezuela	1,144	1,022	1,175
Vietnam	437	325	425
Yemen	2,085	2,026	2,400
European Union	2,085	2,545	2,400
Other Western Europe	610	390	475
Eastern Europe	1,926	1,663	3,679
United States	2,850	1,749	2,577
Subtotal	85,360	85,337	86,424
Other Countries	10,643	8,835	9,826
Unaccounted	1,153	1,445	1,458
Total	96,156	95,537	96,709

[1] Flour reported in terms of grain equivalent. [2] Year beginning July 1. [3] Preliminary.

FAS, Grain and Feed Division, (202) 720-6219. Prepared or estimated on the basis of official statistics from foreign governments, other foreign source materials, reports of U.S. Agricultural Counselors, Attaches and Foreign Service Officers, results of office research, and related information.

Table 8 shows per capita flour consumption values in pounds from 1972 to 1997, these values did not change significantly from 1972 to 1981 ranging from 110 to117 pounds. Since 1981 U.S. per capita flour consumption increased –excluding 1989 and 1995--. Since 1981 to 1997 per capita flour consumption increased almost one-fourth compared with 1981.

From 1972 to 1984 flour consumption was between 110 and 119 pounds. In 1985 flour consumption increased 5% compared with 1984. During the periods 1985-1988, 1990-1994, and 1995-1997 flour consumption increased. During 1989 and 1995 flour consumption decreased compared with the year before.

Table 8. U.S. Per Capita Flour Consumption (pounds)

YEAR	POUNDS PER CAPITA	YEAR	POUNDS PER CAPITA
72	110	85	125
73	113	86	126
74	111	87	130
75	115	88	132
76	119	89	130
77	115	90	136
78	115	91	137
79	117	92	139
80	117	93	143
81	116	94	144
82	117	95	142
83	118	96	149
84	119	97	150

Source: North Dakota Wheat Commission, 1999.

Table 9 shows the top 10 markets for U.S. hrs. and durum for 1997-98 expressed in thousand of tons. Venezuela is one of the top 10 markets for U.S. In 1997-1998 Italy was

the highest market for US Durum; while Venezuela occupied the fifth position.

Japan represented the top position for US hrs. consumption and Venezuela occupied the fifth position.

Table 9. Top 10 Markets for U.S. Hrs & Durum - 1997-98 (Thousand Tons)

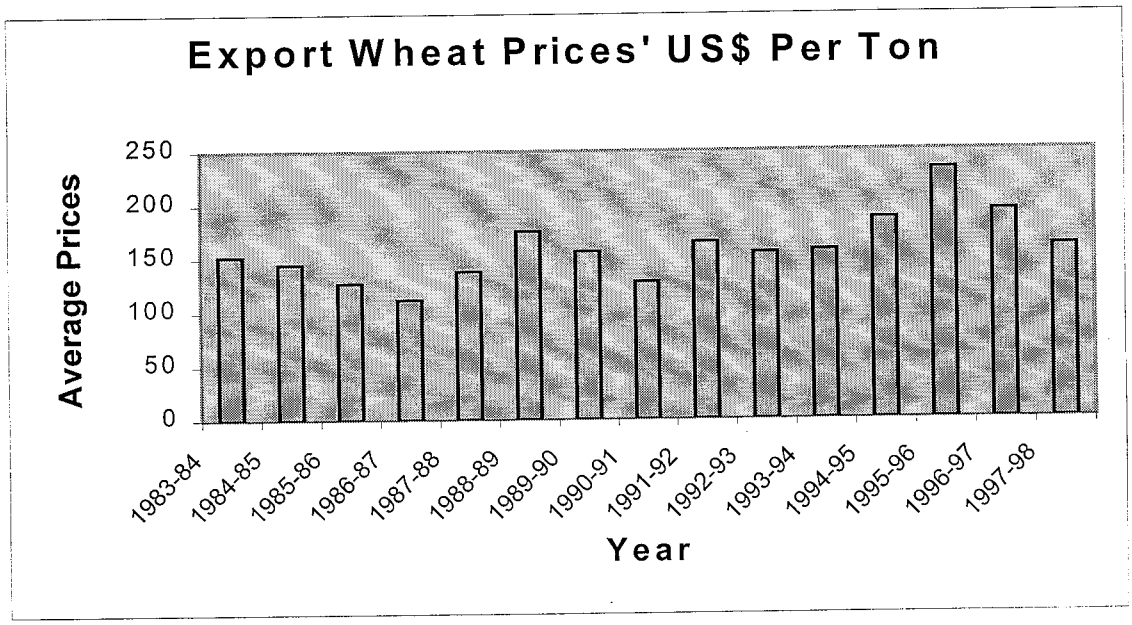
Durum		Hrs	
Italy	353	Japan	1,369
Tunisia	343	Philippines	874
Morocco	105	Taiwan	569
Belgium	15	Korea	377
Venezuela	**15**	**Venezuela**	**323**
Algeria	70	Italy	291
Germany	31	Spain	216
Costa Rica	20	Dominican Republic	166
Cyprus	76	Ecuador	151
Dominican Republic	15	Belgium	222

Source: North Dakota Wheat Commission 1999

The export wheat prices' in U.S. $ per ton since 1983 to 1998 according the Australian Grains Market (AWB Limited) are shown in figure 6; the year runs from 1 October to 30 September. There are fluctuations in wheat prices during this period of time –1983/1998-- Lowest price was in 1986/87 and highest price was in 1995/96; this explains why the level of consumption during 1995/1996 was less than the years before and after. –See table -8-.

The price in 1997/98 compared with 1983/84 was only 5% higher –15 years later--. This is one of the reasons that explain trends in the level of consumption.

Figure 6. Export Wheat Prices' US$ Per Ton



Source: Australian Grains Market (AWB), 1999.

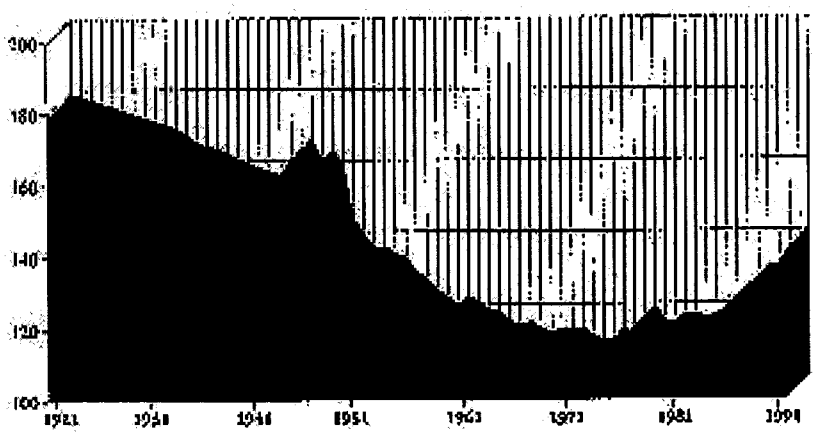
Flour Milling in the U.S.

Flour milling could hardly be more favorably positioned than at present, reflecting the astounding growth in consumption and a continuing favorable balance between demand and capacity. Flour production is near record levels, spurred by a rising trend in consumption that got under way in the early 1970s after reversing the downward pattern that had prevailed since the turn of the century. The average rate of milling operations in 1991 was 90% of capacity, based on a six-day week. (4: p. 6)

Figure 7 shows per capita consumption –expressed in Lbs.—from 1922 to 1991. Per capita consumption during 1922 to 1973 decreased, since 1973 increased, reaching a maximum in 1991, and after the second war was a positive variation. From 1961 to 1981

the variations were not significant.

Figure 7. Per Capita Consumption in Lbs., 1922-1991



Consumption of baked products in the U.S.

Per capita consumption of bread, cake and related items produced by wholesale bakers will increase at an annual rate of 1.7% in the 1992-97 period, according to the "1998 Industrial Outlook" of the U.S. Department of Commerce. The outlook, which provides an annual update of 350 manufacturing and services industries, states that per capita consumption of all wholesale-produced baked foods will rise 1.6% annually over the next five years. (4: p. 9).

Table 10 shows per capita consumption of cookies and crackers in lbs. From 1988 to 1995 per capita consumption of cookies was below 13 pounds, with its lowest value in 1991 (12.15 Lbs.) and highest value in 1989 (12.91 Lbs.). In 1996 per capita consumption of cookies reach 13.16 Lbs. value that increased in 1997, and according the projections from 1999 to 2001 this value would keep going up.

from 1999 to 2001 this value would keep going up.

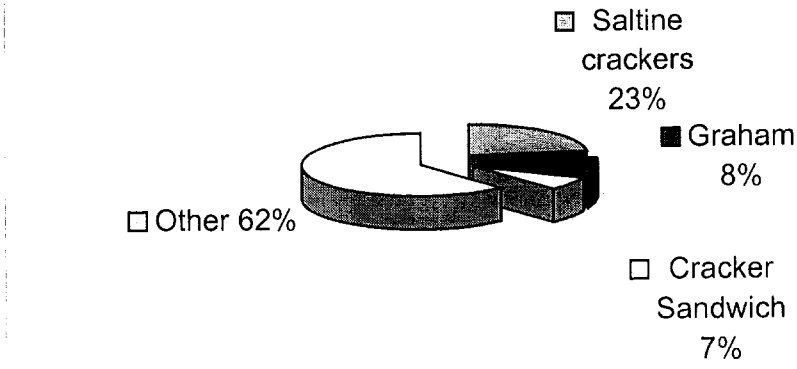
Per capita consumption of crackers, had its lowest value in 1989 (7.96 Lbs.) and its highest value in 1997 (9.01 Lbs.). From 1989 to 1997 per capita consumption of crackers increased yearly, reaching an increase of 13% during that period. According the projections from 1999 to 2001 this value decreased, reaching its lowest point in 2001 (6.13 Lbs.).

