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Coffee is produced in 53 countries and territories and is vital to the economies of many underdeveloped countries that produce it. In 1976 its export value was more than $8 billion, second in value only to petroleum in international commodity trade. Over half of Colombia's and El Salvador's 1976 export earnings were from coffee. Findings/Conclusions: The United States has joined the 1962, 1968, and 1976 International Coffee Agreements primarily to help stabilize prices and export income of the developing producing countries. Although fluctuations in the price of exported coffee appear to be in response to anticipated availability of coffee, the policies and procedures of exporting countries influence availability and create pressures on price. The use of minimum export prices, export taxes, and other measures has occasionally limited the availability of a country's coffee supply to the world market. The Department of State has primary responsibility for formulating U.S. policy on coffee and coffee-exporting countries. It represents the United States in the International Coffee Organization which administers the International Coffee Agre[illegible] The Departments of Agriculture and Commerce are resp[illegible] monitoring the coffee commodity situation by collec[illegible] nd information on coffee production and marketin[illegible] h some gaps and weaknesses exist, data and information [illegible] ted and compiled by the Government are sufficient [illegible] yze current supply and demand. (Author/SC)

REPORT TO THE CONGRESS

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

Coffee: Production and Marketing Systems

Coffee is produced in 53 countries and territories and is vital to the economies of many underdeveloped countries that produce it. In 1976 its export value was more than $8 billion, second in value only to petroleum in international commodity trade.

The United States has joined the 1962, 1968, and 1976 International Coffee Agreements primarily to help stabilize prices and export income of the developing producing countries.

Fluctuations in the price of exported coffee appear to be in response to anticipated future availability. However, the policies and procedures of exporting countries can influence availability and create pressure on prices.

ID-77-54

OCTOBER 28, 1977

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-175530

To the President of the Senate and the
Speaker of the House of Representatives

This report discusses our review of coffee producing and marketing systems. We made this review at the request of the Chairman of the Subcommittee on Domestic Marketing, Consumer Relations and Nutrition, House Committee on Agriculture.

To expedite the issuance of this report, the Chairman's office requested that formal comments not be obtained. However, the report has been discussed with representatives of the Departments of State, Commerce, and Agriculture, and their comments were considered in the report.

Copies of this report are being sent to the Secretaries of Agriculture, Commerce, State, and the Treasury, and other parties.

ACTING Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

COFFEE: PRODUCTION AND
MARKETING SYSTEMS

D I G E S T

Coffee is produced in 53 countries and territories and is vital to the economies of many underdeveloped countries that produce it. In 1976 its export value was more than $8 billion, second in value only to petroleum in international commodity trade. Over half of Colombia's and El Salvador's 1976 export earnings were from coffee.

In 1976 the third International Coffee Agreement entered into force with the United States and 12 coffee exporting and 23 coffee importing countries. The United States was also a member of the 1962 and 1968 Agreements. Notwithstanding certain consumer-oriented changes in the 1976 Agreement, the primary reason for U.S. membership in the agreements was to help stabilize prices and the export income of the developing producing countries, which needed to plan and pursue their development goals.

In July 1975, during negotiations for the 1976 Agreement, devastating frost hit Brazil's coffee trees. This reduced Brazil's coffee production the next year from 23 million 60-kilo bags to 9.6 million bags. Later, other major coffee-producing countries experienced reduced production due to political and natural events. At the time of the frost, world stocks of coffee had fallen from over 87 million bags in 1966 to 39 million; U.S. inventories of green unprocessed coffee had fallen from a normal level of 4 million to 5 million bags to 2.5 million bags.

News of events that affected supply created concern over possible shortages and resulted in increased demand and a seller's market. Between July 1975 and April 1977, green bean prices increased

from $0.55 to $3.40 a pound, but fell to around $1.96 a pound in July 1977. The increasing prices raised the ire of U.S. consumers but appeared to have no great effect on consumer demand. Recognizing that, historically, demand has been inelastic within certain limits, wholesalers and retailers were reluctant, without knowledge of the limits, to pass the full cost effect on to consumers.

During the period of price increases, the price stabilization provisions of the 1976 International Coffee Agreement were not in effect. The primary stabilization feature of the agreement is the provision for export quotas when green bean prices fall to between 63 and 77 cents a pound, which protects the price at the low end of the price range. However, there are no provisions, such as ceiling prices and buffer stocks, to protect against price increases.

Although fluctuations in the price of exported coffee appear to be in response to anticipated availability of coffee, the policies and procedures of exporting countries influence availability and create pressures on price. The use of minimum export prices, export taxes, and other measures has occasionally limited the availability of a country's coffee supply to the world market.

The Department of State has primary responsibility for formulating U.S. policy on coffee and coffee-exporting countries. It represented the United States in negotiations of the 1976 Agreement with the assistance of the Departments of the Treasury, Commerce, and Agriculture. It also represents the United States in the International Coffee Organization, which administers the 1976 Agreement. Matters relating to coffee are also brought before the Economic Policy Group within the Executive Office of the President.

The Departments of Agriculture and Commerce are responsible for monitoring the

coffee commodity situation by collecting data and information on coffee production and marketing. Although some gaps and weaknesses exist, data and information collected and compiled by the Government are sufficient to analyze current supply and demand.

Information is not available, however, to reliably forecast future supply and demand and the resulting price of coffee due to unforeseen natural or political events and to the psychological aspect of anticipation of future availability.

This review was made at the request of the Chairman, Subcommittee on Domestic Marketing, Consumer Relations and Nutrition, House Committee on Agriculture. To expedite the issuance of the report, the Chairman's office requested that formal comments not be obtained. However, the report has been discussed with representatives of the Departments of State, Commerce, and Agriculture, and their comments were considered in the report.

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ABBREVIATIONS

ERS	Economic Research Service
FAS	Foreign Agricultural Service
GAO	General Accounting Office
IBC	Instituto Brasileiro de Cafe
ICO	International Coffee Organization
INMECAFE	Instituto Mexicano del Cafe
NASA	National Aeronautics and Space Administration
NCA	National Coffee Association
SAMI	Selling Areas Marketing, Inc.
UNCTAD	United Nations Conference on Trade and Development

CHAPTER 1

INTRODUCTION

Coffee is produced in 53 countries and territories. Production generally flourishes in regions within the temperate zones of the tropics. Latin American countries produced about two-thirds of the 73.6 million bags of coffee produced during the coffee-marketing year 1975-76. 1/

Brazil, which is traditionally credited with about one-third of world production, accounted for about 31 percent, or 23 million bags, in 1975-76. Colombia, the second largest producer, retained its usual share of about 12 percent. However, because of the July 1975 frost damage to coffee trees, Brazil's estimated share of production for marketing year 1976-77 decreased to 15 percent.

Table 1 shows production estimates for 1977-78. Brazil's estimated production of 17 million bags (about 24.2 percent of the world total) shows that it is recovering strongly from the devastation of the 1975 frost.

1/ The coffee-marketing year is from October through September for many countries. For others, including Brazil, the marketing year is from July through June.

Table 1

Green Coffee Production
and Export Availability
Estimates for Marketing Year
1977-78

Producer	Production	Domestic consumption	Exportable production
	(thousands of 60 kilogram bags)		
Latin America:	45,320	13,044	32,276
Brazil	17,000	7,000	10,000
Colombia	9,300	1,400	7,900
Mexico	4,500	1,500	3,000
El Salvador	3,000	177	2,823
Guatemala	2,450	307	2,143
Costa Rica	1,390	194	1,196
Equador	1,285	170	1,115
13 Others and Puerto Rico	6,395	2,296	4,099
Africa:	18,025	1,332	16,693
Ivory Coast	4,200	60	4,140
Uganda	2,600	22	2,578
Ethiopia	1,900	725	1,175
Zaire	1,450	120	1,330
Kenya	1,335	18	1,317
Malagasy	1,200	140	1,060
Angola	1,500	60	1,440
15 Others	3,840	187	3,653
Asia:	6,235	3,125	3,110
Indonesia	3,000	900	2,100
India	1,760	1,050	710
5 others	1,475	1,175	300
Rest of world 3 countries including U.S. Hawaii	790	31	759
World Total	70,370	17,532	52,838

Source: Foreign Agriculture Circular, July 1977. Prepared by Foreign Agricultural Service, U.S. Department of Agriculture.

Coffee is conceded to have little, if any, nutritional value and is not essential to the human diet. Nonetheless, in 1976 it was second in value only to petroleum in international commodity trade, and it is vital to the economies of many underdeveloped countries that produce it.

Coffee provides income to growers, and coffee harvesting, processing, and marketing is a leading source of employment. Moreover, foreign exchange earnings from exports provide a significant source of financing for the import of goods needed for internal economic development.

During calendar year 1976, the 18 largest coffee-producing countries exported coffee valued at $6.9 billion, which represented about a 95-percent increase over 1975 earnings, as shown in table 2. The value of Brazil's coffee exports increased by $1.5 billion, or over 156 percent, making Brazil the primary beneficiary of higher 1976 prices.

Coffee Export Earnings of ICO Members 1975 and 1976 (note a)

Producer	1976	1975	Value increase	Percent of increase
	(millions)			
Latin America:				
Brazil	$2,398	$ 934	$1,464	156.7
Colombia	1,026	b/744	282	37.9
Mexico	413	190	223	117.4
El Salvador	406	229	177	77.3
Guatemala	282	159	123	77.4
Ecuador	208	64	144	225.0
Dominican Republic	103	44	59	134.1
Honduras	101	57	44	77.2
Peru	101	53	48	90.6
Venezuela	38	21	17	81.0
Total	5,076	2,495	2,581	103.4
Africa:				
Ivory Coast	642	320	322	100.6
Uganda	298	191	107	56.0
Ethiopia	155	71	84	118.3
Angola	149	158	-9	-5.7
Malagasy	137	81	56	69.1
Rwanda	66	33	33	100.0
Total	1,447	854	593	69.4
Asia:				
Indonesia	217	100	117	117.0
India	142	85	57	67.1
Total	359	185	174	94.1
Total 18 members	6,882	3,534	3,348	94.7
24 other members	c/1,242	c/644	598	92.9
Total	c/$8,124	c/$4,178	$3,946	94.4

a/ International Coffee Organization export earnings as reported by George Gordon Paton & Co., Inc., June 7, 1977.

b/ Under discussion with the government.

c/ Partial figure--data for three African countries either not available or estimated.

Coffee's importance relative to total exports of the coffee-producing countries also grew significantly as shown for seven countries for which statistics were available.

Percentage of coffee exports to total exports

Country	1975	1976
El Salvador	41.1	52.0
Colombia	48.9	51.9
Costa Rica	20.6	27.6
Nicaragua	12.8	22.0
Brazil	10.8	21.4
Mexico	6.5	10.0
Ivory Coast	29.6	33.8

Increased export earnings should help relieve the drastic trade deficits suffered by some of these countries in recent years. Brazil has experienced trade deficits since 1969, but in 1974 the cost of its imports more than doubled, from about $7 billion to $14.2 billion, due primarily to the increased cost of petroleum. This 1974 deficit of about $6.2 billion was followed by deficits of $4.9 billion in 1975 and $3.5 billion in 1976. According to Brazil's finance minister, the first monthly trade surplus ($70 million) in 3 years was realized in April 1977.

The United States imports about 37 percent of the world's coffee imports, making it the largest single importer. The Federal Republic of Germany, which has consistently imported about 10 percent since 1972, ranked a distant second with about 11 percent. The European Economic Community collectively accounted for about 40 percent in 1976.

INCREASE IN COFFEE PRICES

Unprecedented coffee price increases after the frost hit Brazilian coffee trees on July 17, 1975, not only raised the ire of U.S. consumers, but also added to U.S. balance-of-payments problems already heightened by the high costs of imported petroleum. It has been estimated that the U.S. import price for coffee during 1977 may approach $6.5 billion, almost two and one-half times greater than the $2.7 billion for 1976.

Since the 1975 frost, the U.S. imported price of green coffee soared from about $0.55 to $3.40 a pound in mid-April 1977 and wholesale prices rose from about $1.21 to $4.46 a pound. However, after hitting those mid-April peaks, green coffee prices declined to $1.96 a pound by the end of July.

Events leading to price increases

High levels of production and increasing supplies during the first half of the 1960s were reflected in exceptionally low prices. The United States was importing green coffee at less than 40 cents a pound and producing countries began to diversify their crops and move their economies away from dependence on a single commodity. Brazil, for example, reduced both the numbers of trees and acreage in coffee production by almost 50 percent between 1960 and 1970. Consequently, its annual production, which averaged 30.5 million bags during the first 3 years of the 1960s, was reduced about one-third, to an annual average of 20.7 million bags over the last 3 years of the decade.

This move by Brazil had a significant impact on world production, which averaged about 72.2 million bags during the early 1960s, while annual requirements were about 57.1 million bags. This situation, which was gradually increasing world stocks, began moderating after 1963 and was reversed in 1966 when annual world requirements began to average about 69.1 million bags and production averaged about 63.4 million bags. As shown below, this reversal and resultant stock depletion has continued into the mid-1970s.

Marketing years	Production	Requirements	Increase in stock levels
	(millions of 60 kilogram bags)		
1959-60 to 1961-62	72.2	57.1	15.1
1963-64 to 1965-66	67.7	62.4	5.3
1966-67 to 1968-69	63.4	69.1	-5.7
1969-70 to 1971-72	65.8	73.1	-7.3
1973-74 to 1975-76	71.8	75.4	-3.6

Source: Annual Coffee Statistics, Pan American Coffee Bureau

As world production had not kept pace with consumption since the mid-1960s, record-level stocks of 83 million bags held by producers were reduced to about 39 million bags by mid-1975, the lowest level in 18 years. Based on the average rate of exports and producers' domestic requirements for the 3 preceding years, stocks were reduced from a 69-week supply to about a 26-week supply.