Figure 8 shows average per capita consumption of crackers from 1988 to 2001, saltine crackers represent in average 23% of the crackers market. Per capita consumption of saltine crackers from 1988 to 1997 decreased yearly, this means a total decreased of 15% during this period.

Figure 8 shows average per capita consumption of cookies, crackers, and pretzels 1988-2001. Crackers represent 36% of the market share.

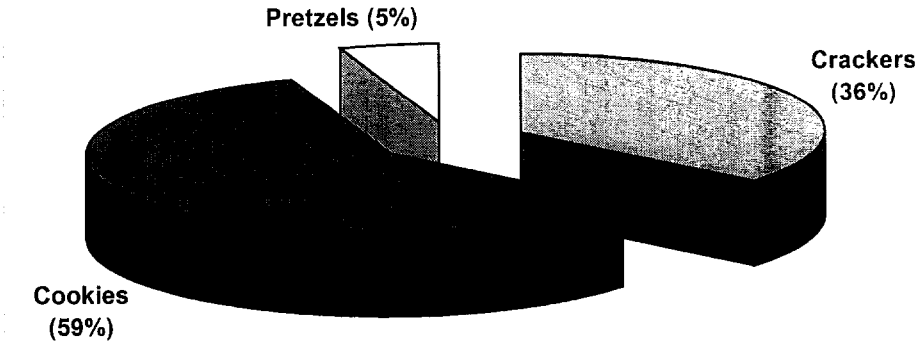
Table 10. Per Capita Consumption of Cookies and Crackers in lbs.

Figure 8. Average Per Capita Consumption Of Crackers 1988-2001



Source: Table 10.

Figure 9. Average Per capita Consumption of Cookies, Crackers, and Pretzels 1988-2001



Source: table 10.

Wheat usage in South America

Wheat was introduced in South America by the European explorers. The crop had to compete with others better adapted to the environment. It was only in the southern cone (the area comprising the countries Argentina, Chile, Bolivia, Paraguay, Uruguay and southernmost Brazil), the most temperate part of the subcontinent, where wheat became important as a

commercial crop. Brazil and Chile also produce significant amounts of wheat (Table 10). However, Argentina is the only net exporter of the region. All the other countries have to import wheat in various amounts to meet their demands. Argentina is the only country that grows a small quantity of durum wheat (table 11).

Per capita consumption varies widely depending on location and ranges from 150Kg/year in Chile to 25 Kg/year in Colombia. (4: p. 65)

Wheat usage in South America by category is roughly as follows: bread (70%), pasta (18%) and cookies (4%).

Most of the bread consumed is of the French type and produced in small bakeries. The modernization level of small bakeries varies from country to country but, in general is low. In many instances all or part of the bread making process is still performed by hand. This can be attributed to several reasons: small bakeries of low production output, cheap labor costs, the high investment needed in machinery, the varied shapes that can be obtained by hand and resistance to change (linked to cultural issues). Modern linked plants enjoy lower production costs. This reduces price, which, in turn, enhances consumer's demand for bread. Most South American bakeries turn out fresh bread from early morning till late evening thus maintaining a constant supply of attractive products. More recently supermarkets are becoming bread producers. This extends the market to a large number of consumers. The cracker and cookie industry, unlike the bread industry, has a generally high technological level. (4: p. 67)

Wheat, Flour, and Flour Usage in Venezuela

Less than 3,000 tons of wheat are grown in Venezuela annually, but the crop is an important food grain with about 1.2 million tons imported annually. Mills produce 850,000 tons of flour a year for bakers, pasta manufacturers, cookie and confectionery industry and for household use. Wheat-based products include French-type bread, a broad array of croissants, pastries, and pasta products. French type bread consumption is rapidly expanding in Venezuela. More bakeries are small establishments, owned and/or managed by Spanish or Portuguese immigrants. Quality is generally high and loaf size small. (4: p. 90).

Brazil, Venezuela, and Peru represent the main importer countries in South America. The main wheat production is spring bread wheat. Chile is the only country producing winter bread wheat and facultative bread wheat. Looking at per capita utilization in 1984/86, Chile had the highest value –150kg/year, 330 pounds/year-, Colombia had the lowest value –25Kg/year, 55 pounds/year--, and Venezuela consumed 59 Kg./year, 130 pounds/year. These values mean that there are strong variations in wheat utilization among South American countries.

Table 11. Wheat production in South America

	Country									
	Argentina	Chile	Brazil	Uruguay	Paraguay	Bolivia	Peru	Ecuador	Colombia	Venezuela
Estimated population 1987 (×10⁶)	31.5	12.4	141.3	3.1	3.9	6.7	20.7	9.9	29.9	18.3
Production 1985/87 (1,000 tons/year)	9,167	1,555	5,753	262	264	79	115	18	75	---
Net imports 1985/87 (1,000 tons/year)	~6,000	220	3,338	60	38	305	989	243	661	1,063
Per capita utilization 1984/86 (kg/year)	111	150	56	132	72	66	54	27	25	59
% of area planted to spring bread wheat	99	98	100	100	100	N/A	N/A	N/A	N/A	N/A
% of area planted to winter bread wheat	0	25	0	0	0	N/A	N/A	N/A	N/A	N/A
% of area planted to facultative bread wheat	0	27	0	0	0	N/A	N/A	N/A	N/A	N/A
% of area planted to durum wheat	1	0	0	0	0	N/A	N/A	N/A	N/A	N/A

Data from: CIMMYT. 1989. CIMMYT 1987–88 Hechos y Tendencias Mundiales Relacionados con el Trigo. Nuevamente la Revolución del Trigo: Tendencias Recientes y Retos Futuros. Mexico, D.F.:CIMMYT.

N/A = Not Available

and corn flour in all wheat flours. This has caused technical problems for both millers and bakers. Although the requirement is still in force, the availability of non-diluted wheat flour has been scarce for the past few years.

A number of changes are expected in wheat usage such as: higher rates of blending different wheat classes, higher use of winter and/or softer wheat, lower bread but higher pasta consumption.

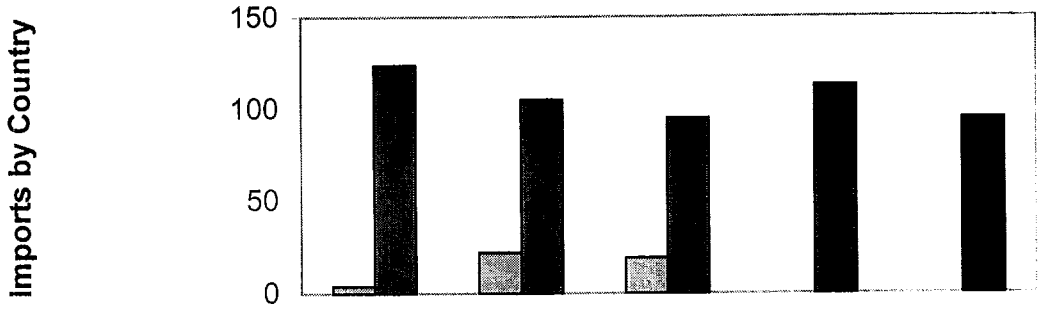
Table 12 shows selected imports by country and product for the Venezuelan market expressed in US $. The main import countries for Venezuela are United States, Colombia, Japan, and Federal Germany. Wheat is imported from United States, Canada, Federal Germany, and Argentina. Wheat represents one of the main imports from US and also from Federal Germany.

Table 12. Commerce: Selected Imports by Country and Product (US$)

	1993	1994	1995	1996	1997
IMPORTS	**11.271.303.907**	**8.277.202.368**	**10.791.454.856**	**8.902.231.376**	**13.875.255.535**
Colombia	**469.579.714**	**420.578.130**	**818.801.205**	**632.048.640**	**912.344.415**
Sugar	55.762.925	60.100.113	84.987.405	50.433.592	47.916.876
Vehicles (Merchandise)	18.905.386	433.273	24.551.959	48.899.036	80.912.648
Manufacturing	14.200.184	9.172.871	24.488.993	12.098.582	14.197.832
Cotton Fabrics	11.085.092	10.105.899	18.593.495	17.763.565	13.959.899
Other Products	369.626.127	340.765.974	666.179.353	502.853.865	755.357.160
Federal Germany	**626.098.220**	**457.618.029**	**521.295.350**	**401.325.614**	**574.181.395**
Vehicles (Tourism)	21.241.841	8.769.293	6.353.644	10.861.864	27.441.572
Ceramics Items	10.980.329	11.178.788	18.103.289	17.067.817	17.799.050
Computers	7.937.589	4.674.382	15.387.014	17.897.875	10.417.326
Drive Shafts	12.215.259	9.253.288	9.193.338	10.075.230	12.107.036
Wheat	**3.633.482**	**21.538.335**	**19.145.861**	**N/A**	**N/A**
Other Products	570.089.720	402.203.943	453.112.204	345.422.828	506.416.411
Japan	**860.821.832**	**469.968.760**	**473.706.931**	**300.223.112**	**614.393.400**
Vehicles (Tourism)	373.836.134	192.740.496	216.674.499	107.899.256	302.249.757
Vehicles (Merchandise)	26.938.381	14.161.984	26.093.885	17.416.962	35.697.859
Motors	26.117.097	31.603.228	20.370.968	10.655.660	723.105
Turbines	26.148.364	31.024.402	18.697.552	5.380.558	103.510
Piping	7.895.494	11.611.653	10.210.287	6.844.228	24.301.481
Other Products	399.886.362	188.826.997	181.659.740	152.026.448	251.317.688
Brazil	**398.180.121**	**256.864.870**	**415.521.455**	**361.995.722**	**661.980.485**
Vehicles (Tourism)	31.131.877	18.767.530	35.933.827	36.819.481	112.638.751
Iron Products	10.182.321	2.602.629	3.060.294	11.674.586	410.397
Iron Products	9.792.339	10.293.404	23.292.670	22.548.136	21.092.364
Tires	7.012.271	5.182.024	16.850.052	10.820.343	16.901.872
Computers	2.147.614	569.636	9.868.740	17.688.403	30.577.172
Other Products	337.913.699	219.449.647	326.515.872	262.444.773	480.359.929
United States	**5.167.671.154**	**3.790.599.179**	**4.556.099.857**	**3.974.902.769**	**6.323.558.999**
Vehicles (Tourism)	307.892.601	179.444.433	140.743.678	155.478.362	320.994.195
Computers	173.813.042	106.756.554	151.004.273	132.377.540	199.195.567
Wheat	**124.045.733**	**105.120.750**	**95.241.255**	**112.711.840**	**95.343.410**
Vehicles (Merchandise)	180.542.984	109.711.750	115.131.688	69.408.785	127.076.846
Appliances and Devices	152.576.617	219.287.674	91.665.286	56.076.610	61.562.630
Corn	108.673.954	73.247.881	105.735.963	99.154.319	70.681.189
Other Products	4.120.126.223	2.997.030.137	3.856.577.714	3.349.695.313	5.448.705.162
Rest of the World	**3.748.952.866**	**2.881.573.400**	**4.006.030.058**	**3.231.735.519**	**4.788.807.275**

N/A - Not Available. Source: Promexport and OCEI - Venezuela

Figure 10. Venezuelan Wheat Imports from USA and Federal Germany. (Expresed in Million $)



	1993	1994	1995	1996	1997
Federal Germany	4	22	19	0	0
USA	124	105	95	113	95

From 1993 to 1997 there are yearly variations in the Venezuelan wheat imports from USA and also from Federal Germany. For 1996 and 1997 there is not information available for imports from Federal Germany. Venezuela its an important wheat market for USA.

Saltine Cracker Industry in United States and Venezuela

Crackers contain little or no sugar and moderate levels of fat. The dough generally contains low levels of water. There are three major types of crackers: saltine, chemically leavened, and savory. Crackers, particularly saltines, are deceptively simply food systems. In fact, the process required to produce acceptable saltines is both lengthy and complex. A brief description of the process follows. Saltine crackers are made by a sponge and dough process that requires about 24 hours, much of it for fermentation (fig. 12). Because cracker sponges are mixed just long enough to wet the flour, gluten development occurs only to a limited extent at this stage. During the next 19 hours of sponge fermentation, the consistency of the sponge changes drastically as the sponge becomes more acidic and less elastic. (4: p. 22)

Table 13 shows cracker formulas for 7 different kinds of crackers. The main component for crackers is flour. There are variations in the content an kind of ingredients used depending of the cracker that is produced. There are two variations in saltine crackers according the process to produce it, sponge and dough. These variations imply the use of different ingredients to produce saltine crackers. It is important to see that there are significant variations in the amount used of wheat, depending of the process used. This means a reduction of 86% use of wheat flour for the dough process compared with the sponge process.

Table 13. Cracker Formulas

Ingredients	Graham	Cheese Cracker Straight Dough	Lunch Biscuit	Saltine		Cheese Saucks	
				Sponge	Dough	Sponge	Dough
Flour	80	100	100	65	35	75	25
Graham Flour	20	-	-	-	-	-	-
Shortening	12	12	16	-	-	12	-
Lard	-	-	-	-	11	-	-
Sugar	25	-	3	-	-	-	-
Molasses	5	-	-	-	-	-	-
Invert Syrup	5	-	-	-	-	-	-
Cheese	-	25	-	-	-	-	-
Salt	1	1	1	-	-	-	-
Soda	Variable	0.5	-	-	Variable	-	0.5
Ca Phosphate	-	-	2.6	-	0.5	-	0.25
Ammonium Bicarbonate	0.5	-	-	-	-	-	0.25
Water	20	30	30	29	-	25	5
Sponge	-	10	-	10	-	-	-
Milk Powder	-	-	4	-	-	-	-
Yeast	-	-	-	0.25	-	0.25	-
Paprika	-	-	-	-	-	1	-

Source: B&CMA Handbook,1981

Variation in the saltine cracker products

Researching through Internet were found four different variations of saltine crackers produced by Zesta and Krispy. Zesta and Krispy rare main companies that produce saltine crackers in USA.

Zesta produces original saltine crackers, low salt crackers, unsalted crackers, and fat free crackers. Krispy produces saltine crackers, fat free crackers, and unsalted tops crackers. The ingredients used are basically the same. Most variations are due to percentages of ingredients used.

Table 14. Ingredients Used by Zesta to Produce Saltine Crackers

Ingredients	Original Saltine	Low Saltine	Unsalted	Fat Free
Wheat flour	X	X	X	X
Niacin	X	X	X	X
Reduced Iron	X	X	X	X
Thiamin	X	X	X	X
Riboflavin	X	X	X	X
Folid Acic	X	X	X	X
Vegetable Shortening	X	X	X	X
Salt	X	X	X	X
Corn Syrup	X	X	X	
Malted Barley Flour	X	X	X	
Leavining	X	X	X	X

Source: Available at Internet: Keebler Zesta Company, 1999.

There are some variations among the ingredients used for both companies –tables 14 and 15-.

Table 16 shows nutrition facts provided by Krispy company, there are variations among them. The percentage of iron is constant for the different variations of saltine crackers, the other nutrition values suffer variations among them.

Table 15. Ingredients Used by Krispy to Produce Saltine Crackers

Ingredients	Original Saltine	Fat Free	Unsalted Tops
Wheat flour	X	X	X
Niacin	X	X	X
Reduced Iron	X	X	X
Thiamin	X	X	X
Riboflavin	X	X	X
Folid Acic	X	X	X
Vegetable Shortening	X		X
Salt	X	X	X
Corn Syrup	X	X	X
Malt	X		X
Baking Soda	X		X
Dextrose	X		X
Sodium Bicarbonate		X	
Yeast	X	X	X
Natural Flavor		X	

Source: Available at Internet: Krispy Saltines Company, 1999

Table 16. Nutrition Facts Provided by Krispy Saltine Crackers

Item	Original Saltine	Fat Free	Unsalted Tops
Serving size	14gr	14gr	14gr
Calories	60	30	60
Total Fat	2%	0%	2%
Cholesterol	0%	0%	0%
Sodium	8%	6%	5%
Carbohydrate	3%	4%	3%
Protein	2gr	1gr	2%
Iron	4%	4%	4%

Source: Available at Internet: Krispy Saltines Company, 1999

Saltine cracker production process.

After fermentation, the sponge is mixed with other dough ingredients and the "dough-up" flour; the dough is allowed to relax for 4-6 hours. After the relaxation/resting period the dough is taking to the hopper of the sheeter. Sheeting this extensible, non-elastic dough through multiple sets of rolls produces the thin dough piece required in the next step.

Cracker doughs are laminated after exiting the sheeting rolls. After lamination, multiple pairs of heavy steel rolls (called gauge rolls) gradually reduce the dough sheet thickness to that desired for cutting. Typically there are two or three pairs, although may be used for short dough and more than three may be used where gentle reductions in dough thickness are necessary. As a rule of thumb, the reduction in thickness should be about 2:1 for each pass through a roll pair, although ratios of up to 4:1 are used. Obviously, the greater the ratio, the more work and stress is put into the dough and the more its physical properties change.