The July 1975 frost in Brazil killed or damaged some 1.5 billion coffee trees (96 percent of the trees were affected in the State of Parana, Brazil's principal producing state). Events in other countries were also disrupting future production expectations--a civil war in Angola, adverse weather in

Colombia, an earthquake in Guatemala, and, more recently, coffee rust in Central America. Consequently, any news or events affecting supplies or production exerted an upward pressure on prices.

Though stocks continued to decline, the rate has slowed considerably as production has returned to early 1960 levels. Surplus production is again expected with the harvesting of Brazil's 1978-79 crop, when new trees planted after the frost come into production.

WHY THE REVIEW WAS MADE

Price increases of over 250 percent in less than 2 years created a movement within the United States for a consumer boycott against coffee consumption, and the Department of State and private U.S. coffee roasters were criticized for not taking more forceful action to slow or lower these pricing trends. The Subcommittee on Domestic Marketing, Consumer Relations and Nutrition of the House Committee on Agriculture held hearings during March 16 and 18, 1976, and held joint hearings with the Subcommittee on Commerce, Consumer, and Monetary Affairs of the House Committee on Government Operations on February 22 and 23, 1977.

In a January 25, 1977, letter, the Chairman, Subcommittee on Domestic Marketing, Consumer Relations and Nutrition, House Committee on Agriculture, asked us to examine the Federal Government's coffee information collection efforts and seek to determine whether such information is sufficient to analyze supply and demand. As an integral part of our efforts, the Chairman asked that we review:

--Interagency mechanisms for monitoring the coffee commodity situation and for formulating and coordinating U.S. policy with regard to coffee and coffee-exporting countries.

--The International Coffee Agreement and, to the extent possible, analyze its merits and weaknesses.

--Marketing policies and procedures of the 18 largest suppliers of coffee to the United States, the ramifications of these policies and procedures on domestic coffee prices, and the interrelationship of U.S. processors with the marketing system.

SCOPE OF REVIEW

To meet the requirements of the request, we conducted studies in five countries that supplied over 51 percent of U.S. coffee imports during 1976--Colombia (16 percent), Brazil (15.6 percent), Mexico (10.2 percent), El Salvador (4 percent), and Ivory Coast (5.5 percent). With Subcommittee staff concurrence, we attempted to develop information on coffee activities of the other 13 largest U.S. suppliers from data available in the United States. Collectively, the 18 countries selected provided over 90 percent of 1976 U.S. coffee imports.

Our work in the United States focused principally on activities of the Departments of State, Agriculture, Commerce, and the Treasury, but we also developed information through contacts with the National Aeronautics and Space Administration, Commodities Futures Trading Commission, World Bank, Congressional Research Service, Central Intelligence Agency, the National Coffee Association (NCA), the World Coffee Information Center, and private U.S. importers, brokers, wholesalers, and retailers.

Our overseas work at U.S. Embassies was supplemented by field visits to observe growing areas and handling and storage facilities. In addition to U.S. officials, our contacts included appropriate representatives of producing country governments, private growers, fieldhands, cooperatives, warehousers, and exporters.

Much of our work on the International Coffee Agreement was conducted at the U.S. Embassy and the International Coffee Organization (ICO) Headquarters in London, England.

In the United States we worked principally in Washington, D.C., and vicinity, but interviews were also held in New York, New York, and Boston, Massachusetts.

CHAPTER 2

INTERNATIONAL COFFEE AGREEMENT

On October 1, 1976, the third International Coffee Agreement entered into force with the United States as a member. The United States was also a member of the 1962 and 1968 Agreements. Forty-two coffee-exporting and 24 coffee-importing countries are currently members of the 1976 Agreement, representing about 99 percent of coffee exports and about 91 percent of coffee imports.

The 1976 Agreement is scheduled to expire on September 30, 1982, and members must notify the U.N. Secretary General during the 12 months preceding September 30, 1979, of their intention to participate in the second 3 years of the agreement. Congressional approval was required for the United States to become a member of the agreement, and the Department of State has committed itself to seek congressional approval to participate in the second 3 years of the agreement. The United States and other members can withdraw from the agreement at any time by notifying the U.N. Secretary General.

The objectives of the agreement are:

"(1) to achieve a reasonable balance between world supply and demand on a basis which will assure adequate supplies of coffee at fair prices to consumers and markets for coffee at remunerative prices to producers and which will be conducive to long term equilibrium between production and consumption;

(2) to avoid excessive fluctuations in the levels of world supplies, stocks and prices which are harmful to both producers and consumers;

(3) to contribute to the development of productive resources and to the promotion and maintenance of employment and income in Member countries, thereby helping to bring about fair wages, higher living standards and better working conditions;

(4) to increase the purchasing power of coffee-exporting countries by keeping prices in accordance with the provisions of paragraph (1) * * * and by increasing consumption;

(5) to promote and increase the consumption of coffee by every possible means; and

(6) in general, in recognition of the relationship of the trade in coffee to the economic stability of markets for industrial products, to further international cooperation in connection with world coffee problems."

These objectives reflect the reasons that exporting and importing nations became members. Exporting nations face a commodity market in which production responds very slowly to price changes. High prices stimulate increased plantings which increase production 3 to 5 years later. When production increases it tends to force prices downward. Since the new trees produce for 15 to 20 years, production stays high despite the resulting low prices. In 1954 coffee prices were at record peaks, which prompted expanded plantings. Prices began moving downward shortly thereafter, and the threat of further falling prices prompted producers to adopt a series of price maintenance arrangements which culminated in the 1962 Coffee Agreement.

Importing countries joined the agreements for reasons in addition to their own economic interests. The United States joined primarily to help stabilize the export income of over 40 developing coffee-producing countries which needed to plan and pursue their development goals. The United States was already committed to the economic development of many of these countries through U.S. programs and the Alliance for Progress. A secondary reason was to help secure for consumers an adequate coffee supply at reasonable and stable prices.

President John F. Kennedy, in connection with the 1962 Agreement, stated that:

"The Agreement is a heartening example of international cooperation to resolve a vitally important economic problem. Coffee is the third most traded commodity in the world and is the main source of foreign income in many underdeveloped countries, particularly in Latin America.

A drop of one cent a pound for green coffee costs Latin American producers $50 million in export proceeds enough to seriously undermine what we are seeking to accomplish by the Alliance for Progress * * *."

President Lyndon B. Johnson, in connection with the 1968 Agreement, said that:

"Through the International Coffee Agreement the machinery for economic cooperation is now in place--tested over the years and now improved. Without that machinery, we could return to the days of ruinous coffee price swings,

disrupting the economics of many friendly nations, impairing world coffee trade, and endangering the continued flow of coffee at reasonable prices to the tables of American families * * *."

During negotiations for the 1976 Agreement, the occurance of the July frost changed the principal concerns of the coffee market from excess supplies and low prices for producers to critically short supplies and the threat of high prices for consumers. The increased consumer orientation of the changes in the 1976 Agreement reflect the new concerns. When President Ford recommended that the Senate ratify the treaty providing for U.S. participation in the 1976 Agreement, he highlighted the consumer-oriented changes and described the agreement as one which would mutually benefit producers and consumers. Nevertheless, it appears that economic considerations for the coffee-producing countries were still the primary reason the United States entered into the 1976 Agreement.

When the United States considers whether to continue its participation in the second 3 years of the agreement, the decision may be measured against a specific consumer-related criterion established by President Carter in his April 15, 1977, anti-inflation program--whether the agreement, by reducing fluctuations in commodity prices, reduces U.S. inflation.

AGENCIES' INVOLVEMENT IN COFFEE POLICY

The major negotiations for the 1976 International Coffee Agreement were held in London in April, July, and November 1975. The Department of State was the primary U.S. representative in these negotiations and was assisted by the Treasury, Commerce, and Agriculture representatives who were members of the negotiating team. Also, it received input from the National Coffee Association (NCA) representing the industry sector. Before and during the negotiations, the development of a U.S. international coffee policy required regular and frequent communication between State and the other departments.

The former cabinet level Economic Policy Board had established a special commodity policy group, co-chaired by State and the Treasury, with various subgroups devoted to specific commodities, such as coffee. The coffee subgroup was a working-level staff, representing the agencies responsible for coffee policy.

Since the United States joined the 1976 Agreement, the Department of State has had primary responsibility for policy concerning coffee and the coffee-producing nations. State's

representative to the International Coffee Organization (ICO) handles administrative and technical matters of the agreement. The Departments of the Treasury, Commerce, and Agriculture, as well as the private sector, consult with and provide technical advice to State.

Although interagency coordination is conducted informally, a Commodities Task Force was established in May 1977, under the Economic Policy Group of the Executive Office, to deal with commodity issues that require fast decisions and frequent attention. The task force is chaired by State and composed of representatives at the assistant secretary level from nine executive agencies

At inception it was tasked to present an initial report to the Economic Policy Group by early June on the status of commodities, including coffee, listed under the U.N. Conference on Trade and Development (UNCTAD) integrated program. The subgroups that have been set up include one on sugar and another on the UNCTAD common fund proposal, which have met regularly. Issues regarding coffee have been discussed even though they are not presently covered by a special subgroup.

NCA channels the trade position on ICO issues to the State Department through its Foreign Affairs Committee, which was established in the mid-1950s. At that time coffee prices were plummeting as a result of increased production following the 1953 frost, and there was much discussion of international agreements and buffer stocks. The NCA created its Foreign Affairs Committee to look into the possibilities and implications of such agreements.

Since the 1962 International Coffee Agreement, the Foreign Affairs Committee has been the formal voice for communicating industry views to the State Department. Throughout the last 20 years it has had periodic input to Government policymaking for the international coffee situation. The Committee meets about 3 or 4 times a year as issues requiring discussion arise. About once or twice a year, it receives requests from Government sources and meets with Government representatives.

PROVISIONS OF THE COFFEE AGREEMENT

The Coffee Agreements have been considered successful in achieving their objectives in that they have

--reduced surplus stocks which had been depressing prices,

--helped to provide consumers coffee at lower prices than at peaks reached prior to the agreements,

--provided producers with relatively stable foreign exchange without disastrously low prices which would have hindered their long-term development programs, and

--worked toward a supply/demand balance.

As the agreements have been primarily concerned with excess supplies and low prices, they have relied primarily on export quotas and to a lesser extent on production goals to balance supply and demand, but have never used a buffer stock. Consumer countries have not wanted to finance a buffer stock which could cost over $1 billion to be effective. 1/ Producer, government, and privately held and financed stocks are all that is available under the agreement as insurance against production shortfalls.

The 1976 Agreement uses quotas and production goals differently than the 1968 Agreement. The 1968 Agreement had continuously operative export quotas. The quotas were established prior to the beginning of each coffee year based on projections of world demand and other factors. The 1968 Agreement also attempted to establish a basic demand-supply balance through a mandatory production policy which encouraged producers to establish by December 31, 1968, production targets such that the combined production from all producers would approximate the agreement's estimate of 1972-73 world demand. The agreement encouraged producers to cooperate in setting production goals through (1) providing that production in excess of a country's quota could not be exported and (2) providing for a diversification fund to help finance their efforts to move out of coffee and into other areas such as meat and dairy products.

The 1976 Agreement provides for quotas to be put into effect when prices fall to between 63 cents and 77 cents a pound unless the agreement's governing body provides otherwise. The 63-cent price will trigger quotas if prices decline gradually over a long period of time; prices closer to 77 cents will call forth quotas if prices decline rapidly.

1/Treasury Department estimate based on 15 million bags at 50 cents a pound; other estimates for stock size range up to 30 million bags.

The 1976 Agreement has a voluntary rather than mandatory production policy and a provision, as yet unused, to create a voluntary diversification program.

The International Coffee Organization

ICO was established under the 1962 Agreement and is headquartered in London, England. It comprises the International Coffee Council, an executive board, and an executive director and his permanent staff of international civil servants.

International Coffee Council

The council, consisting of all members of the agreement, (1) approves the administrative budget, (2) decides disputes, (3) establishes and adjusts annual quotas, (4) establishes price ranges which trigger the imposition and removal of quotas, and (5) can suspend member voting rights.

Decisions and recommendations are made through member voting, and importing members and exporting members each have a block of 1,000 votes. Within the blocks, each member has a small equal number of basic votes, with the remainder allocated proportionally according to the quantity of imports or exports to importing members. The United States is the largest importer and has 353 votes, the largest number of votes in the importing block. Brazil is the largest exporter and has 319 votes, the largest number of votes in the exporting block.

Unless otherwise provided, all decisions and recommendations require a simple majority vote of both importing and exporting blocks, taken separately. A two-thirds majority of both producers and consumers is required, among other things, to

--exclude a member from ICO,

--terminate or amend the agreement,

--delegate certain council powers to the executive board,

--set global annual quotas,

--adjust quotas on the basis of market conditions or as necessary when membership is increased,

--establish a price range to trigger the imposition of quotas, or

--override the automatic procedure for suspending quotas.

With more than one-third of the importing member votes, the United States and one other consumer member can veto proposed council actions which require two-thirds vote. One other member must join with the United States because the agreement has a procedure for blocking an attempted veto by only one member with over one-third of the consumer or producer votes.

Executive board

The board, composed of eight exporting and eight importing members, functions principally as the working group of the council. It deals with the issues for which the council is responsible and recommends courses of action to the council.

Executive director

The executive director and his staff administer the provisions of the agreement. The executive director, for example, sets export quotas when the trigger prices are reached. The staff gathers, develops, and publishes statistics concerning coffee commerce.

Data and information

Whether a commodity agreement relies on a buffer stock, quotas, or production goals, it needs a reliable data base, which includes estimates of current and future demand, production, and exports needed to set individual and global quotas and production goals.

Two currently critical statistical series which ICO publishes are production estimates and stocks in producing countries. For its estimates of production, ICO uses the projections submitted by producing-member countries. Although it also uses U.S. Department of Agriculture production estimates and may question producers about differences between their estimates and those of Agriculture, ICO must accept producer country estimates.

The estimate of stocks is developed quite differently. The 1976 Agreement has a special producer-financed fund which ICO uses to retain a private firm to independently verify stocks. The firm's representatives physically count bags of coffee in all previously specified and approved warehouses in all member exporting countries, except when exporting members certify that warehouses contain less than 1,000 bags (500 bags for members producing small amounts of coffee) or when members' stocks are less than 2 percent of their exports.

The inventorying firm counts stocks at the end of the quarter preceeding the beginning of the new crop year. Because there are three distinct harvest periods, there are three corresponding inventory periods--March 31, June 30, and September 30.

The objective is to count coffee stocks available at the end of a country's coffee-marketing year. The count includes working stocks but excludes coffee (1) held on the farm, (2) in transit, and (3) from the new year's harvest.

The producer-financed special fund, which came into existence for the 1976-77 crop year, changed the procedure for financing the counting of inventories. Previously, producers paid directly for verification in their countries.

In addition to the production and stock series, ICO publishes daily indicator prices for green coffee imports. The indicator price under the 1968 Agreement was the average of prices for Colombian and other milds, Brazilian unwashed arabicas, and African robustas. During the negotiations for the 1976 Agreement, the averaging basis was changed to exclude the Colombian and Brazilian coffees. When supply was plentiful, prior to the Brazilian frost and other natural and political disruptions, Colombian and Brazilian coffees were selling at a substantially higher price than the rest of the world's coffees. In order to compete, these countries discounted the price for buyers' agreements on future purchases of a certain volume. As a result, the quoted prices were generally not the real prices at which these coffees sold. As these producing countries had such a large share of the world market, variations from the real price distorted the indicator price. ICO presently publishes both a 1968 and 1976 Agreement-based indicator price.

ICO also administers the special fund which the 1976 Agreement established to promote "consumption in importing countries by all appropriate means without regard to origin, type or brand of coffee, and of achieving and maintaining the highest quality and purity of the beverage." The fund continues the work of the 1968 Agreement's special promotion committee. The principal difference between the two is that contributions were voluntary under the 1968 Agreement but are mandatory for producers under the 1976 Agreement.

Congressional hearings in 1976 questioned the wisdom of trying to increase demand for coffee during a period when tight supplies were already pushing up prices. The Deputy Director of ICO told us that plans for a U.S. promotion program have been shelved because of the supply situation.

Longstanding programs in Switzerland and Norway are being funded at about $295,000 and $225,000, respectively. An ICO press release described the Swiss program as an effort to promote coffee consumption. The purpose of Norway's program is to improve the quality of the coffee and to increase both total and per capita consumption. The press release also pointed out that a campaign in Austria was being considered.

EVALUATION OF THE AGREEMENTS

In 1969 and 1973 we reported on our examinations of the 1962 and 1968 Coffee Agreements. 1/ These reports pointed out that the agreements, as a result of causing consumers to pay higher prices than they would in the absence of the agreement, provided economic aid to producing countries without congressional approval. Subsequent higher prices reduced the applicability of this conclusion to the current agreement. The Senate has approved U.S. participation in the extension of the 1968 Agreement and in the 1976 Agreement, and the Congress has approved funds for the U.S. share of ICO annual budget. It appears, therefore, that the Congress has recognized that consumers may pay higher prices for coffee under the agreements and that the higher prices represent assistance to the producing countries.

Consumers were paying higher prices for several reasons. First, the continuously effective quotas restricted supply and prevented prices from falling and remaining as low as they would have without the agreements. Second, removal of quotas required council approval, a time-consuming process which slowed down the expansion of supply during periods of rising prices. Prices therefore rose higher and more rapidly than they would have if supplies had been more readily available to the market. Third, the agreement provided a framework in which exporters could increase prices by undershipping their quotas without fear that other producers, also subject to quota, could nullify their actions by increasing exports.

1/Foreign Aid Provided Through the Operations of the United States Sugar Act and the International Coffee Agreement, Oct. 1969 (B-167416).

The International Coffee Agreement and Its Impact on Coffee Prices, and the Ability of the International Coffee Agreement to Deal with Unforeseen Supply and Demand Conditions, Mar. 1973 (B-175530).

The 1976 Agreement contains several improvements over prior agreements which could benefit consuming countries. The 1976 Agreement provides that quotas will not come into effect until prices fall to trigger levels of between 63 and 77 cents unless the council decides otherwise. In the absence of quotas, any increase in supply tends to push prices toward the trigger levels. It provides also for quotas to be automatically suspended if prices for 20 consecutive market days are 15 percent above the ceiling of the price range established by the council, or 15 percent or more above the average composite indicator price recorded during the preceding calendar year. A private contractor to ICO establishes the indicator price based on daily prices for robusta coffees and mild arabica coffees other than those from Brazil and Colombia.

U.S. representatives reportedly tried unsuccessfully to negotiate into the 1976 Agreement a penalty for exporters who purposely undership their quotas to restrict supply and raise price. However, an interagency analysis of the coffee agreements pointed out that the 1976 Agreement's provision for automatically suspending quotas will limit the effectiveness of intentional undershipments. The negotiators did establish an incentive for exporting members to declare expected undershipments to ICO in the first half of the coffee year by providing for the reporting country's quota to increase in the succeeding year by 30 percent of the undershipment declared. Early reporting is helpful because quota increases for other exporters can make up for anticipated shortfalls.

The 1976 Agreement contains other consumer-oriented changes unrelated to matters discussed in our prior reports. The July 1975 frost hit Brazil while negotiations for the agreement were still in progress. U.S. negotiators, realizing that available supplies would be tight for the agreement's first 2 to 3 years, tried to modify the agreement to encourage the largest possible exports during those years. To provide this encouragement the agreement specifies that 70 percent of a member's export quota will be based on its exports during specified periods. Quotas introduced during coffee year 1976-77 would be based on exports in coffee years 1968-69 to 1971-72; quotas during coffee year 1977-78 on exports in 1968-69 to 1971-72 or 1976-77, whichever is higher; and quotas in 1978-79 or later on exports in 1968-69 to 1971-72 or 1976-77 and 1977-78.

The agreement provides that only exports to importing members of the agreement will be counted in determining an exporter's quota. During 1976 Brazil attempted to purchase coffee from other exporters in apparent excess of its domestic

needs. Although Brazil stated that the the imports were for its soluble coffee industry, others, including State Department officials, contended that the purpose of the imports was to shore up sagging prices. The State Department used this provision in its attempts to discourage exporters' sales to Brazil so that these supplies would be available to importing countries.

The 1976 Agreement provides also that an exporting country's stock level in relation to world stocks will determine 30 percent of its export quota. This will allow producer countries, especially the more efficient, to increase their quotas during the course of the agreement. If this provision encourages producers to hold stocks at their own expense, such stocks will provide protection against high prices for consumers during periods of reduced production. In addition, producer-financed stock will spare consumer countries the expense of financing a buffer stock to provide the same kind of protection. Using stocks to establish export quotas increases the importance of reliable stock figures.

The 1976 Agreement removes provisions of the 1968 Agreement which might have encumbered imports. The 1968 Agreement required a member to (1) prohibit the entry of coffee from another member which was not accompanied by a Certificate of Origin or of Re-export issued in accordance with council-established rules and (2) limit its annual imports of coffee produced in nonmember countries to average annual imports of coffee from those countries during calendar years 1960-62. The 1976 Agreement provides that when quotas are suspended, as they currently are, consumers are not obligated to exclude coffee from any source.

Since its inception, the 1976 Agreement has had no effect on the supply and price of coffee As prices have been significantly above the trigger levels, quotas have not been in effect. The principal mechanism a commodity agreement can use to slow price increases is a buffer stock, which the agreements have never had. Also, the agreement does not provide for a price ceiling.

An unresolved question is whether past coffee agreements have affected prices through their long-term impact on supply. Some say the agreements' protection against excessively low prices has maintained investments in coffee and thus kept production higher and prices lower than they would otherwise have been. Others argue that the agreements, through their production policy, have caused supplies to be lower and prices higher than they otherwise would.

Overall, the agreements probably depressed coffee production through July 1975. Although the protection against low prices may have stimulated some individual producers to maintain or even increase production, the agreement's diversification fund and production policy apparently kept total production low enough to reduce stocks from 83 million bags in 1965 to about 39 million bags before the July 1975 frost.

However, it is possible also that the agreement depressed production less than it would have been in the absence of an agreement. Without an agreement, prices may have fallen lower, causing a greater drop in production than resulted from the mandatory production policy and the diversification fund.

CHAPTER 3

COFFEE-MARKETING SYSTEMS OF PRODUCING COUNTRIES

Coffee-marketing systems of the producing countries essentially consist of growers, processors, brokers or other intermediaries, domestic roasters, exporters, and either a government or quasi-government agency charged with carrying out country coffee policies. Such policies may be directed toward any number of primary objectives--from controlling production, inventories, and exports to allocating revenues, maximizing government revenues, and curbing inflation. Most policy implementations have rippling effects that ultimately influence prices to consumers.

Members within each element of the marketing system may perform more than one marketing function. Some growers handle coffee from harvest through export, and some processors handle both processing and exporting functions.

GROWERS

Coffee production is a labor-intensive operation and is limited mainly to developing countries with agrarian economies. Consequently, there are numerous growers with relatively small operations, as shown below.

Country	Number of growers	Hectares in production (note a)	Average number of hectares per grower
Brazil	b/300,000	b/2,700,000	9.0
Colombia	302,945	1,100,000	3.6
El Salvador	40,779	147,000	3.6
Mexico	97,716	356,253	3.6
Ivory Coast	350,000	760,000	2.2

a/One hectare equals 2.47 acres.

b/Brazilian Coffee Institute statistics for 1975.

In the Ivory Coast, most coffee trees are scattered among other crops on small plots of less than 5 hectares, and it is estimated that only 1 to 2 percent of the coffee is produced on large plantations. In Brazil, Colombia, and Mexico, less than 3 percent of the growers are considered large-scale operations. In El Salvador, on the other hand, 4 percent of

the farms (some 1,564) average 63 hectares and produce over 67 percent of the coffee.

Harvesting seasons vary from country to country, lasting only a few months in some, but practically all year in others. In Brazil, where the harvest lasts from May to September, all coffee cherries, reflecting separate tree flowerings, are stripped from the tree limbs at the initial picking. In other countries, separate harvestings coincide with the ripening of the coffee cherry. Although Brazil's practice saves harvesting costs, it is felt that there is some sacrifice of quality.

All coffee is harvested by hand, providing employment to thousands. In Colombia, 10 percent of the population is employed in the production of coffee. However, fieldhands' pay remains at relatively low levels. Daily wages in Colombia rose from $1.55 in 1975 to $2.52 in early 1977; in Brazil daily wages in 1976 ranged from $3.76 to $7.52.

To help allocate income within the coffee sector and stabilize income to the grower, producing countries set minimum internal prices to growers in conjunction with export taxes and minimum export registration prices. To make the system enforceable, government coffee agencies will buy at the minimum price, forcing buyers to pay either that minimum or a higher price. Because of demand in the postfrost period, buyer prices have in some cases exceeded minimum levels. In early 1977 minimum prices set for growers and the prices being paid by buyers were as follows.

Country	Minimum price a pound	Price a pound paid by buyers
Brazil	$1.13	$2.27
Colombia	.70	.88
Mexico	1.38	1.38
El Salvador	1.82	1.82
Ivory Coast	.35	.35

PROCESSING AND MARKETING

Coffee beans are processed by sun-drying and removing the husks by hand or machine or by soaking, fermenting, and removing the husks in water and then drying the beans before they are machine cleaned. Most growers have little capability to process coffee beyond the sun-drying stage. Normally, it is delivered to a processing facility, which may be privately owned and operated to provide only that service, or may be owned by grower cooperatives, exporters, or government agencies that perform additional marketing functions.

Cooperatives, for example, in addition to processing, may assist members with storage, arrange for loans to growers, sell coffee to exporters, or export independently. Representatives of a cooperative in Brazil stated that they were involved in an effort to develop an annual export capacity of 2.5 million bags or about 20 percent of Brazil's 1976 exports.

Brokers and other intermediaries, acting on their own behalf or as agents of exporters, importers, or roasters, may buy and sell coffee at any point in the marketing chain.

Exporters, however, are generally the principal movers of coffee from the field to international markets. They buy, process, transport, store, sell, and ship.

A few exporters handle the bulk of Ivory Coast shipments serving merely as brokers for the government's coffee agency at a fixed rate of remuneration.

Government coffee agencies in El Salvador and Mexico compete with private exporters for available supplies and accounted for 40 and 15 percent, respectively, of 1976-77 coffee exports. In contrast, Brazil's coffee agency has not purchased coffee domestically since 1974, though sizable exports were made from stocks acquired in earlier years. Brazil controls exporters and the marketing of coffee abroad.

Contraband

The volume of coffee smuggled out of producing countries to avoid taxation and/or low internal prices is not actually known, but it was estimated that as much as 1 million bags, or 13 percent, of the coffee leaving Colombia in 1976, may have been in the form of contraband. About 6 percent of coffee leaving the Ivory Coast was estimated to be contraband. In both cases, prices set for growers were substantially below world prices. High export taxes and foreign exchange requirements were believed to be other contributing factors in Colombia.

In Mexico it was reported in March 1977 that 100,000 bags, costing the government about $10 million in revenues, had been smuggled out of the country.

Smuggling not only deprives the governments of needed revenues but may also keep the countries from establishing true export quotas under the International Coffee Agreement. Consequently, government measures have been taken to control the practice. Colombia restricted the routes over which coffee could be moved and designated the military to enforce

the restrictions. It intends to establish committees at each port to review export documents, because most contraband was leaving the country by documents which understated the amount exported.

GOVERNMENT COFFEE AGENCIES

Government or quasi-government agencies responsible for implementing country coffee policies do not function as producers, but most all buy, sell, store, and export coffee; in El Salvador and Mexico, they also operate processing facilities.