Chemically leavened crackers are generally called "snack crackers" and have a final pH of about 6.5 as compared to 7.0 - 7.1 for saltines. After a single stage mixing and a relatively short rest time (2-4 hours), snack cracker dough is sheeted to form a continuos ribbon which is then laminated, with a light application of dusting flour between the layers. Graham crackers are chemically leavened semi-sweet crackers in which part of the white flour (10-40%) is replaced by whole-wheat flour. Figure outlines the process for production of chemically leavened crackers. (4: p. 24)

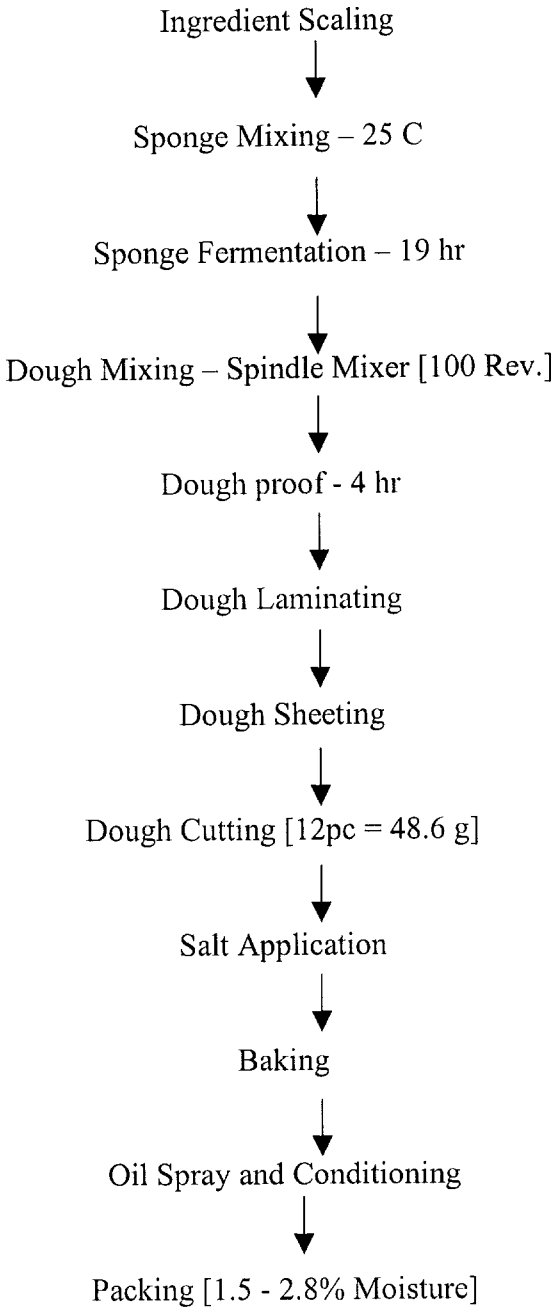
Savory cracker production process

Flavored or savory crackers are well accepted in the U.S. market and accounted for much of the recent growth in cracker sales. The intense savory flavors are produced by adding the appropriate flavoring agents directly to the dough before or to the surface of the crackers after baking. Savory or cheese crackers are generally produce from fermented doughs. The yeast fermentation and the lower pH improve the cheese flavor. The formulation and processing is similar to that of soda crackers, with adjustments to

compensate for the increased fat and moisture content of the cheese. (4: p. 24)

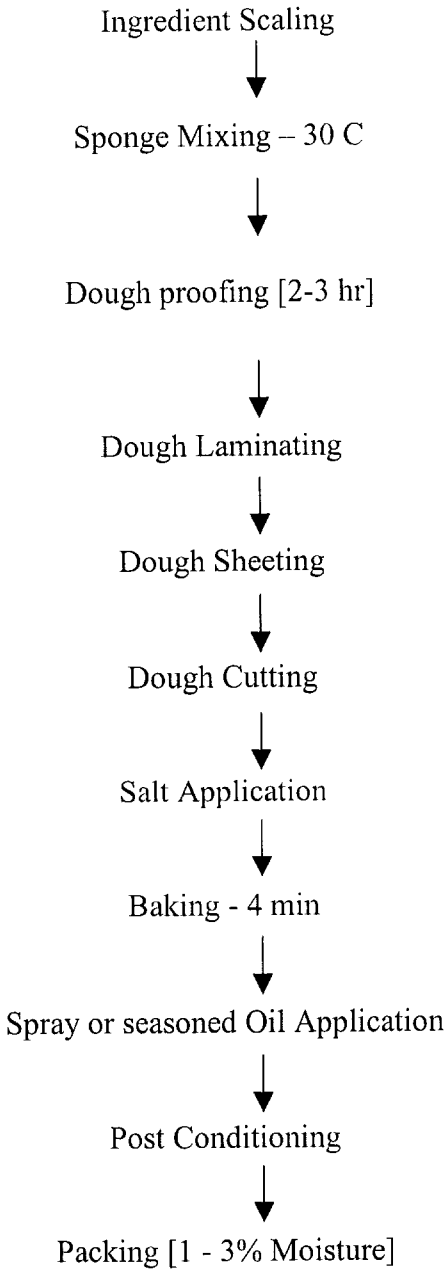
Typical production process for various types of crackers (saltine, snack, and grahams) are shown in the figure 11.

Figure 11. Saltine cracker production process



Source: American Association of Cereal Chemists

Figure 12. Savory cracker production process



Source: American Association of Cereal Chemists

General Venezuelan Market Overview

Importance of Venezuela as an Agri-food Market

Venezuela's climate and land provide conditions appropriate for agriculture. In 1930, agriculture made up 70% of the country's GDP; in 1996, that figure was only about 6%. A number of factors have resulted in this sector being among the country's weakest. The decline in agriculture followed the discovery of oil. As oil money came into the country after 1920, Venezuelan agriculture contracted, partially the result of widespread migration to the cities and cheaper agricultural imports. By 1982, Venezuela was importing nearly 70% of its foodstuffs. (1: p. 12)

Characteristics of the Agriculture and Agri-Food Sector in Venezuela

The agricultural sector is receiving more attention as the government tries to diversify the economy. However, a combination of price controls, high interest rates, very low productivity and technology levels (estimated to be at 1985 levels) are limiting growth. In addition, only 23% of Venezuela's 95 million hectares of cultivable land is presently used, are three quarters of which is devoted to pasture. Grasslands and meadows cover huge stretches of the country, and commercial woodlands are abundant. In 1989, it was estimated that 2,640 sq. km of land were irrigated. Venezuela's 2,816 km of open coast provide excellent conditions for aquaculture. (1: p. 12)

Currently, agriculture employs about 11 percent of the labor force, the bulk of which is employed in cattle ranching, which produces roughly half of all agricultural revenues. Other agricultural products such as grains, fruits, vegetables, dairy products and poultry employ an additional 39 percent, while the remaining 10 percent is employed by forestry

and fishing. (1: p. 13)

The Venezuelan agri-food industry infrastructure is among the best in Latin America; however, it was developed under intensive and frequent political intervention, which limited potential in terms of volume and quality. Consumers grew accustomed to stable food prices, due to massive state subsidies to the sector which favor local production of value-added products with major components of imported raw materials.

During 1995, exchange and price controls kept farm prices controlled at the farmer and consumer levels, while the price of inputs used by farmers were freed. Since the exchange controls' system favored imports of inputs, while simultaneously blocking entry of competing end products, Venezuelan agri-business had no alternative but to rely on domestic production. This situation explains why the sector achieved a 3.93% growth, according to the Ministry of Agriculture, which is higher than growth in other sectors in the economy. The growth was lead in part by the vegetable sub-sector, which grew at 5.77%. (1: p. 13)

Table 17 shows main Venezuelan agricultural products for 1994, more than 50% of these products are grains.

Table 17. Venezuelan Agricultural Products 1994 –by tons--.

Agricultural Products	Thousands Tons	Agricultural Products	Thousands Tons
Sugar Cane	7664	Corn	1141
Cattle (thousand units)	2209	Rice	738
Swine (thousand units)	2209	Sorghum	446
Milk (millions liteers)	1562	Poultry	342
Harvested areas (thousand hectares)	1280	Coffee	79
Cacao	14		

Source: Marketing Industry Services branch Canada, 1999

Challenges Facing the Venezuelan Agriculture and Agri-Food Sector

The Venezuelan Agri-food sector, particularly small and medium-sized farmers, is strongly affected by the following:

- a high inflation rate (40% estimated for 1997);
- a high active interest rate; and
- high operational costs.

The agricultural sector also faces major hurdles in the areas of land reform and finance. (1: p. 14)

Land Reform

The 1964 Agrarian Reform Law granted some land to holders of small farms; however, the National Agrarian Institute still controls more than 80 % of the country's arable land, only 3% of which is being used. The result is that many farmers struggle on small plots with low-yield crops, rather than pursuing more economically advantageous endeavors. The diseconomies of scale further penalize their efforts. (1: p. 15)

Finance

Finance is a major concern to both farmers and food processors. Given the country's high interest rates, many producers and processors are being squeezed out of the market despite the government's preferential interest rates. Processors are especially vulnerable since they need to find large sums of money to pay for crops at harvest time. The lack of liquidity makes their task even more difficult and has had a serious impact on profit margins. The problem is significant. It is estimated that Venezuelan agro-industrialists

owe between Bs. 60 million and Bs. 143 million. (1: p. 15)

Agri-food and Import policy

Venezuela's agricultural productivity levels are below the averages registered by countries with similar climatic conditions. Because of conflicting priorities in setting new macroeconomic and fiscal policies, the government has been slow in developing a specific program to reactivate this important sector. However, a series of measures has been announced based on the recent IMF agreement. Infrastructure works will continue to be financed through the PITSA program (Investment Plan to Transform the Agricultural Sector). This program seeks to improve conditions in irrigation, communications and road infrastructure at major production centers. The main purpose of these measures is to keep small-scale farmers on their land.

The Ministry of Agriculture is also implementing a number of programs to increase the sector's efficiency and productivity and encourage growth, including:

- tax exemptions for new investments (20% tax rebate);
- financial assistance through the farm loan portfolio, with a seven-year repayment period and two-year grace period;
- preferential interest rates (limited to 45% of the market rate);
- limited protectionism measures for domestic products;
- price bands for 12 agri-food commodities;
- standardization of regional import duty tariffs;
- a 10% export subsidy (the only sector of the economy to receive such a subsidy)

and,

- educational programs for farmers.