Coffee agencies in the various countries are listed below.

Instituto Brasileiro do Cafe (IBC) The Brazilian Coffee Institute is organizationally under the Ministry of Industry and Commerce, and implements policies established by the National Monetary Council.

Federacion Nacional de Cafeteros de Colombia The Colombian National Federation of Coffee Growers was created as a trade union with the central purpose of supporting coffee farmers. The Federation, either acting alone or in conjunction with the Monetary Board, sets policies and is responsible for implementing those policies.

Compania Salvadorena de Cafe S.A. The El Salvador Coffee Company implements policies established by the six-member board of directors of the National Coffee Department (Departamento Nacional del Cafe)

Instituto Mexicano del Cafe (INMECAFE) The Mexican Coffee Institute implements policies established by its own 10-member board of directors.

Caisse de Stabilisation des prix (Caisse) The Caisse is a state trading corporation of the Ivory Coast that works to stabilize income for eight commodities, including coffee.

These agencies are responsible for the well-being of their countries' coffee industries. In times of large supply and low prices, they buy coffee and assume storage costs when growers cannot find buyers willing to meet minimum established prices. They allocate coffee earnings by setting minimum prices to growers, export tax rates, and minimum registration prices for exports. They use export revenues principally to

conduct research, buy and store coffee, subsidize the domestic industry, finance operations, construct facilities and public works, and promote production.

COFFEE POLICIES

In the sellers' market following the 1975 frost, producing countries have endeavored to implement policies perceived to best serve their interests. Countries with more advanced economies, which are also the largest coffee producers, have been particularly anxious to increase their foreign exchange earnings and lessen the burden of petroleum price increases since the third quarter of 1973.1/

The era of high prices has been accompanied in some producing countries by inflation and fear that higher prices will encourage overproduction, driving prices once again to rockbottom levels. Governments have dealt with these issues by trying to influence production, supply, and price.

Production expansion

Concern that high prices will lead to overproduction may be causing producing countries to exercise caution in offering assistance to stimulate production. Most efforts have been directed toward improving farming techniques, rather than increasing coffee acreage.

The Ivory Coast Government provides free fertilizer and pesticides to growers and finances research on new tree varieties. Brazil, Colombia, and Mexico provide loans to growers at below-market rates to encourage use of fertilizers, pesticides, improved planting and cultivation techniques and replacement of older trees with new, higher yield varieties. Brazil instituted a $1-billion program to restore production to pre-frost levels of about 26 million bags, and Mexico is providing $200 million over the next 6 years to increase production from a present 4 million bags to 7 million bags by coffee year 1981-82. Colombia authorized $80 million for

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1/Petroleum exporting countries quadrupled the price of oil in late 1973. Subsequent increases have followed and Brazil, pursuing ambitious development projects, has been exceptionally hard hit. The cost of Brazil's petroleum imports increased from $986 million, 14 percent of total imports in 1973, to over $4 billion, nearly 30 percent of imports in 1976.

expansion projects and plans to increase acreage over the next 2 years by 30,000 hectares to reach a production goal of 11.4 million bags by 1980.

The trend throughout the countries is toward new, higher yield trees which are smaller than the normal 12 to 15 feet of older trees. Thus, planting density can be increased considerably--from less than 1,000 trees to about 1,450 trees per hectare in Brazil. El Salvador has no formal assistance programs for production expansion, but experiments with 8,500 trees per hectare have yielded about 48 bags of coffee per hectare within the second and third years after planting; trees generally do not reach bearing maturity for about 5 to 6 years. However, the average yield in El Salvador for 1976-77 was about 20 bags per hectare from a density of about 1,400 trees.

Estimated per hectare yields for the countries are:

Country	Yield
	(60-kilo bags)
Brazil	8.2
Colombia	8.8
El Salvador	20.0
Mexico	12.6
Ivory Coast	5.0

Export taxes

Coffee export taxes provide important revenues and foreign exchange to most producing countries. The countries maintain that such taxes are merely a means of allocating revenues between public and private sectors and have no effect on price.

Brazil, Colombia, and Mexico have increased export tax rates significantly since the July 1975 frost, increasing government revenues and helping curb inflation by limiting the amount of price increases that accrue to the private sector. The tax is one of the main sources of revenue for El Salvador which has not changed the rate since the tax was established in 1949. In the Ivory Coast, where exporters serve merely as brokers for the Caisse de Stabilization des prix at fees set by the Caisse, there is a 23 percent export tax in the form of a customs duty that reverts to the government. Remaining revenues after exporter fees and customs duties go to the Caisse.

Producing countries claim that taxes are adjusted in response to world price movements and do not lead world prices. However, increasing the tax rate may act as a deterrent to export while exporters await lower tax rates, lower minimum internal prices that must be paid to growers, or higher price offerings from importers. Until one or more of these events provide the exporter with what he considers an acceptable profit margin, coffee may be withheld from the market, thereby diminishing supplies and putting upward pressure on prices.

On the basis of our review, we are not able to say to what extent taxes have influenced prices since the Brazilian frost. Analysis of price movements in relation to the timing and amounts of Brazil's tax increases establish no clear pattern of cause and effect relationships. However, the wide difference between total tax increases and price increases since the frost suggests that forces other than taxes were more influential on price movements.

The table on the following page shows the ICO indicator (composite) price for Brazilian coffees on the dates of announced tax increases, changes before and after the increases, the new tax rates, and percent of tax to price.

Resolution date	Effective date	ICO indicator price: Before date of Resolution	ICO indicator price: Increase: Before tax increase	ICO indicator price: Increase: Most recent day after resolution	Export tax: Amount	Export tax: Amount of increase	Percent of tax to price
		(per pound)					
Before frost		$ .69	$ -	$ -	$ .16	$ -	23.2
8-04-75	8-05-75	a/.98	.29	.01	.17	.01	17.3
8-22-75	8-23-75	.96	-.02	-	.18	.01	18.8
9-22-75	9-23-75	.96	-	-	.19	.01	19.8
10-24-75	10-27-75	.96	-	-	.20	.01	20.8
11-24-75	b/11-25-75	.94	-.02	-	.21	.01	22.3
12-16-75	12-17-75	1.01	.07	-	.22	.01	21.8
4-23-76	7-01-76	c/1.54	.53	.09	.26	.04	16.9
10-06-76	10-07-76	1.60	.06	.03	.30	.04	18.8
11-09-76	11-22-76	d/1.85	.25	.05	.38	.08	20.8
12-20-76	12-21-76	2.13	.28	.16	.60	.22	28.2
1-17-77	1-18-77	2.47	.34	-	.78	.18	31.6
2-15-77	2-16-77	2.53	.06	.05	.81	.03	32.0
3-04-77	3-07-77	3.20	.67	.33	.91	.10	28.4
3-08-77	3-09-77	3.53	.33	.16	.94	.03	26.6
4-01-77	4-04-77	3.69	.16	-	1.01	.07	27.4
5-05-77	5-06-77	3.35	-.34	-	1.08	.07	32.2
5-30-77	5-31-77	3.25	-.10	-.05	1.13	.05	34.8
6-27-77	6-28-77	3.20	-.05	-	1.18	.05	36.9

a/Price on date of resolution; price on immediately preceding date was not available.

b/An earlier resolution on 11-11-75 was not included because tax increase was less than $.01 per lb.

c/Price was $1.39 before resolution, but reached $1.54 immediately before this tax increase became effective.

d/Price was $1.76 on Nov. 8, but reached $1.85 immediately before this tax increase became effective

In several instances there was no immediate change in prices after taxes were increased. In other instances, tax increases were followed by immediate price increases. Prices, from December 1975 until they began to drop in mid-April 1977, usually continued to rise substantially beyond the amount of the tax increase. For example prices increased by $0.03 a pound after a tax increase of $0.04 a pound became effective on October 7, 1976, and continued to increase by another $0.13 to $1.76 a pound before the next tax increase of $0.08 a pound was announced on November 9, 1976. Beginning with the tax increase on April 4, however, prices have either remained unchanged or dropped following tax increases, which would support contentions that tax increases do not necessarily drive prices upward.

On the other hand, the timing and amount of tax increases may affect exports. According to some assessments, Brazil induced increased exports in mid-1976 by announcing in April that an export tax increase would not take effect until July 1. The volume of exports jumped from 900,000 bags in both April and May to 2.1 million in June, then dropped back to about 1 million bags in July, August, and September. On September 10, Brazil indicated its intention of keeping the export tax relatively low by announcing less than $0.003 a pound tax increase to take effect on October 1. Exports for October, November, and December reached 1.5, 1.7, and 2.8 million bags respectively. When concern developed over declining stocks, Brazil increased the export tax, effective December 21, by almost 60 percent, from 38 cents to 60 cents a pound and followed this with a 30-percent increase--from 60 cents to 78 cents a pound in January 1977. Taxes were again increased in February and March. The continuance of these increases together with increases in minimum export registration prices after the decline in world prices began in April virtually eliminated any demand for Brazilian coffee in early July.

Minimum export prices

Most producing countries establish minimum prices at which coffee can be exported. The minimum prices are in various forms designed to serve a variety of policy objectives, and have been used to limit exports, thus reducing the supplies of coffee on the world market.

Brazil

Brazil maintains a minimum price at which coffee may be registered for export. Historically, until May 1977, the registration price was periodically increased to levels below

both the price for Brazilian coffees and the ICO composite indicator price for all coffees. From the end of 1976 to the end of March 1977, the minimum price was increased to such levels five times.

Date	Minimum registration price	ICO indicator for Brazilian coffee	ICO composite price
	(per pound)		
Dec. 13, 1976	$1.90	$2.09	$2.02
Jan. 3, 1977	2.10	2.47	2.28
Jan. 31, 1977	2.20	2.47	2.22
Feb. 28, 1977	2.30	3.10	2.87
Mar. 7, 1977	2.80	3.53	3.04
Mar. 28, 1977	3.00	3.69	3.16

In May 1977, the price of Brazilian coffee started decreasing from its high of $3.69. The indicator price was $3.25 and the composite price had dropped to $2.94 when Brazil increased the minimum registration price to $3.20 on May 23. At June 1, 1977, the indicator price dropped to $3.20 and stabilized at the minimum export price level. As the world price was down to $2.57, there was no demand for Brazilian coffee at the enforced price level.

Brazilian exporters will not put coffee on the international market until consumers are willing to pay the higher price or the government lowers the minimum price. In the interim period and as long as supplies are available, consuming countries will rely on coffees from other countries at a lower price. On July 5, 1977, the ICO indicator price for Colombian coffee was $2.70, for other mild coffees was $2.54, and for robusta was $2.04. It was reported later in July that coffee exports from Brazil had virtually ceased.

At that time the President of the Brazilian Coffee Institute was reported to have announced that Brazil would not sell coffee during the second half of 1977 at less than $3.20 a pound. He stated that Brazil had shipped almost 8.4 million bags in the first 6 months of 1977 and had only about 3.5 million bags available to export in the second half. On July 13, 1977, the Finance Minister stated in a press release that Brazil was in no hurry to sell coffee since its trade balance was in surplus and the level of its international reserves was highly satisfactory.

Colombia

Colombia's minimum export price is in the form of a requirement that exporters must deposit a designated amount of foreign exchange with the central bank prior to exporting coffee. In exchange, the exporter receives local currency and short-term notes for the coffee exports. This system allows Colombia to take advantage of the foreign exchange earnings on the sale of coffee. According to Colombian officials, the repatriation requirement (reintegro) is not intended to dictate the market price but is meant to keep the Colombian price in line with the world market price.

There were only two increases in the reintegro from early June 1976 through January 1977, but there were frequent increases from February through April to catch up with quickly rising prices.

Date of modification	Reintegro		ICO indicator price for Colombian coffee
	Per 70-kilo bag	Per pound	
1976:			
June 7	$259.25	$1.68	$1.76
November 27	284.65	1.85	1.91
December 27	307.60	2.00	2.25
1977:			
February 10	331.00	2.15	2.34
February 16	354.00	2.30	2.43
February 24	376.00	2.45	2.65
February 28	423.00	2.75	3.04
March 9	440.00	2.86	3.09
March 23	457.00	2.97	3.25
April 14	477.00	3.10	3.34

When Colombia increased the requirements from $2.97 to $3.10 per pound on April 14, 1977, the price for Colombian coffee had reached $3.30 at the dock in New York. However, prices began to decline in mid-April and reached $2.95 per pound in early May. With the reintegro fixed at $3.10 per pound, exporters were in effect required to exchange more foreign currency for pesos than they could earn on current sales abroad.

On May 4, 1977, the President of the Colombian Coffee Exporters Association announced that private coffee exporters had suspended coffee sales abroad. He blamed the price decrease on speculation by foreign roasters and stated that

suspension of sales would be maintained until prices rose to levels that would make exports remunerative. He stated that export taxes, foreign exchange rates, and foreign currency return requirements prevented exporters from accepting less than $3.27 per pound.

Suspension of sales by private exporters gives the government's coffee agency a free hand in the marketing of coffee. The agency's purchasing activities in the interior were reported to have increased. With such control, the agency can elect to hold supplies off the market until buyers are willing to pay the asking price or it can export, therefore retaining in the government a greater portion of the proceeds from sales.

However, on May 26, 1977, the reintegro was reduced to $3.03 a pound, but the ICO indicator price had fallen to $2.90. In June and July 1977, there were three more reductions in the reintegro.

Date	Reintegro per pound	ICO indicator price per pound
June 17	$2.70	$2.56
July 12	2.45	2.41
July 16	2.34	2.40

Although the reintegro was decreased substantially, it was not until mid-July that it was reduced below the export price.

Other countries

Other producing-country measures during this tight supply situation have helped to keep pressures on price. For example, the El Salvador Coffee Company approves exports and, although there is no formal minimum export price, has the option to purchase coffee from an exporter whenever the company feels the sale price is less than the world price.

The company purchased about 1 million bags of 1974-75 coffee, 500,000 bags of 1975-76 coffee, and estimates purchases from the current crop at less than 100,000 bags. Such policy interferes with free market forces and, in effect, supports continuation of high prices by limiting supply.

Other measures

Many producing countries have set high quality export standards. This causes consumers to pay a premium for higher

quality and automatically reduces supplies available for export.

Other measures require exporters to reserve specific amounts for the domestic market, based on export quantities. In El Salvador, exporters must deliver to the El Salvador Coffee Company one bag of a particular lower grade coffee for every four exported. Mexico adopted a similar measure beginning April 1, 1977, requiring exporters to deliver to the Mexican Coffee Institute one bag for every two to be exported.

Brazil also adopted a one-for-two-bag requirement, effective July 1, 1977, but the manner of insuring exporter compliance may also influence prices upward. The new rule forces the exporter to sell directly to domestic industry at a price considerably below the export price. Because of the subsidized price and sales taxes these domestic sales are expected to be made at losses to the exporters. Hence, exporters must either accept a decline in profits or seek to recover losses through their export sales.

Brazil's stocks production and purchases

Understatements of stock levels and possibly production, and purchasing from other producing countries by Brazil may have caused upward pressures on prices.

Whether intended or not, coffee available from Brazil was understated by 5.1 million bags from March 1976 to January 1977. That quantity represents about 33 percent of Brazil's 1976 exports and, in a period of already tight supplies, may have helped maintain an upward pressure on prices. The International Coffee Organization confirmed a Brazilian inventory of 24.8 million bags of green coffee on hand at March 31, 1976. On January 26, 1977, the Brazilian Coffee Institute reported that the March 31, 1976, inventory should have been 29.9 million bags. The Institute indicated that stocks held in warehouses of less than 10,000 bags, stocks held on farms, and stocks held by the soluble industry had not been counted by ICO.

This adjustment has implications for the difference that developed between the Brazilian Coffee Institute and the U.S. Department of Agriculture over production forecasts for the

1976-77 frost-affected crop. 1/ Though this crop was harvested during May to September 1976, both principals have steadfastly refused to amend their figures. Brazil states that no more than 6 million bags (60 kilograms each) were harvested, and Agriculture maintains that 9.5 million bags should have been harvested.

It is difficult to determine the accuracy of respective positions when essentially the same statistics (Brazilian Coffee Institute data on numbers and types of trees and acreage under cultivation) are used by both parties. Differences have hinged basically on varying perceptions of tree and soil conditions and anticipated yields based on physical observations in selected test areas. One principal difference was over the expected 1976-77 harvest in the State of Minas Gerais. In April 1976, just before the harvest, the Coffee Institute estimated production for the State at 4.9 million bags, but subsequently reduced this estimate to 2.3 million bags. Agriculture estimated production at 5 million bags.

The revised stock level for March 31, 1976, and other data now available on stocks, exports, and domestic consumption tend to confirm the accuracy of Agriculture's 1976-77 forecast. The Coffee Institute reported in February 1977 that 21.2 million bags of coffee were on hand at December 31, 1976. Using these revised stock figures and the Institute's data on exports and domestic requirements, the 1976-77 harvest can be derived as follows:

1/Another difference has shown signs of developing over projections for the 1977-78 crop now being harvested. In April 1977, Brazil reduced earlier estimates of the 1977-78 harvest from 14.8 million to 13 million bags. Agriculture had been estimating a 15 million to 18 million bag harvest before settling on a figure of 17 million bags in a May 11, 1977, press release. However, according to information reported June 30, Brazil is now estimating 15.3 million bags. Information indicated that most trade source estimates were 13 million to 15 million bags. Two export companies that specialize in surveying Brazil's coffee were estimating closer to 17 million bags.

	Millions of 60-kilo bags	
Stated inventory 12-31-76		21.2
Exports 4-1-76 to 12-31-76	12.9	
Domestic requirements 4-1-76 to 12-31-76 (3/4 of 7 million bags)	5.3	18.2
		39.4
Less revised inventory at 3-31-76		29.9
1976-77 production		9.5

These figures are tenuous because of the uncertainty over actual domestic requirements and because quantities held in the Institute's overseas warehouses which are reportedly in Beruit, Hamburg, Trieste, and Hong Kong are neither reported to ICO nor subject to ICO verification.

Brazil's purchases from other producing countries

There were several reported Brazilian coffee purchases or attempts to purchase from other producing countries during 1976. It was stated officially that the coffee was needed for the domestic soluble industry, but it was rather clear that such moves were also intended to influence prices.

Correspondence from the U.S. Embassy in Brasilia, dated April 20, 1976, states that an official of the Brazilian Coffee Institute had confirmed Brazil's efforts to purchase 500,000 to 1 million bags of Angolan robusta coffee for domestic blending into soluble coffee for reexport. Subsequent correspondence on April 27 shows that five major Santos coffee traders had indicated that Brazil had also attempted purchases from the Ivory Coast. 1/ The traders believed these were Brazilian moves to force prices up. They indicated, however, that such purchases made good economic

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1/Correspondence dated April 20, 1976, from the U.S. Embassy in London reported that a Brazilian official had confirmed negotiations with both Angola and the Ivory Coast and, although quantities had not been decided, the latest estimates were about 333,000 bags.

and commercial sense because importing lower quality coffee for the soluble industry would free larger amounts of higher quality Brazilian coffee for export at higher values.

In April 1976 a trade publication, while not mentioning the Ivory Coast negotiations, called the confirmation of the Angolan purchase one of the most significant and price-supportive developments of the month. The negotiations, which Brazilian traders believed involved 500,000 bags, were apparently announced about mid-April.

When U.S. concerns over Brazilian purchases were conveyed to the Brazilian Coffee Institute on April 26, 1976, an Institute official attributed price increases at that time to rumors floated by traders with long positions who wished to drive up prices. The official was also skeptical that a purchase could be consummated because Angola had only about 30,000 bags of coffee and the Institute was interested in purchasing 250,000 to 300,000 bags.

Another Institute official refused to confirm in May 1976 a rumored purchase of 50,000 bags of coffee from a French trader. Trade sources were reported to believe a purchase had been made.

Coffee prices began to drop after achieving highs in June 1976. In late July, the confirmation of Brazil's purchase of some 560,000 bags from El Salvador coincided with a halt in the price decline, and, according to a trade publication, the market for all types of coffee took on added strength.

Again, when U.S. officials questioned Brazil's motives, the officially stated purpose was to supply the domestic soluble industry. However, Brazil was notably upset over declining prices when there had been no change in the supply situation, and there were acknowledgments that producers had to protect themselves. An El Salvador official saw the June decline in price as an attack by U.S. roasters selling short far beyond registered available stocks. According to this official, the El Salvador Coffee Company tried to sell in July but could find no buyers and the market situation convinced El Salvador to sell to Brazil.

In August 1976 purchases of 334,000 bags from the Ivory Coast and 168,000 bags from the Malagasy Republic were reported. There were also indications in August of impending purchases from Cameroon and Mexico. In January 1977 there was a reported purchase from Malagasy. In June 1977 purchases involving 300,000 bags from El Salvador and 167,000 bags from

Malagasy were reported. Purchase negotiations with the Ivory Coast were also reported in June. Brazil's Finance Minister was quoted as saying that Brazil intends to buy coffee overseas to regularize prices, not to increase them.

The actual quantity of coffee imported into Brazil is not clear. Ivory Coast officials told us a purchase was never made and apparently the Angola purchase did not materialize. About 160,000 bags from El Salvador's stocks in Hamburg and about 57,500 bags from El Salvador were supposed to be shipped quickly to satisfy Brazil's immediate needs. The balance was to be delivered from El Salvador during the 6-month period following October 1, 1976.

According to an agency of Banco Do Brazil in January 1977, Brazil's green coffee imports from January through November 1976 all came from El Salvador--57,380 bags. In December 1976 a trade publication reported that 30,000 bags of robustas from the Malagasy purchase had been offloaded in Rio de Janeiro early in December and a shipment of 46,000 bags was scheduled to arrive at that port by the end of the month.

CHAPTER 4

COFFEE MARKETING IN THE UNITED STATES

The usual flow of coffee into and through the domestic marketing chain is generally first to the importer or merchant who sells to roasters. Roasters in turn sell to wholesalers, after which the coffee enters the retail market for sale to consumers. A wholesaler may also import and roast coffee, and in some instances of total domestic vertical integration, can operate retail outlets.

IMPORTS

Although small amounts of coffee are produced in Hawaii and Puerto Rico (about 165,000 bags) the United States depends primarily on imports for its total coffee needs. In 1976 U.S. imports were about 37 percent of total world imports. Coffee enters the United States in the form of green beans, roasted coffee, and soluble coffee. In 1976 total imports consisted of 96-percent green coffee, 1.5-percent roasted coffee, and 2.5-percent soluble coffee.

Imports of coffee

	60 kilo bags (note a)				
Year	Green coffee	Roasted coffee	Soluble coffee	Total	Customs value
1974	19,242,556	189,668	1,637,149	21,069,373	$1,637,929,822
1975	20,288,508	324,751	1,107,216	21,720,475	$1,671,430,125
1976	19,787,842	372,552	1,550,243	21,710,637	$2,857,442,202

a/In green bean equivalent.

In 1976 the U.S. exported 219,166 bags (green bean equivalent) of coffee in green bean, roasted, and soluble forms.

Eight producing countries supplied 64 percent of U.S. green imports in 1976.

Country	Year 1974	1975	1976
	----------60 kilo bags----------		
Brazil	2,724,885	3,747,164	3,090,943
Colombia	3,089,160	3,399,782	2,687,223
Mexico	1,323,637	1,661,636	1,368,346
Ivory Coast	748,497	965,366	1,329,456
Indonesia	941,348	764,746	1,081,819
El Salvador	1,110,820	1,018,254	1,044,676
Guatemala	1,096,124	874,256	748,573
Angola	2,395,508	1,201,850	870,550
Total	13,429,979	13,633,054	12,721,586

Green coffee is sold in the cash market (spot and shipment markets) and the futures market. Principal ports of entry for coffee in the United States are New York, New Orleans, and San Francisco.

Cash market

The spot market entails trading among importers, brokers, jobbers, and roasters of coffee that has arrived from producing countries and is already landed and in warehouses. The shipment market involves the purchase or sale of actual coffee for shipment from a producing country at a given time. New York importers in the shipment market generally buy coffee from the producing country in one of three ways, either c.&f. (cost and freight), c.i.f. (cost, insurance, freight), or on an f.o.b. (free on board) delivery steamer at loading port. Payment is usually made by a letter of credit drawn upon the importer's bank entitling the exporter to draw drafts 30, 60, or 90 days' sight against the shipping documents.

Purchases of green coffee are handled by a variety of buyers. Coffee is bought directly from the producing countries by importing agents and to a lesser degree by processors. The importing agents handle about 75 percent of all coffee shipments into the United States while the balance is purchased directly by processors. In many cases, the same processors that buy directly from the producer will also buy additional supplies from importing agents. In the United States there are approximately 100 green coffee importers or agents and 200 processing companies; however, 40 percent of total imports are handled by 4 importing companies.

The agents in turn sell the green beans (1) directly to the processors, which include food manufacturers and chain grocers that have their own roasting and packaging facilities, and to roasters that are solely in the business of roasting coffee and (2) to merchants that resell to processors. The basic business function of the importing agents is their role as middlemen. They merchandise the coffee in its original import package by buying, importing, financing, and then reselling green coffee beans. They usually have established connections in the producing areas, worldwide communication networks, market analysis and financing capabilities, and experience in traffic and shipping.

When processors purchase directly from the source, they are responsible for all importing, shipping, and financing arrangements. Several U.S. importers function as exporters in producing countries.

Futures market

The New York Coffee and Sugar Exchange, Inc., in New York City and the Coffee Terminal Market in London are the major coffee futures markets. These futures markets are used extensively by the international coffee trade, principally as a management tool for day-to-day operations.

The Exchange provides a central marketplace for trading in futures contracts. A contract is a legally binding agreement to buy and sell a specified quantity and quality of coffee for delivery in a specified month in the future. The price at which a contract is traded is determined by open bidding and offering and reflects the market's assessment of what the price will be at a future point in time. The market is, therefore, a barometer of price and is not intended to be a mechanism for delivering or receiving the actual offer. Although the contract contemplates delivery, the parties usually relieve themselves of their obligation by entering into offsetting transactions. In 1976 actual delivery was made on less than 1 percent of the contracts traded.

The Exchange is used basically (1) to avoid the risk of price fluctuation (hedging) and (2) to assume the risk of price fluctuation (speculating). The hedger expects to need to buy or sell coffee at some future date and, rather than risk less favorable prices in the future, either buys or sells coffee contracts for future delivery. The speculator takes the risk that the hedger seeks to avoid with the goal of making a profit on predicting the direction in which the

market will move. The futures market also offers an economically viable means for preharvest financing to producers as well as marketing boards of exporting countries.

There is one actively traded contract on the Exchange--the "C" contract. Until June 1, 1977, this contract included deliverable growths from Mexico, El Salvador, Guatemala, Costa Rica, Nicaragua, Honduras, and Colombia. On June 1, 1977, the New York Coffee and Sugar Exchange expanded the "C" contract to cover deliveries from 18 rather than 7 countries starting with the July and September 1978 contracts. The amended "C" contract added coffees from Kenya, Tanzania, Uganda, New Guinea, Peru, Venezuela, Dominican Republic, Burundi, Ecuador, India, and Rwanda. The primary purpose of the expansions was to increase the volume of futures trading by increasing the options of available coffees.

Regulation of the futures market

The Commodity Futures Trading Commission was created by the Commodity Futures Trading Commission Act of 1974 (7 U.S.C. 4(a)) to regulate commodity futures markets. The Commission maintains a daily market surveillance program which collects, summarizes, and analyzes transactions to identify and prevent market congestion or manipulation. It obtains trading data from each of its members in order to identify individuals and firms that have the potential to disrupt the market.