The government has also delegated a number of as yet unspecified marketing activities to producer organizations and is offering soft loans to small farmers through the Agriculture Credit Institute (Bs 4 billion in loans to 15,000 farm families (Bs 266,000/ family)) and the Agricultural Credit Fund. Despite these activities, no local agri-food growth is expected for the next few years due to readjustment. While these initiatives are a beginning, more are needed to create a modern agricultural industry. (1: p. 15)

Trade Agreements

European Union General System of Preferences for the Andean Countries (GSP), since January 1995, Venezuela has benefited from the GSP. Membership allows a Venezuela-based producer to gain access to the 370 million consumer market of the European Union through its preferential tariff system which comprises zero tariff for most industrial and agricultural products and a system of relative preference for various other products. (1: p. 17).

NAFTA and Association of Free Trade in the Americas (ALCA), Venezuela has expressed some interest in eventual membership in the North American Free Trade Agreement (NAFTA), but discussions on this are not likely to be advanced in the next few years. As well, Venezuela, along with the rest of the countries in the region, is part of the goods and services trading working committees, aimed at the creation of the Association of Free Trade in the Americas by the year 2005. (1: p. 17)

Two Agencies Monitor Imports

Food safety in Venezuela is regulated by the *Ley General de Alimentos* (General Food Law) of 1996. The law authorizes two agencies to monitor all health-related aspects of food production and commercialization. The major players: *Ministerio de Sanidad y Asistencia Social (MSAS)* (Ministry of Health and Social Assistance) and the *Ministerio de Industria y Comercio (MIC)* (Ministry of Industry and Commerce). Specific offices directly involved in the import process (6: p. 2):

- ***Ministerio de Sanidad y Asistencia Social (MSAS):*** The Food Hygiene Division is Venezuela's central authority regarding food safety and quality. It issues health registration numbers for food products.
- ***Servicio Autonomo Nacional de Metrologia Legal (SANAMET):*** This MIC agency approves packaging, weights and measurements for all processed food products. All brand names and trademarks must be registered with SANAMET.
- ***Servicio Autonomo de Sanidad Agropecuaria (SASA):*** The Plant and Animal Health Protection Service of the Ministry of Agriculture enforces food safety regulations for plants and animals and their products and byproducts.
- ***Comite Venezolano de Normas Industriales (COVENIN):*** As a member of the International Standards Organization, the Industrial Standards Bureau of this MIC agency sets mandatory and optional standards according to product type.
- ***Servicio Autonomo Direccion de Normalizacion y Certificacion de Calidad (SENORCA):*** Another MIC agency, the Quality Standards and Certification

Service provides the MSAS health registration number necessary for imported processed foods.

- ***Servicio Autonomo de Registro de la Propiedad Industrial (SARPI):*** The Industrial Property Registration Service is Venezuela's patent and trademark office, which registers food brand names and trademarks.

Market of Grains/Saltine Crackers in Venezuela

Growth and Size of Market Grains

Venezuela is not a major producer of grain. Local production, which is insufficient for domestic food and feed demand, is limited to white corn for human consumption, rice, sorghum and some feed corn.

Venezuela imports practically all its wheat needs, an estimated 1.2 million tons in 1996/97, to satisfy the population's taste for bread and pasta. The quantities and types of wheat imported are determined by consumer demand, domestic supplies of alternative grains (such as rice and white corn), and government policies that influence wheat trade. The Venezuelan wheat market grew strongly in the late 1980's and into 1990, due to the then robust economy and the 1989 trade reforms. This growth was dampened when the Venezuelan economy entered a recession in 1993. (1: p. 24)

Economic turmoil and urban population growth has shifted wheat consumption from breads to pastas, rice, and corn products. Corn, durum and rice thus benefit from greater demand. Bakery goods consumption has declined from an estimated 35 kg/capita (77 pounds/capita) in 1994 to 27 kg/capita (60 pounds/capita) in 1996. Pasta consumption has increased from 17 kg/capita (37 pounds/capita) to 23 kg/capita (51 pounds/capita) over

the same time period, making the citizens of Venezuela the second largest per capita pasta consumers in the world. Total wheat consumption is estimated to show only very slight growth in 1997 and is not expected to make significant gains in 1998.

All wheat imports are purchased by the private sector. The major milling companies are vertically integrated and control all aspects of wheat marketing and processing. The milling industry in recent years has been integrating with pasta producers and is highly concentrated. Only small amounts of barley are imported and used for animal feed. Total consumption of barley is estimated at 1,000 tons a year. Barley consumption has been steady for the last three years and it is not expected to change in 1997. (1: p. 25)

Companies that Buy Milling Products in Venezuela

There are different kinds of wheat flour used by the Venezuelan market. There local companies, but also there are American plants producing in Venezuela. The main companies that buy milling products in Venezuela are shown in table 18.

Table 18. Milling Products in Venezuela-

Product	Company
Flour for bread and pastry making	Molinos Nacionales C.A.
Household and Industrial Flour	Grandes Molinos de Venezuela S.A.
Wheat Flour	C.A. Promasa
Oatmeal Flour	Molinos Nacionales C.A.
Precooked Corn Flour	C.A. Promasa, Euroven S.A., and Molinos Nacionales C.A.
Precooked Yellow Corn Flour	Molinos Nacionales C.A.
Semola For Pasta Production	Molinos Nacionales C.A.
Wheat Groats	Grandes Molinos de Venezuela S.A.
Corn and Rice grits for Snacks	C.A. Promasa
Oatmeal Flakes	Molinos Nacionales C.A.
Yucca Flour For Human Consumption	Agroselect Snacks, C.A.
Whole Yucca Flour (For Animal Feed)	Agroselect Snacks, C.A.

Source: Venezuelan Trade, 1998

Companies that Produce/Sell Saltine Crackers in Venezuela

The main companies that produce saltine crackers in Venezuela are shown in table 19

Table 19. Companies that Produce/Sell Saltine Crackers in Venezuela

Company	Product	Postal Address	Phone (011-58-)	Founded
C.A. Galletas Carabobo (7: p.1)	cookies, saltine crackers and Jellies.	Pasaje 19 de Abril, Ejido, Tocuyito. Carabobo state.	41-95740 / 95513	1959
Nabisco La Favorita (7: p. 2)	Saltine crackers /pharmaceutical products	Maracaibo state	61-361958	N/A
C.A Sucesora de Jose Puig & CIA (8: p. 1)	Cookies	Apartado Postal 70013. Caracas, Venezuela	2-239.18.46/ 239.69.56	1911
N/A (9: p. 1)	Saltine Crackers	Barquisimeto. Lara State.	51-691182 / 692477	N/A
Galletas la Rosa (9: p. 1)	Saltine crackers and cookies.	N/A	980015566	N/A

C.A Sucesora de Jose Puig & CIA.

Was founded in 1911. The Puig Group is the largest manufacturer of cookies in Venezuela with three factories. This company has eight plants located in: Tariba, Tachira State, phone: 011-58+76-942823; Barquisimeto, Lara State; Maracaibo, Maracaibo State; Caracas, Federal District; Barcelona, Barcelona state; Ciudad Bolivar, Ciudad Bolivar State. (8: p. 1)

Export Markets: French Caribbean islands, Curaçao, Aruba, Bonaire, Puerto Rico, United States, Peru and Colombia.

Payment Conditions: Letter of Credit or check in advance.

Banks: Venezolano de Crédito, Provincial.

President: José Puig Marquez, and Exports Manager: Lino R. Ojeda. (8: p. 1)

Products that C.A Sucesora de Jose Puig & CIA produce (8: p. 2) are:

María Selecta Puig: Sweet "María" cookies, very toasted with low moisture content and packed in polypropylene foil. It is used as a breakfast complement. Production Capacity: 20 tons a day. Type of Packaging: Cardboard boxes.

Family Crackers: Cholesterol-free crackers, in tins with 32 individual packages. Ideal for the familiar economy. Production Capacity: 20 tons a day. Type of Packaging: Cardboard boxes.

Soda Puig: Lightly salted crackers, absolute leader in the Venezuelan market. This versatile cracker can be eaten at any time, with cheese, butter or jam. Production Capacity: 40 tons a day. Type of Packaging: Cardboard boxes.

Marilu. Sweet sandwich cookie filled with vanilla or chocolate cream. Popular as school snacks. Very flavorful and economically priced. Production Capacity: 10 tons a day. Type of Packaging: Cardboard boxes or paper bags.

Elite. Delicious chocolate cookies filled with vanilla cream. Popular as school snacks and in children parties. Production Capacity: 20 tons a day. Type of Packaging: Cardboard boxes.

Katy. Delicious cookies filled with vanilla cream and covered with chocolate with hazelnuts. Packaged in aluminized foil. Ideal as snacks or desserts. Production Capacity: 10 tons a day. Type of Packaging: Cardboard boxes.

Sweetie Bran. Sweet cookies made with a high percentage of whole wheat flour and

sweetened with honey. Easy to digest and economically priced. Production Capacity: 20 tons a day. Type of Packaging: Cardboard boxes.

All products are delivered two weeks after confirmation of Letter of Credit.

Quality of Saltine Crackers

There are variations in quality of saltine crackers. This is reflected in the price of the product. In Venezuela there are Sanitary and Phyto-sanitary Standards (SPS) and Other Technical Restrictions. The food products must comply with Venezuelan sanitary and phyto-sanitary import requirements and be accompanied by any required certificates of health and origin, issued by the appropriate foreign authority in cases of importation. A Venezuelan consular authority in foreign country prior to shipment must validate these documents. (1: p. 19)

Food products arriving/producing in Venezuela must be registered at the Ministry of Health in order to obtain an import permit number. The product is detained by Ministry of Health and by Customs inspectors in situations where further validation of sanitary or phyto-sanitary status and/or origin is required. In the case of imported alcoholic beverages, the tax "band" must be affixed across the bottle closure before the shipment can leave the customs premises. Imported cigarettes are also subject to this type of measure and adhesive labels are not allowed. (1: p. 20)

There are local Standards, so the agri-food exporters/producers should consult the Venezuelan Industrial Norms Committee (COVENIN) regulations concerning the guidelines and testing protocols for agri-foods before doing business in Venezuela. COVENIN has established over 300 obligatory standards that apply to both domestic and

imported products of all kinds. Where no qualifying certificate can be obtained, COVENIN will, in some cases, arrange for local testing at the cost of the importer. This, however, can present difficulties when, for example, the tester is a local competitor of the imported product. Cost may also be prohibitive in the case of small or mixed shipments. It does not appear that adherence to ISO 9000 guidelines will be acceptable in place of a standards compliance certificate.(1: p. 20)

Market volume

According the geographical distribution of the country, and variations in the consumer behavior among states there are significant variations in the level of consumption. There is a direct relation in the level of consumption in the urban areas because the concentration of population.

As part of the culture in this country the level of consumption of corn is high, there are two main types of fast foods called: corn cake (arepa) and turnover (empanadas). These fast foods displace part of the potential market for saltine crackers. The people used to eat them for breakfast and also for dinner. (10: p. 1)

Market share.

According the location of Markets the primary market areas are metropolitan and urban (36% of purchasing power) –table 20--. Distribution throughout the rest of the country is characterized by consolidation of shipments to Caracas, Valencia, Porlamar (duty-free and trade area), Maracaibo and Barquisimeto. (1: p. 22)

Table 20. Location of the Venezuelan Markets

Geographic Area	Population (%)	Purchasing Power
Metropolitan (Caracas and metropolitan zone)	23.8%	29.0%
Oil States	14.5%	13.0%
Eastern States	18.2%	14.0%
Central States	30.7%	31.0%
Andean States	12.8%	13.0%

Source: Marketing Industry Services branch Canada, 1999

The competitors' basic strategy.

a. Pricing

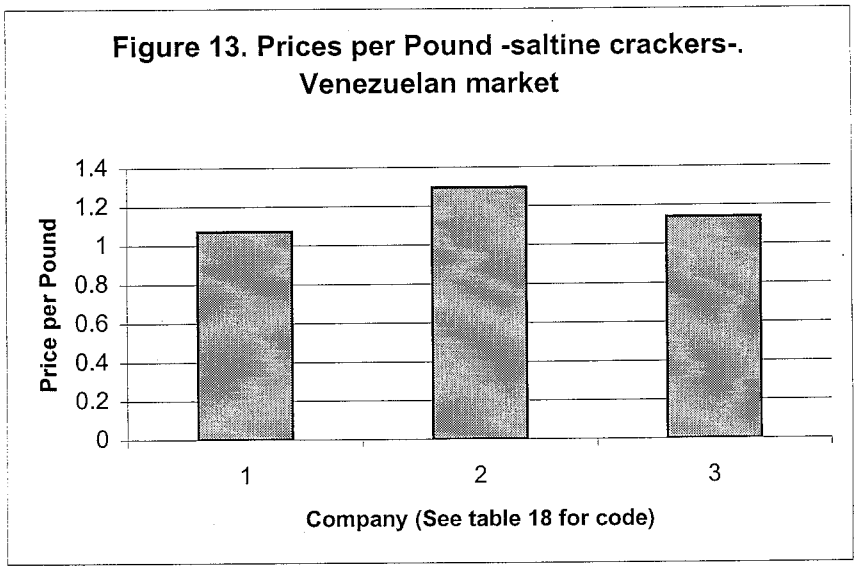
Price of Saltine Crackers in Venezuela

Because of difficulties to find information related with price, and market share; only the price of regular Saltine crackers was found for the main companies. There are variations in price, table 21 shows values are between $0.59 and $0.64 for a package of approximately 250gr./8.8 oz., content of 10 packages per container.

Table 21. Price of Saltine Crackers in Venezuela

Company	Name of the product	Weight	Presentation	Price
1. C.A Sucesora de Jose Puig & CIA.	Galleta de Soda el Sol	250 gr./ 8.8 oz	10pk	Bs.350/$0.59
2. No identified.	Galleta de Soda	242 gr.	10pk	Bs.409/$0.69
3. Galletas la Rosa.Colombian company.	Soda Premium	255gr.	10pk	Bs.381/$0.64

Source: Consuelo Urbina, 1999



The cheapest price for the same presentation/product is around Bs.300/$0.50.

The most expensive price for the same presentation/product is around Bs.420/$0.71.

The labels are in Spanish, this country uses the metric system as a measure system (grams).

There are variations in the currency exchange, for this project was used the exchange rate at 05/12/99, the value of the exchange rate: 594.50 Bs./$. (2: p. 1)

As is showed in figure 13, variations among prices for saltine crackers are around $0.20.

Price of Saltine Crackers in U.S.A.

Researching through Internet was found the next information related with the price of saltine crackers in the U.S. market (11: p. 1). The main companies that produce saltine crackers in U.S. are: General Mills Foodservice, Keebler Company, Lance, Inc., McKee Foods Corporation, and President Baking Company. The codes used in table 23 are:

List of the companies used in table 22 is as follows, in the table will be used the number in the list as code for each company:

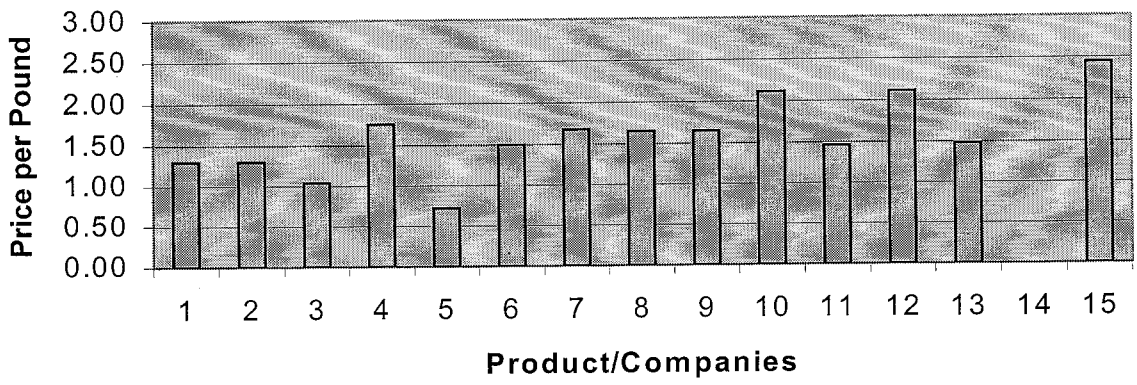
Table 22. List of Companies that produce/sell saltine crackers in USA

Company code	
1	Keebler Company
2	Lance Inc.
3	President Baking Co.
4	McKee Foods Corp.
5	Lance Incorporated
6	No specified.

Source: Central Intelligence Agency (CIA), 1999

Figure 15 shows variation in saltine cracker prices for U.S. market. There are significant variations in prices among these companies. Comparing product/companies, the most significant variation in price is that between N. 15 and N. 5, price per pound for N. 15 is about 2.5 times price per pound for N. 5. Most of the prices per pound are around $1.5.

Figure 14. Prices per Pound --Saltine Crackers--. U.S. Market



b. Advertising

Specifically there is no publicity in the TV related with saltine crackers, but the main companies have publicity on TV for cookies.

The main media is represented by:

Newspapers: El Universal, El Nacional, Meridiano, 2001, NotiVen, PDVSA news, and Noticiero Venevision;

Magazines: El Planeta Urbe, Venezuela Analitica, La Red, and El Ucabista (from UCAB University);

Television: Venevision, Radio Caracas Television, and Televen.

In some magazines can be find some publicity related with saltine crackers. The companies used to distribute posters through the retailers, so this is the main way of publicity in

Venezuela.

Labels must be in Spanish and contain the required information, which includes: product name and type; weight or volume in metric measurements; country of origin, name and address of manufacturer and local importer; local sanitary registration number; grade of product; list of ingredients; durable life; lot number; and instructions for use (if applicable). Many importers simply affix mini-labels (stickers) containing the required information in Spanish to the original labels. Any user's or owner's manuals must be in Spanish. (1: p. 20)

c. Distribution Channels

Container Handling: Containers are handled efficiently, but will not pass customs unless their contents fall under one single tariff classification number. If they contain consolidated mixed cargo, Customs will separate their contents to check each individual item. In order to alleviate congestion at ports and airports, Customs will authorize this procedure to take place in a bonded warehouse or, under special arrangements, at extra cost at the recipient's warehouse. Containers must be sealed during the transfer. Duty-free bonded warehouses are available in ports, airports and in most major towns. (1: p. 18)

Transportation Infrastructure: The country's physical infrastructure is relatively modern and improving with a nationwide network of roads and highways that total more than 81,000 km -129,600,000 miles- that are currently being upgraded. The most recent information is that 31,200 km -49,920,000 miles- are paved, 24,800 Km -39,680,000 miles- are gravel, and the remainder are earth and unimproved earth. Venezuela also has more than 60 airports, seven of which are international. Simón Bolívar International in

Maiquetía is 28 km -44,800 miles- from the center of Caracas.