Several actions have been taken to prevent manipulations of the futures market. For example, in August 1976 the Commission was concerned about the supplies of coffee available to satisfy delivery on September contracts and the slow rate at which those contracts were being liquidated. To prevent these situations from adversely affecting price the Commission raised margins--the amount a trader must deposit for each contract--three times to speed up liquidations and limited trading to liquidation only.

In cases of erratic market behavior, the Commission subpoenas the documents of the traders in question to determine whether the intent of such trading behavior was to manipulate the market. Recently, it subpoenaed two U.S. brokers for information on the trading activities of two of their foreign clients.

PROCESSING

At the processing stage of the coffee marketing system roasters prepare coffee into ground and instant coffees. The

two largest U.S. coffee processors purchase between 60 and 85 percent of their green beans from domestic coffee merchants and the remainder directly from producing country sources.

The U.S. coffee processing industry is made up largely of regional roasters and packers including retail grocery companies and national food manufacturers. Processors may be independent roasters which prepare their own brands and products for chain grocers, small food manufacturers, and small specialty shops, or they may be national or regional food manufacturers which prepare their companies' brands of coffee.

In the wholesale market, processors sell to the retail grocery trade. Wholesale prices are generally set by the largest processors, and changes in wholesale quotations by one or more industry leaders are usually followed by widespread competitive moves in the trade. However, although the wholesale quotations of major roasters may be static for long periods, promotional discounts and special promotional tie-in sales result in real wholesale prices to the grocery trade which can vary from month to month.

DISTRIBUTION

The distribution network from the processors to the consumer market consists of supermarket chains and other grocers, retailers, institutions, and other wholesalers.

An average U.S. supermarket sells approximately 25 different brands of coffee at a wide range of retail prices. National brands compete directly with a variety of regional coffee products as well as a store's own brands.

The following table shows coffee market shares held in 1974 and 1975 by specific companies for both regular and instant coffees.

Coffee Market Share by Company

	Regular coffee		Instant coffee	
	1974	1975	1974	1975
	--------(percent of market)--------			
General Foods Corp.:				
Maxwell House	25.3	24.9	25.5	24.9
Maxim	-	-	7.0	5.5
Sanka	4.0	4.0	11.2	11.6
Yuban	2.2	2.2	2.0	2.0
Freeze-Dried Sanka	-	-	3.6	3.2
Max-Pax & Brim	3.7	4.1	3.5	3.5
Total	35.2	35.2	52.8	50.7
Procter & Gamble Co.:				
Folger's	20.7	21.0	6.8	8.0
Hills Brothers:				
Hills Bros.	7.7	7.6	1.0	.9
Standard Brands:				
Chase & Sanborn	4.3	4.2	2.0	1.9
Nestle:				
Nescafe			11.0	11.0
Taster's Choice 100% Coffee	-	-	11.7	11.7
Decaf	-	-	1.4	1.4
Taster's Choice Decaffeinated	-	-	5.1	5.4
Total	-	-	29.2	29.5
Borden:				
Kava	-	-	.8	.7
All other	32.1	32.0	7.4	8.3

Coffee is also sold in specialty shops, which purchase it directly from importers or roasters in the form of green beans or special-order blends and roastings.

Another distribution channel for coffee is the institutional sector, including hotels, restaurants, and public and private

facilities. Although major roasters are factors in the institutional market, a significant proportion of that trade is accounted for by regional and local coffee firms.

Pricing and promotion

The last link in the marketing chain is the consumer. A firm's objective, be it a processor, wholesaler, or retailer, is to maintain and improve its market position, and marketing strategy, therefore, is based on assumptions of probable consumer response. What happened to coffee prices in the post-1975 frost period was in large part due to the cost of the green coffee. However, the marketing system's promotion and pricing policies, geared to maintain each firm's ultimate market position with the consumer, also affected domestic prices.

Coffee is a highly competitive grocery item. Marketing experts view coffee as an item that the consumer buys nearly every week and is apt to remember the price paid for it the week before. Both processors and retailers reportedly operate at low margins on coffee in order to compete. As competition varies from market to market across the country, so do prices. Accordingly, coffee wholesalers frequently feature promotional offerings which also vary quite a bit from market to market. They offer retailers various display, advertising, and coupon allowances. Such allowances reduce the cost of the product to the retailers and the profit margin to the manufacturer and make that product more price competitive. As a high turnover item, bargains on coffee can also be a decisive factor in a consumer's decision to shop in a given grocery store. Consequently, to compete, retailers move coffee prices up grudgingly.

Due to competitive and promotional reasons, some processors we interviewed stated that they sold their coffees at a loss during the postfrost period. Independent roasters that market their own brands could not absorb the loss, as did the national food chains which market multiple lines of products, and consequently suffered substantial setbacks during that time. By not being able to discount their coffee below cost, they were forced to maintain retail prices above cost and thus lost customers to their competitors' cheaper brands of coffee.

FACTORS THAT AFFECTED CONSUMER PRICES

Until 1966 world coffee production was greater than demand and stocks had increased to over 87 million bags. Subsequently, continued growth in demand resulted in an excess

of consumption over production which continued for most of a decade as production scarcely advanced. Shortfalls were provided by existing stocks and at the time of the July 1975 frost, world stocks had decreased to 39 million bags when demand was about 76 million bags and production was about 74 million bags.

In 1975 inventories of green coffee in the United States had fallen to 2.5 million bags from a normal level of 4 to 5 million. As the news of the frost reached the coffee trade, importers and roasters became concerned over possible short supplies and increased prices. Imports in the third quarter of 1975 increased by 33 percent over the second quarter and 74 percent over the same quarter of 1974. As consumer demand did not react adversely to the resulting price increases, imports remained at a high level through the first quarter of 1977. During this period production continued to be outpaced by demand and supplies of available coffee were being depleted. Exporters could demand their prices because buyers were willing and continued to pay.

Most observers were surprised that the consumer demand for coffee did not decrease in view of the continuously increasing prices. Even though the price elasticity of demand for coffee has been historically very low, the general concensus was that after a certain price level, the elasticity would increase, resulting in decreased demand. In hearings before the Subcommittee on Domestic Marketing and Consumer Relations and Nutrition of the House Committee on Agriculture in March 1976, a research firm predicted that the price of green coffee would rise from the then $1.00 a pound to $2.30 a pound in the following 12 months. A representative of the Department of State replied that, barring some new event, there was no particular reason why the price should go any higher than $1.00. By mid-March 1977 the ICO composite indicator price had reached $3.00 and was still climbing.

To many increasing prices were not understandable in view of reports that U.S. per capita consumption had been gradually decreasing over the same period. Per capita consumption figures are deceiving in representing consumption trends. Even though individual consumption in the major consuming countries has decreased, populations have grown and total consumption has increased. Furthermore, noncoffee-drinking cultures, such as Japan, have joined the ranks of coffee consumers, adding further to total world consumption.

In the spring of 1977 when retail prices reached $3.00 a pound with prospects of going much higher because of the

increasing prices of green bean imports, the situation altered and consumer demand began to decrease.

Roastings for the first quarter of 1977 fell by 16 percent from the same quarter of the year before. Warehouse movement data showed a drop of 3 percent and 5 percent from January to February and February to March, respectively. First quarter imports, however, had increased by 23 percent over the previous quarter and ending inventories for that quarter increased by 10 percent over the first quarter of the previous year and by 26 percent over the previous quarter. As consumer demand and roastings continued to decrease into the summer of 1977, the demand for green coffee imports decreased, with a significant decrease in price of imports.

From February of 1976 until mid-1977, retail prices were lower than wholesale prices. At their highest level, prices of green coffee imports and retail prices had risen by $2.70 a pound while wholesale prices had increased by $2.80 over prefrost prices. Added to the greatly increased price for green coffee, there were major increases in the financing of the coffee industry. Prior to the frost, payment for green coffee was due 30 days after the receipt of coffee. Subsequently, 20 days of credit were considered good, but generally the term was 10 days.

Above the price and financing of the beans, the processor incurred increased inventory and processing costs. To deal with their increased costs, the processors cut the inventory period from the previous average of 60 days to 45 days.

The greater cash involved, the shorter term of payment, and the reduced percentage of mark-up made it difficult for many small roasters to stay in business.

CHAPTER 5

COFFEE INFORMATION SYSTEMS

Green coffee prices in the postfrost period were extremely sensitive to any news which could affect coffee supplies and prices, such as government policies of producing countries, weather conditions, and political situations. Decisions on purchases, sales, and prices are generally based on anticipated supply and demand. The way these factors are perceived by the decisionmaking structure in both the private sector and government is determined by the type and quality of the data flowing into the marketing system.

The world supply of green coffee consists of total production for a given year plus the carryover stocks at the beginning of the year. The ending stocks result after domestic consumption and exports are removed from the available supply. Coffee industry data consists of information from government, the private sector, the ICO, trade associations, and the international coffee business community.

THE U.S. GOVERNMENT'S ROLE IN COFFEE DATA AND INFORMATION

The U.S. Government disseminates information on almost all stages of coffee marketing from production to consumption. Reports are available on conditions and events affecting the coffee industry as well as statistics on quantities and prices.

The Departments of Agriculture and Commerce have the primary responsibility for gathering and reporting information on coffee.

Production information

U.S. Government information on coffee production is provided by the Department of Agriculture. The administration of the forecasting and information system for coffee is divided between the Assistant Secretary for International Affairs and Commodity Programs with responsibility for the Foreign Agricultural Service (FAS), and the Director of Agricultural Economics, Policy Analysis and Budget with responsibility for the Economice Research Service (ERS).

FAS maintains a worldwide corps of agricultural attaches. The primary mission of the attaches is to promote U.S. commodities in foreign markets. There are agricultural attaches in 75 percent of the coffee-producing countries. Representation

can be in the form of either one or more persons in the coffee-producing country or in a neighboring country with responsibility in the coffee-producing country. These representatives report information on a regular basis to the Foreign Commodity Analysis unit of FAS. In compiling reports the attaches rely on data published by host-government agencies, on periodic checks with traders, warehousemen, and other business groups and on personal inspection.

In addition to the information compiled incountry by the attaches, FAS receives information from the State Department's Economic/Commercial officers in the coffee-producing countries. This information comes in the form of cables and such reports as the Quarterly Economic Review.

The methodology of the data gathering and the frequency of the reporting usually is based on the importance of the country in coffee production and trade and the importance of coffee as a source of foreign exchange. In Brazil, the attache regards coffee reporting as a very important part of his total activity, and it is probable that more field survey work is done on coffee than any other commodity.

In El Salvador the attache perceived the monitoring of the coffee industry as his major concern because the sale of coffee is El Salvador's most important source of revenue.

On the other hand, the attache assigned to Liberia was responsible for reporting on five African countries, including the Ivory Coast 1/, on 12 commodities, including coffee. According to the attache, his primary role was to be a "salesman" for U.S. agricultural products, with secondary responsibility for providing intelligence on foreign products that compete with U.S. agricultural commodities. Products which the U.S. imports, such as coffee, fall into a third priority category.

The attache visited the Ivory Coast only to fulfill his official reporting responsibility. Consequently, he has made no field trips into the coffee growing areas, relying for information almost entirely on 2 of the over 30 exporters in the Ivory Coast. Four of the five exporters that export about half of the Ivorian coffee and the export representative of one American coffee firm in Abidjan had never been contacted.

1/Subsequent to our review, an attache was assigned to the Ivory Coast.

Although FAS collects data from many sources, including official foreign government statistics, it believes that independent judgment in arriving at estimates, even though different from those presented by other sources, best serves the general public and industry interests. For example, FAS estimates that production in Brazil for the 1976-77 coffee crop was 9.5 million bags, while the Brazilian Coffee Institute estimates it at 6.0 million bags. Both parties steadfastly support their own estimates.

In Colombia and El Salvador the attaches did not consider data issued by the government to be reliable. In Colombia the attache claimed that his estimates were higher than the Federation's because he included losses from contraband trade in the total production figure and the Federation did not. In El Salvador, Embassy officials stated that the statistics were held by only a few individuals within the El Salvador Coffee Company. As a result, they have to supplement the data with other information gathered from producers, exporters, other host government agencies, and the ICO.

Analysis and forecasting

The Foreign Commodity Analysis unit of FAS is responsible for analyzing and forecasting world coffee production, consumption, and trade trends. It compiles production data received from the attaches and other sources. Information from other sources is used when no attache data is available and to adjust attache data when the analyst believes such an adjustment is appropriate. The data received is compiled quarterly and lists by country the figures on total production and exportable production for the current and forthcoming coffee year and the specific source of the information. The completed compilation is sent to the Economic Research Service for review and comment.

ERS's Foreign Demand and Competition Division is responsible for agricultural production and trade forecasts. It focuses on worldwide supply and demand conditions and compiles information by country and commodity. Country forecasts for each commodity are totaled regionally and worldwide. These regional commodity totals are then compared with the compilation submitted by FAS; 48 hours after receipt of the compilation, ERS meets with FAS to discuss the data and agree on the final figures.

In compiling coffee production and trade information, ERS obtains data from many sources, including the same sources as FAS, such as attaches. Although ERS compares the attache

information to the other sources, such as ICO, it believes the attache data is generally acceptable.

Analysis of Department of Agriculture crop estimates showed that from the 1970-71 to the 1975-76 crop years, Agriculture's first production estimates have deviated from its postharvest estimates by about 4.3 million bags (6.5 percent) over actual to 3.8 million (5.3 percent) under actual, principally because of weather occurrences.

Publication

After it arrives at acceptable figures, FAS will prepare a statement on world production of coffee and a news item for the "Weekly Roundup of World Production and Trade." Production data is published also in the "Foreign Agricultural Circular" on a quarterly basis. The publication is free to the public and is circulated through a mailing list. As of January 1977 there were 1,188 subscribers receiving 1,409 copies. The last distribution survey was made in 1971, and showed that 69 percent of the recipients were in the business community.

Other FAS publications, such as the weekly "Foreign Agriculture" and the FAS "M" series, include information on coffee from time to time. The "M" series are special issue reports that FAS publishes as it perceives the need, and has included reports on "Coffee Production in Africa," "Coffee Situation," and "U.S. Coffee Consumption, 1946-76."

FAS is responsible for the organization, analysis, and publication of data in forms that provide information and guidance to policy-level executives and others, and the value of its evaluations depends on the accuracy of the data it relies upon. FAS claims that the evaluations and the data base, although not always exact, have been relatively good and on the trend line.

ERS also publishes information on coffee production, trade, and forecasting. The "World Agricultural Situation" published in June, September, and December, summarizes production and trade and lists statistical information by region and country. Regional "Agricultural Situation and Outlook" reports are published every year during March to May, for Western Europe, the Western Hemisphere, the Far East and Oceania, Africa and West Asia, the People's Republic of China, and Eastern Europe. The coffee production data and statements used in the ERS situation reports are subject to review and clearance by FAS prior to publication.

Current technology

The LANDSAT program of the National Aeronautics and Space Administration (NASA) has potential for gathering data on coffee production. LANDSAT's twin satellites systematically pass over and send back imagery of virtually every point on the globe once every 9 days.

NASA obtained images of the frost-struck area of Brazil 4 days before and 14 days after the freeze. The results of the LANDSAT analysis were compared to Brazilian Coffee Institute ground survey statistics, and the relative error or difference between the two results was about 2 percent.

The analysts' report concluded that the procedure can yield highly accurate estimates of the severity of frost damage to coffee, is potentially considerably faster, and is far less costly than conventional ground survey techniques. While the results were positive, the report stated that more tests are needed to establish adequate confidence in their repeatability.

The Executive Director of ICO expressed a desire to hold a seminar by the end of 1977 to discuss and examine the potential value of various aerial surveys, including LANDSAT. He stated that total reliance on LANDSAT imagery for all coffee-producing regions would be unwise as terrain and planting patterns vary. When coffee is grown in open areas with no cover the detectors can pick up infrared light waves from coffee alone. However, coffee trees are often interspersed with other trees which may shade the coffee trees, and LANDSAT detectors would pick up projections from growths other than coffee. In this case, analysis of LANDSAT imagery would have to be combined with ground checks.

The Office of Public Affairs at Goddard Space Flight Center recently received a communication from a Geneva firm regarding analyzing growth and production of coffee, tea, and cocoa on plantations through the use of LANDSAT imagery.

Consumption, exports and stocks of producing countries

The major source of information available to the U.S. Government on domestic consumption, exports, and stocks of producing countries are the countries themselves.

Information on domestic consumption is the most questionable. Most countries do not collect such data, and when

it can be obtained, its validity is debatable as most data-gathering processes are usually incomplete. Generally, this data is obtained by the countries from their coffee industries and from some surveys, and U.S. agricultural attaches have no means of verifying the information. Historically there has been an average, 2-million bag worldwide error.

Export figures are probably the best statistics in all countries. They are obtained through customs procedures, which are usually rigorous, especially where export taxes are a source of government revenue as they are for most coffee-exporting countries.1/ The FAS compares export figures with import statistics from other countries.

FAS receives figures on stocks from the attaches and from Embassy commercial/economic officers. Stock figures are compiled from official host government publications and are supplemented by interviews with the trade. To check the validity of yearend stock figures obtained, FAS computes a figure from the basic equation using beginning stocks, production, domestic consumption, and exports. The quality of the derived figure on ending inventory depends on the validity of the figures in the other elements of the equation.

For example, a November 1975 attache report from the Ivory Coast showed that coffee stocks were around 1,667 thousand bags at the end of the 1974-75 season. However, in November 1976, the new attache reported stocks at only 250,000 bags at the end of the 1974-75 season. By the end of the following year, stocks were reportedly down to 83,000 bags. This also conflicts with official ICO verification results, which claimed that the Ivory Coast had stocks of about 1,567,000 bags at the beginning of the 1975-76 season and about 1,133,000 bags at the start of the 1976-77 season. As the stock figure was derived, it is assumed that the changes resulted from changes in other elements of the equation.

U.S. domestic marketing system

The Business Division of Commerce's Bureau of the Census is responsible for information on the domestic supply of green and processed coffee. It aggregates, evaluates, and publishes data on imports, inventories, and roastings. This data is reported on a regular and quarterly basis in the "Current

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1/A problem exists when coffee is leaving the country as contraband.

Business Reports--Green Coffee, Inventories, Imports, Roastings." The major source of price information is Labor's Bureau of Labor Statistics, whose Food Branch in the Office of Prices and Living Conditions collects, aggregates, and publishes the price statistics on foods, including coffee.

Imports

Official U.S. import and export statistics are collected by Treasury's Bureau of Customs, and furnished to the Bureau of the Census for compilation. The import data is obtained from the import entry and warehouse withdrawal forms which importers are required by law to file with Customs officials, who verify country of origin, net quantity, value, and commodity classification. Effective with the January 1974 statistics, Bureau of Census foreign trade reports present import data in terms of f.a.s. (free alongside ship) and c.i.f. (cost, insurance, and freight) values in addition to the Customs value data previously shown.

Import information is reported as "General Imports" and "Imports for Consumption."

--General imports are a combination of entries for immediate consumption and entries into Customs bonded warehouses. They generally reflect total arrivals of merchandise, whether it enters consumption channels immediately or is entered into warehouses under Customs' custody to be subsequently withdrawn for consumption or export.

--Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. They generally reflect the total of commodities entered into U.S. consumption channels.

Official U.S. export statistics are compiled by the Bureau of the Census primarily from shipper's export declarations which are required to be filed with Customs officials. Summary statistics for both imports and exports are published in Report FT 900 "Summary of U.S. Export and Import Merchandise Trade," and Report FT 990, "Highlights of U.S. Export and Import Trade." Information on additional sources of foreign trade is furnished in the "Guide to Foreign Trade Statistics".

Inventories and roastings

The Business Division of the Bureau of Census collects quarterly data from the coffee industry on green coffee inventories and roastings. The quarterly survey involves 160 firms, including roasters and nonroasters, and uses a shuttle form that is remailed to each company over a 3-year period. The resulting information for the preceding quarter is published 40 to 45 days later, and there is a regular practice of following up with companies that do not respond. The Division has a response rate of 85 percent from industry. It is currently evaluating the return to a monthly survey and reporting service as was done 10 years ago. The National Coffee Association was to make its recommendation on the matter but the result of their survey of members was mixed. There is some doubt whether the companies in the survey would be as compliant in responding to the survey if it were required 12 times a year instead of 4. Also, there is some doubt about the level of accuracy of reportings made that frequently.

After the Division receives the data, it is analyzed and checked against figures from past surveys and, in case of a question, the Census staff will call the companies. To further check on the data's reliability, the Business Division checks with people in the trade who have their own estimates and matches it against import and export figures received from Customs. Census generally finds a 2-percent difference between the Customs figure and reported inventories and roastings, which is accounted for as loss by theft, coffee used for experimentation, and speculation that bags could be short-shipped as Customs does not weigh bags at entry. The Division claims that the quarterly estimates on supply are off at times, but that the average result for the year is generally right on target.

The survey has encountered several problems. One major problem has been the inconsistency with which the companies in the survey account for inventories. Due to different systems, some companies have included in the inventory figures supplies that were in transit from the producing country and not yet recorded in Customs' import figures. As a result, the "Current Business Reports" issue of August 1976 shows inventories at March 31 of 3,064,000 bags and at June 30 of 3,670,000 bags. In a November 1976 issue, however, these figures were revised to show inventories at March 31, 1976, of 3,194,000 bags and at June 30, 1976, of 2,908,000 bags.

Subsequently, buyers were able to confirm that certain expected shipments were included in the inventory figures and were also able to specify the amount of coffee that was in

transit and in inventory. To prevent this from recurring, the Division included a special notice on the form specifying what items were to be included in the inventory figures.

Wholesale, retail, and consumption

U.S. Government agencies that monitor the coffee marketing system do not obtain data on the quantities of coffee sold into the wholesale or retail markets or purchased by the consumer. The Bureau of Labor Statistics does obtain information on wholesale and retail prices. Information on roasted coffee wholesale prices is collected by a survey of instant and roasted coffee distributors. It is taken on a monthly basis and the prices reported are those listed for the middle of each month. The survey sample includes six companies.

The major source of the Bureau's information on green coffee wholesale prices is the "New York Journal of Commerce" listing. The prices used are those listed in the Tuesday issue of the week of the 13th of every month for four types of coffee--Brazilian Santos #4, Colombian Manizales, African Ambriz, and Mexican Washed. The average prices for these above four types are published in the monthly "Wholesale Prices and Price Indexes." In the case of large differences between the listed prices and indexes between months, the Bureau includes explanatory notes in the publication.

Information for the consumer price (retail) index is gathered by the Bureau of Labor Statistics through a regular monthly survey in 56 cities--the same cities used for commodities surveyed for the Consumer Price Index. The coffee sample in the survey consists of instant coffees in 6-ounce sizes and roasted in 1-pound sizes and it includes the "volume selling brands" in three chain stores and three independent stores per city. Store brands are also included if they happen to be the volume selling brands. The consumer prices are listed by the current and previous month's prices.

The use of these price listings has a few limitations. Slight inconsistencies between surveys for wholesale and retail prices are caused by timing and sample makeups, and list prices do not take into consideration volume or promotion discounts.

The sample used for the retail price survey includes the "volume selling brand" of national brands and grocery store brands. The sample for the wholesale price survey includes only national brands. This could give a somewhat distorted picture of the differences between the wholesale and retail

prices of coffee since the store brands are generally lower in price.

Furthermore, the Bureau's retail price survey is made on the first Tuesday, Wednesday, and Thursday of each month while the wholesale price survey takes place in the middle of the month. As a result, it is difficult in a period of fluctuating prices to trace the exact differential between the two at any given point in time.

Comprehensive market information

Information on all stages of coffee production and marketing is aggregated and analyzed by the ERS Commodity Economics Division.

The Division compiles supply and utilization tables for consumption as well as remarks on the coffee situation and supplies it to the Agriculture publication "National Food Situation," the "Foreign Agriculture Circular," and such special publications as the "Food Consumption, Prices, Expenditures," which was a supplement for 1975 to the Agricultural Economic Report No. 138. For import and export data the Division relies primarily on the Census Bureau's "Current Business Reports," the monthly and annual "U.S. General Imports" and "U.S. General Exports," and the weekly and monthly computer runs of imports and exports of coffee. These are checked against information published by private sources. Inventory and roasting figures come from the Census Bureau's "Green Coffee Inventories, Imports, Roastings," published in "Current Business Reports" and from private sources.

The Commodity Economics Division workload on coffee is handled by one staff member and a statistical assistant for whom coffee is only one area of responsibility. Time and resource constraints limit the derivation of statistics on coffee consumption and future projections to a very simple mechanical approach.

Supply and use

The Division's major work on coffee is a table showing trends in U.S. coffee supply and use. This table shows the total supply of green coffee in the United States and utilization of that supply for exports, military use, and civilian consumption.

Consumption levels compiled by the Division are not based on actual sales but on "Net Civilian Disappearance," which is based primarily on roasting data. Equating

consumption to roastings may not represent actual consumption because of time lags in the marketing chain and the lack of data on roasted coffee still in inventory and that sold to consumers.

The Division bases calculations of per capita consumption of all commodities on total civilian population. For the sake of consistency, the same method is applied to coffee.

This does not reflect actual per capita consumption since the young[illegible]ge group in the population normally does not drink coffee. 1/ As the share of the coffee drinking age group changes relative to the total population, consumption trends based on the total population will be quite different from those based on the particular age group segment that does consume coffee.

The Commodities Economics Division's monthly tables on coffee prices and price spreads allow track[illegible]g of coffee prices from the green bean to the retail stages.

Price forecasting

The Commodities Economics Division is responsible for price projections for commodities. However, neither this Division nor any other area in Agriculture have done any price forecasting for coffee, although one staff member in ERS has been assigned to develop a model for forecasting coffee prices.

It is generally conceded that price produc[illegible]on models or models for analyzing a current price in relation to supply and demand have a low level of reliability.

INFORMATION SOURCES IN THE PRIVATE SECTOR

Marketing decisionmaking requires more accurate information on consumption trends than government sources make available. Changes in inventory levels of processed coffee are very important in determining levels of demand and supply by which to gear future purchases, sales, and promotions. As a result, coffee businesses turn to the private sector for more exact information on movement of coffee from one phase to another.

1/Estimates of consumption by age group, region of country, at home and away from home, have been available to the industry from the annual winter consumption surveys currently published by the ICO.

Market research f

Primary sources of information are such agencies as Selling Areas Marketing, Inc. (SAMI), which is owned by Time Incorporated and reports warehouse withdrawals to food stores in defined marketing areas.

SAMI collects information from food operators that regularly provide order book listing of all items stocked in their warehouses. Each item has its own code number and product description, so the sequence of reports shows the movement of goods from each warehouse. These reports are compiled on a 4-week basis.

SAMI agrees that warehouse movements of goods are not the equivalent of actual sales, but considers the movement from the warehouse to the grocery shelf adequate in representing sales and, therefore, consumption.

SAMI is also involved in the national experiment with front-end scanners by large chain grocers, which can maintain cash register records of goods leaving the store. The prices listed are accompanied by the product code. This type of record allows a specific tracking of product movement from retail to the consumer.

SAMI's work in the movement of food goods does not cover institutions such as restaurants hospitals, and schools. This is the next area that it will be developing, since it believes that its coverage of the market should be as complete as possible.