The country's ports on the Caribbean provide direct access to the North American Gulf Coast, the Panama Canal, Central America and the Caribbean islands. Caracas' seaport in La Guaira is among the busiest in the country and is located approximately 33 km - 52,800 miles- from the city center. The Orinoco River port of Puerto Ordaz provides a shipping outlet to the Atlantic Ocean. The privatization of most of the country's ports in 1992, improved efficiency and speed of deliveries. It should be noted that freight handling in ports and airports is somewhat rudimentary and that damage might occur unless the products are well packed. (1: p. 19)

Venezuelan agri-food distribution channels are straightforward. Storage and distribution facilities for frozen products and for value-added deli products are limited to metropolitan areas. (1: p. 21)

There is an international airport, but main cities has access to international flights, for example Nueva Esparta, Valencia y Maracaibo. These cities have daily flights from Miami and New York. Venezuela is the main port of South America because its geographical location. Product can be distributed to South America through Venezuela.

Table 24 shows that 87% of the sales power is just concentrated in 5.66 of the outlets, which are represented by large supermarket chains and independent supermarkets. 13% of the sales power is concentrated in 94.44% of the total outlets, which are represented by medium-sized grocery stores and small grocery stores. According this, the easiest way to reach a huge segment of the market is through the independent supermarkets and large supermarket chains.

Table 24. Distribution of Outlets and its Sales Power

Outlets	No. Of Outlets	Sales Power
Large supermarket chains	212	37.0%
Independent supermarkets	2,938	50.0%
Medium-sized grocery stores	9,515	8.0%
Small grocery stores	42,961	5.0%
TOTAL	**55,626**	**100.0%**

Source: Marketing and Industry Services Branch Canada, 1997.

d. Financial Strength

Payment is generally through an irrevocable letter of credit (supported by a bank involved with international trade, through direct transfer to the exporter's account) after the product has landed in Venezuela and been inspected and approved by local authorities. Advance payment is possible; however, the importer is required to post a bond with his or her bank. (1: p. 18)

The overall experience of suppliers has been that there have been delays in collecting payments. In addition, the recession and heavy devaluation in recent years have had an impact on certain buyers' creditworthiness. Diligent monitoring is required. (6: p. 2)

e. Personnel Strength

The costs of labor are cheaper compared with U.S., also the companies can find qualified people because of the higher unemployment level. This is one of the main strengths to be competitive in this market. There are variations in the productivity labor force compared with the American labor force, because the behavior of the people, the holidays are longer and more frequent in Venezuela than in U.S., sometimes there are strikes that affect the productivity level of the companies. The office hours are normally from 8 a.m. till 12 noon and then from 2p.m. till 5 p.m. (6: p. 1)

f. Brand Names or Market Reputation

The companies that actually operate in the Venezuelan market are recognized, have more than 10 years producing/selling crackers, so the brand names are very important in this market. The reputation is gained through many years of experience, quality and price.

One note of caution for the exporters, since the Venezuelan legal system does not provide ample protection for intellectual property, U.S. exporters should register brands and trademarks privately, using a specialized local or international law firm, before distributing any products. (6: p. 2)

g. Research and Development or Innovation Activities

Agri-food exporters should consult the Venezuelan Industrial Norms Committee (COVENIN) regulations concerning the guidelines and testing protocols for agri-foods before doing business in Venezuela. COVENIN has established over 300 obligatory standards that apply to both domestic and imported products of all kinds. Where no qualifying certificate can be obtained, COVENIN will, in some cases, arrange for local

testing at the cost of the importer. This, however, can present difficulties when, for example, the tester is a local competitor of the imported product. Cost may also be prohibitive in the case of small or mixed shipments. It does not appear that adherence to ISO 9000 guidelines will be acceptable in place of a standards compliance certificate. (1: p. 20)

As part of the characteristics of the market and the level of competition, the research is done internally by every company. The companies work hard to reach the levels of quality required by local Standards (COVENIN).

h. Geographic Dispersion of Facilities

The industrial park related with the saltine cracker industries in this country is concentrated in few states, the main industrial states where plants are located: Carabobo state, Barquisimeto state, and Federal District. Because the extension of this country the transportation system between these states are good, and the distances are around 300 kilometers, 482.700 miles.

Future Situation of Domestic Food Processing Sector

Venezuela is not a major producer of grain. Local production, which is insufficient for domestic food and feed demand, is limited to white corn for human consumption, rice, sorghum and some feed corn.

Venezuela imports practically all its wheat needs, an estimated 1.2 million tonnes in 1996/97, to satisfy the population's taste for bread and pasta. The quantities and types of wheat imported are determined by consumer demand, domestic supplies of alternative

grains (such as rice and white corn), and government policies that influence wheat trade. The Venezuelan wheat market grew strongly in the late 1980's and into 1990, due to the then robust economy and the 1989 trade reforms. This growth was dampened when the Venezuelan economy entered a recession in 1993. (1: p. 24)

Traditionally, Venezuela millers imported high quality, high protein wheat, but because disposable incomes are decreasing, millers and bakers have begun to blend lower quality wheats with higher quality wheats to produce a less expensive flour. (1: p. 25)

Since the new President has not yet revealed his economic-financial programs, nor will he do so until the Constituent Assembly and principal points of the new Constitution have been resolved, the projection for the Venezuelan economy could be divided into two separate versions. The optimistic one which assumes that Pres. Chávez will successfully overcome the basic problem of the budget deficit by cutting expenses, eliminating corruption and increasing income via new taxes which will be collected. Also that the government will come to a favorable agreement with the IMF and World Bank, so that Venezuela will be able to borrow sufficient funds abroad to cover its still pending debts. The second version will be based upon Pres. Chávez taking most of the before mention steps, but results being blocked by political and private sectors. This will result in the present recession not only continuing throughout 1999 but 2000 and even beyond.

a. Technological Forces

The telecommunications sector is braced for a boom. Competitors are actively positioning themselves for the end of the national monopoly in 1999. Regulatory improvements are in process. Sector demand calls for USD 10 billion in new investments

over five years, much of this for technology imports.

Other short-term export prospects will be found in agricultural commodities and computers. Well into the recovery, demand will also rise for air traffic control technology, defense procurement, medical and dental equipment, and consumer goods. But these markets will return more slowly due to fiscal austerity.

With the global development of telecommunications technology Venezuela is favored because this improve the interaction between Venezuela and United States.

b. Economic Forces

Venezuela relies heavily on imported processed and non-processed agricultural products. There has been significant growth in the consumption of imported food products over the last three years and agri-food imports are expected to experience a sharp growth over the next two to three years with most activities targeted on commodity goods and processed products. Venezuela's largest agricultural imports are wheat and corn. The US is Canada's main competitor for wheat.

Quality is extremely important to Venezuelans and the quality of Canadian value-added foods and attractive labelling potentially present an image of prestige to Venezuelan consumers. As well, the heavy European/American influence on Venezuelan taste may also present a major advantage in marketing value-added food products. However, it should be noted that companies interested in this growing market must concentrate on exporting their top-of-the-line products since these products will compete directly with only the best of local and overseas products. (1: p. 23)

c. Socio-Cultural Forces

Venezuela has seen a sea change in public attitudes in favor of a revamping of burdensome labor benefits, elimination of subsidies, and government withdrawal from industry. The details are now being hammered out. Implementation will dictate the pace of recovery.

d. Legal/Governmental Forces

Venezuelan Customs requires that all documents be in Spanish. The following documents must be submitted to the customs authorities:

- manifest of importation and declaration of value (in quadruplicate);
- the commercial invoice (original, typewritten, in duplicate, listing both the value per unit and the total value of the shipment);
- shipping documents; and
- other relevant documents.

Exporters should quote CIF prices for Venezuela (not FOB) since import duties are calculated on the CIF price. Insurance and freight must be listed separately on the invoice. The description for the merchandise must include the appropriate tariff number, which the importer can supply.

The ports charge customs service fees in addition to customs duties. More details on special requirements and documentation are available in publications such as Dun & Bradstreet International. It is also strongly suggested that exporters communicate with prospective importers in order to obtain more information regarding extra documentation

or certification requirements for a specific country.

Venezuelan customs law and its regulations allow the import of merchandise on a temporary basis for exhibitions, cultural purposes, demonstrations, scientific purposes or specific contracts. The importer must request permission for temporary entry, providing an exact description of the merchandise, its number or volume, its value and its expected date of re-export. Temporary entry forms may be requested from the Director General de Servicios Aduanales (General Director of Customs Services) at the Ministry of Finance in Caracas (Fax: 58-241-5771). A bond covering the full value of the duty payable in case the products stay in the country must be obtained. The bond will normally be returned once the products have left the country. Normally, temporary entry permits are granted for a maximum stay of up to six months. The customs handling charge must be paid and is not reimbursable.

Temporary entry of samples by visiting businesspersons is allowed, but the determination of what is a sample is left to the customs agent at the port of entry. Samples arriving unaccompanied as freight are never considered as samples, unless declared as having no commercial value and prepared in such a form that they cannot be sold commercially. (1: p. 20)

Characteristics of the New Saltine Cracker

According researches done by the researcher Elevina Perez, professor of the Central University of Venezuela (Universidad Central de Venezuela) the wheat can be substituted up 15% by local tubers/roots keeping the properties and the quality of the saltine cracker. (11: p. 1)

The studies have been conducted for the development of new local starches with the use of *Xanthosoma saggitifolium, Colocassia esculenta* and *Ipomea batata*, plants that grow in tropical areas in artisan cultures. Like potato, these plants produce underground storage organs (tubers, aroids or corns) whose solid contents are mainly starch. They are growing in tropical areas from a long time and they are consumed mainly in home, boiled in soups or mashed. Tubers or aroids or these plants are potential sources of flour and industrial starch that had not been exploited.

These tubers are perishable, because they have a high moisture content and metabolic activity after harvesting. It has been estimated 30% loss during storage. Because they are perishable its transformation in flours and starches in non-perishable food could solve starvation problems in undeveloped countries.

Since, the transformation in starch or flour will decrease high losses after they have been harvested. Value added process such as, drum dryer and wet milling are useful in order to obtain flour and starches from these aroids. Therefore, before thinking of them as a potential sources of flour and starch to produce foods, it is necessary to characterized their physical, chemical composition, physicochemical, and functional properties. The chemical composition of them shows differences, especially in amylose and phosphorous content. Phosphorous as well as amylose in the pulp of the aroids have influences over the gelatinization and pasting behavior.

There is a potential market in Venezuela for the development of a new saltine cracker with partial substitution of wheat by tropical tubers and roots. The reasons that lead to this statement are:

- Tropical tubers and roots are part of the tropical agriculture, these are cheaper than the wheat. This will be a positive factor in the Venezuelan market.
- 15% of the Wheat can be substituted with tropical tubers and roots starches.
- Reduction in the production costs of saltine cracker because partial substitution of wheat by tropical starches, this lead to a competitive price for the saltine cracker.

Appendix A. Glossary

Bakery: the baker converts the flour produced by the miller from wheat grown by the producer into delicious basic foods favored by the consumer and capable of being eaten with every meal, by every ethnic and age group every day of the year, regardless of economic level from the cradle to the grave.

Colocasia esculenta* aroids:** tropical corms or aroids belong to tuberous plants. It is an edible portion of the ***Colocasia esculenta plants. The aroids are called as ocumo chino, taro. (12: p. 23)

Gelatinization profiles: Gelatinization profiles define the gelatinization and pasting behavior of starchy systems. It means that intermolecular starch's bonds are breaking with increasing temperature and acouse conditions, therefore H bounding sites engage more water. It produces an increased randomness in structure, decreasing in crystallization regions and loss of birefringence. (12: p. 23)

Ipomea batata* aroids:** tropical corms or aroids belong to tuberous plants. It is an edible portion of the ***Ipomea batata plants. The aroids are called as batata, sweet potato. (12: p. 23)

Phosphorous: Organic compounds. Phosphorous can occur into amylose or amylopectin structure and therefore modified their functional properties.

Starch: starch means the storage of sugar in plants. Starch is composed entirely of glucose units. The specific bonding pattern (or linkage) between adjacent glucose units cause chains of glucose to coil. Coiling orients the linkages in such a way that they are

accessible to enzymes that break down starch. Starch has two major components: amylose and amylopectin. These polymers are very different structurally, amylose being linear and amylopectin highly branched –each structure playing a critical role in the ultimate functionality of the native starch and its derivatives-.

***Xanthosoma saggitifolium* aroids:** tropical corms or aroids belong to tuberous plants. It is an edible portion of the *Xanthosoma saggitifolium* plants. The aroids are called as ocumo, cocoyam; and the plant is called malanga. (12: p. 23)

Appendix B. Organizations Related with Organizational Statistical Information (5: p. 1)

Organization	Web page
USDA National Agricultural Statistics Service	http://www.usda.gov/nass
USDA Foreign Agricultural Service	http://ffas.usda.gov/
North Dakota Agricultural Statistics Service	http://www.nass.usda.gov/nd
International Grains Council	http://www.igc.org.uk
U.S. Department of Commerce	http://www.doc.gov
Minneapolis Grain Exchange	http://www.mgex.com
Canada Grains Council	
North Dakota State University	
North Dakota Wheat Commission staff expertise	

Appendix C. Sources of Information in Venezuela

BANCO MERCANTIL	schang@bancomercantil.com	Economic Research Department
DATANALISIS	datanalisis@true.net	Magazine: Indicadores del Camino. No V. 1998
L.A.MONITOR	busmon@dial.pipex.com	Latin America Monitor. March 1998. Vol. 15. No.3
VENECONOMIA	veneconomia@compuserve.com	The Economic, Politic and Social Outlook for Venezuela 1997-2002. Feb 1998
CONAPRI	conapri@conapri.org	Survey made to officers and managers of the main corporations. February 1998
PARIBAS	martin_ducroquet@paribas	Published in the Economía Hoy Newspaper. Feb. 25, 1998
UBS	lawrence.krohn@ubs.com	Latin American Perspectives. January 8, 1998. Year V, No.1
SANTANDER	rpenfold.caracas@sinvest.es	Santander Investment, Emerging Markets Equity Research, October 29, 1997
AZPURUA, GARCIA-PALACIOS & VELAZQUEZ	velazquez@facilnet.com	Torre Kyra, Piso 4, Oficina 45. Avenida Francisco de Miranda, Campo Alegre, Chacao, Caracas 1060, Venezuela.

Appendix D. American Labels for Saltine Crackers

a. Low Sodium Saltine Crackers

This specific container is for low sodium saltine cracker, this product covers specific healthy needs. Net weigh 1 lb./454 gr. Company: Nabisco, INC.

b. Regular Saltine Crackers

Saltine Crackers. Distributed by Sysco Corporation, Houston Texas 77027.

Salad Wafers, Houston Texas 77027, product of Canada.

Appendix E. Venezuelan Label for Chocolate Cookie.

The main reason of this label is to see the presentation of label for cookie in Venezuela.

The company that produces this chocolate cookie is Nestle.

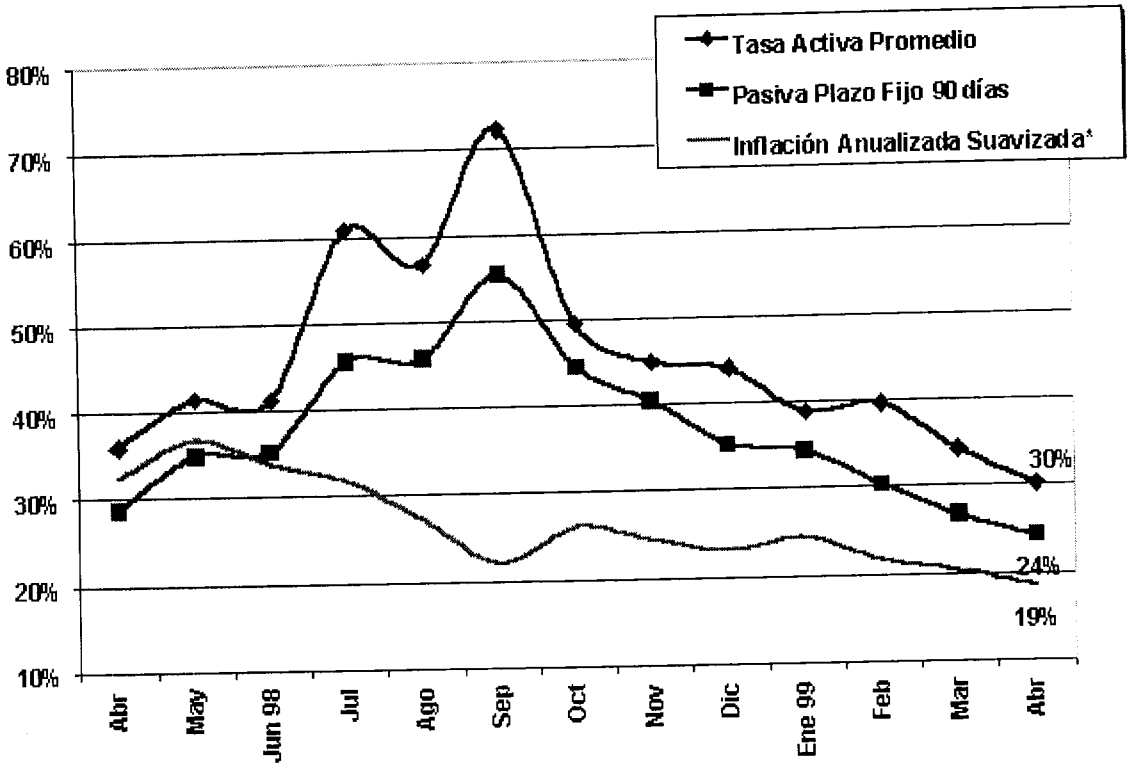
Appendix F. Lending Rates April 1998 - April 1999

The translation for:

Tasa activa promedio is "average active lending rate"

Pasiva plazo fijo 90 dias is "passive lending rate for a fix period of time 90 days"

Inflación anualizada suavisada is "annually smoothly inflation"



Source: Cálculos de Agroplan con base en Banco Central de Venezuela, available at internet:
http://www.agroplan.simplenet.com/coyuntura/tasas_de_interes_activa_y_pasiva.htm

(*) Estimación de la inflación anual, suavizada con promedios móviles
"Annual estimation for inflation, smoothed with mobivle averages"

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