Coffee intelligence report

The most comprehensive and most widely used source of coffee information is the George Gordon Paton & Co., Inc., daily "Complete Coffee Coverage" and monthly "Coffee Intelligence," whose coverage includes activities in that day's market, spot, futures, roasted wholesale and retail prices, production and stocks, exports and imports to and from producers and buyers, roastings and inventories, consumption and various developments affecting the coffee trade around the world. As a rule Paton prints only information, not market analyses.

Paton's reliability is widely acknowledged; ICO members unanimously accept Paton as the formulator of the indicator price. The arrangement calls for a daily submission of the indicator price to the ICO in London before Paton releases it to telephone inquiries and to its own publications.

Paton's utility varies according to its user. Brokers trading in the future or spot markets find the information not timely enough. They use it to have trend data on hand but do not refer to it in their minute to minute buying and selling transactions. Large importers and processors rely on Paton for the supply/demand picture on which they base long-range planning decisions.

News services

The major source of spot and futures price information is the Journal of Commerce. The daily publication prints prices of coffee in various markets--spot prices in New York and futures prices on both the New York and London markets.

The New York spot prices are prices quoted by importers and jobbers, ex-dock New York in lots of 100 bags or more. Journal of Commerce reporters receive their information on spot prices from daily contacts with large coffee dealers and brokers whom they have found to be reliable. The futures prices are received from the London Exchange and the New York Coffee & Sugar Exchange via the ticker service.

Other information sources include the wire services, such as Reuters and the Commodity News Service.

All coffee business groups reported a great reliance on Reuters. The Reuters service in the United States operates out of Chicago and covers all commodities. The London wire service covers commodities on an individual basis.

Reuters gathers its basic coffee information through reporters' coverage around the world, press releases, and publications from producing and importing countries. This includes immediate receipt of news releases from the Department of Agriculture, Bureau of Labor Statistics, and Bureau of the Census.

The Commodity News Service operates in much the same way, except on a smaller scale. It has 19 divisions of commodities and corresponding news wires in the United States. For international dissemination, it has UNICOM news--a wire service that is linked with United Press International. UNICOM sources will also provide information for the domestic services.

Industry communication

All the parties we contacted in the private sector considered their daily personal communication with other members

of the coffee industry as the most important source of information. Roasters receive information on crop and market outlooks for various coffees from their importers. They are also informed on at least a weekly basis by their retailers of the retail inventory outlook for their particular products.

Brokers are on the phone with clients as well as importers, other brokers, processors, and company representatives around the world, while simultaneously following the news received from various wire services.

The National Coffee Association (NCA) is the leading coffee trade organization in the United States. Its membership of over 200 companies, representing approximately 85 percent of the coffee business community, has regular access to its weekly newsletters, special bulletins, and surveys. In carrying out its information, trade promotion, and business relations functions with private industry and the United States and other governments, it provides the trade with a forum for industry communication.

CHAPTER 6

RESPONSES TO QUESTIONS PRESENTED

The Chairman of the Subcommittee on Domestic Marketing, Consumer Relations and Nutrition of the House Committee on Agriculture requested that we review interagency mechanisms within the executive branch for monitoring the coffee commodity situation, the International Coffee Agreement, and suppliers' marketing policies and procedures, and respond to certain specific or implied questions. Below are responses to the questions, based on information in the preceding chapters.

1. Is the information collected by the Federal Government sufficient to analyze current supply and demand?

Although there are gaps and weaknesses, data and information collected and compiled by the Federal Government are, in the aggregate, sufficient to analyze current supply and demand.

The supply of coffee consists of exportable production and current stocks. For data on exportable production, the Government must rely to a great extent on production, domestic consumption, and stock information furnished by producing countries and the International Coffee Organization. The Department of Agriculture does establish its own independent estimates for production. In a number of cases, Agriculture's estimates vary from those presented by other sources.

Demand is determined by the purchase of coffee at various points in the domestic marketing chain. Fairly good data is available for exports from producing countries and imports into the United States and for roastings. No quantity data is obtained on coffee after roasting; therefore, Government information for consumer demand is based primarily on roasting data. Because of the time period between roasting and retail sales, changes in consumer demand will not be reflected until several months after the occurrence.

Available information is not sufficient, however, to reliably forecast future supply and demand and the resulting price of coffee. Future supply can be affected by unforeseen natural or political events, including production and marketing practices of supplying countries. These events trigger changes in demand based on future anticipations of supply availability. As coffee prices are determined through the anticipation of future supply and demand, there appears to be no feasible method for forecasting prices or determining the reasonableness of current prices.

2. What are the interagency mechanisms for monitoring the coffee commodity situation and to formulate and coordinate U.S. policy with regard to coffee and coffee exporting countries?

The Department of State has primary responsibility for formulating U.S. policy regarding coffee and coffee exporting countries. It represented the United States in the negotiation of the 1976 International Coffee Agreement, with the assistance of the Departments of the Treasury, Commerce, and Agriculture as members of the negotiating team. Administrative and technical matters of the agreement are handled by State's representative to the International Coffee Organization. In matters of policy, State consults with the Treasury, Commerce, and Agriculture.

At the time of the negotiation of the 1976 Agreement, there existed within the Executive Office of the President the Economic Policy Board with a special commodity policy group, cochaired by State and Treasury. One subgroup considered matters concerning coffee. In May 1977 the Economic Policy Group replaced the Board. The Group has a Commodities Task Force chaired by State. Although the subject of coffee has been brought before the task force, no subgroup has been established to deal with it.

Responsibility for monitoring the coffee commodity situation through the collection of data and information on coffee production and marketing is held primarily by the Departments of Agriculture and Commerce. Comprehensive information on all stages of coffee production and marketing is aggregated and analyzed by Agriculture's Economic Research Service.

3. What are the merits and weaknesses of the International Coffee Agreement?

The primary reason for U.S. participation in the International Coffee Agreements has been to assist in stabilizing the price of coffee and the revenues of the producing countries to avoid disruptive effects on development efforts. Although the 1976 Agreement has several changes from previous agreements that are beneficial to consumers, stabilization is at the low end of the price range. The agreement does not provide for a price ceiling or buffer stocks as a protection against high prices. As the price of coffee has been substantially above the minimum prices specified in the agreement to trigger export quotas, the agreement has been inoperative with regard to the 114-percent increase in price after its inception in October 1976.

4. What are the ramifications of the policies and procedures of the producing countries and the U.S. domestic marketing system on domestic coffee prices?

Although coffee prices to the consumer since July 1975 have reacted primarily to an anticipated supply shortage, the policies and procedures of exporting countries and the U.S. domestic marketing system do influence the availability of supply and the retail price.

Coffee producing countries maintain controls over coffee production and marketing. Their policies may be directed toward controlling production, inventories, and exports; allocating and maximizing revenues; and curbing inflation. To effect these policies, the producing countries may make adjustments to production incentives or disincentives, minimum prices to producers, export taxes, and minimum export prices. In implementing policies and procedures, the producing countries have been directed by their perception of their own best interests.

The governmental actions influence supply and create pressures on price. The use of export taxes and minimum prices to producers in support of minimum export prices has occasionally limited the availability of a country's coffee supply to the world market. Such practices as limiting the quality of coffee for export, requiring sales to the domestic market at subsidized prices, and purchasing from other producing countries also affect supplies available to consuming countries.

The marketing systems of importing countries may also affect demand and the price paid by consumers. Historically, demand has been inelastic to price within certain limits. However, without knowledge of the limits, wholesalers and retailers were reluctant to pass the full cost impact on to consumers during the recent period of increasing prices.

APPENDIX I

U.S. House of Representatives
Committee on Agriculture
Room 1301, Longworth House Office Building
Washington, D.C. 20515

January 25, 1977

Honorable Elmer B. Staats
Comptroller General of the
United States
General Accounting Office
Washington, D. C.

Dear Mr. Staats:

In my letter to you of January 4th, I requested that the General Accounting Office look into the information collection effort of the Federal Government as it pertains to coffee and seek to determine in a comprehensive fashion whether this information is sufficient to analyze current supply and demand.

As Chairman of the Subcommittee on Domestic Marketing, Consumer Relations and Nutrition of the Committee on Agriculture, I request that as an integral part of your effort you review other aspects of international and domestic coffee marketing:

1. Interagency mechanisms within the Executive Branch of government to monitor the coffee commodity situation and to formulate and coordinate U.S. policy with regard to coffee and coffee-exporting countries.

2. Review the present international coffee agreement and, to the extent possible, analyze its merits and weaknesses.

3. Review the marketing policies and procedures of the 18 largest suppliers of coffee to the United States, the interrelationship of U.S. processors and the marketing system, and the ramifications of their policies and procedures on domestic coffee prices.

I recognize that this request is broad in nature and will require some time to complete. Also, because of the widespread interest

APPENDIX I

of many Members of Congress, I would suggest that the report should be addressed to the Congress as a whole. During the conduct of the review, I would appreciate periodic briefings by your staff as the circumstances warrant. In addition, I would like a written confirmation that the study, as outlined in my two letters, will begin as soon as possible.

Yours sincerely,

Fred Richmond
Chairman
Subcommittee on Domestic Marketing,
Consumer Relations and Nutrition

FR:dsm

BRAZIL

Brazil has experienced rapid economic expansion in the last 10 years. From 1968 through 1974 the gross domestic product grew at an average annual rate of 10 percent with per capita growth at 7 percent. By 1974 average per capita gross domestic product was $760 and the growth in GDP has continued, increasing in 1976 by 8.8 percent or $138 billion. Growth in the industrial sector was 11 percent and in the agricultural sector 4.2 percent, with total farm output accounting for 15 percent of total gross domestic product.

In 1976 there was a 16-percent increase in exports and total export earnings in 1977 are estimated at $12 billion to $13 billion. About 15.6 percent of Brazil's exportable production goes to the United States. Agricultural exports reached a record high of $6.1 billion in 1976 and may reach $8 billion in 1977. Major export commodities include coffee, soybeans, cocoa, sugar, corn, tobacco, and beef.

The benefits of the increased exports have been largely offset by an inflation rate of about 46 percent in 1976, due mainly to the increased price of petroleum.

Brazil is the world's largest coffee producer and supplies about one-third of total coffee exports. However, before the 1975 frost, the economic importance of coffee to Brazil had been declining both domestically and internationally. In the late 1950s half of Brazil's foreign exchange was received from coffee, but until the frost, the percentage had been decreasing as other crops became more important. However, since the frost and the resulting increase in price, coffee is again Brazil's leading foreign exchange earner as well as its largest export. In 1976 coffee exports had a value of $2.3 billion, and 1977 earnings are estimated at $3 billion to $4 billion.

COFFEE PRODUCTION AND MARKETING SYSTEM

The Brazilian Coffee Institute (IBC), an autonomous agency within the Ministry of Trade and Industry, is involved in all aspects of coffee marketing and production. It is responsible for implementing coffee policies set by the National Monetary Council and provides financial assistance to all elements within the coffee marketing system as well as other services to producers. The IBC participates also in the marketing system, buying and selling coffee for domestic and international purposes.

APPENDIX II

Coffee production

As of 1976 IBC estimated that there were about 300,000 coffee producers in Brazil with about 2.4 million hectares in production. Less than 100 producers have farms of more than 10,000 trees or about 10 hectares.

Producers receiving assistance from IBC must comply with certain IBC requirements for (1) planting a new high yielding variety of coffee trees, (2) planting trees in a specific manner, and (3) using fertilizer in a prescribed manner.

In 1975 the average yield per hectare was 8.2 bags of dried green beans. Total yield for all producers has varied substantially during the last 5 years, attributable to new planting techniques and weather conditions.

Assistance to producers

The Bank of Brazil advances low-interest-rate loans to producers through an agricultural credit program sponsored by the IBC. IBC guarantees the loans which are provided for improving production yields and purchasing fertilizer and pesticides.

The program involves extending credit to producers amounting to 80 percent of the minimum support price. For example, if the minimum support price was 1200 cruzeiros 1/ per bag, IBC would guarantee financing of up to 1,000 cruzeiros. The loans are obtained at interest rates of 8 percent, as compared to commercial rates of 36 to 50 percent, and are repayable within 60 to 90 days.

Cost of production

A producer's cost includes labor, fertilizer, pesticides, financing for new planting and machinery, and taxes on production and farmland. Labor represents about 50 percent of the costs, and fertilizers and chemicals represent the next highest costs.

According to IBC, the cost of producing a 60-kilo bag of coffee has risen substantially over recent years from $39.02 in 1975-76 to $52.91 in 1976-77 and to $82.16 in 1977-78.

1/ At July 26, 1977, 13.36 cruzeiros equalled $1.00.

Cooperatives and millers

There are about 72 producer cooperatives throughout Brazil's coffee growing region which receive members' coffee at warehouses, where it is stored at members expense. The cooperatives have responsibility to clean, grade, store, bag, and sell coffee for their members. They also provide advice and information on market conditions and trends, assistance on obtaining IBC financing, and pesticides and fertilizers at wholesale prices.

The cooperatives' exporting capacity is estimated at 2.5 million bags and they sell members' coffee to brokers and exporters or export directly.

There are 350 millers in Brazil who perform services similar to the cooperatives: cleaning, sorting, grading, storing, and selling coffee. They purchase coffee from producers or may sell their services to producers. Millers sell coffee to domestic roasters, the soluble industry, and exporters. They may also deliver coffee to brokers who will arrange sales on a commission basis.

The use of millers is declining as more producers are taking advantage of the services offered by cooperatives. From 1970 to 1975 the number of cooperatives increased by 12 percent, attributable to IBC encouraging producers to use cooperatives as a means of reducing costs.

IBC participation in marketing

IBC buys coffee during periods of surplus crops and low world market prices, it last purchased coffee in 1974. IBC maintains a domestic warehousing network with capacity of 58 million bags of coffee, and has warehouses in Hong Kong, Trieste, Hamburg, and Beirut.

Coffee purchased by IBC is sold both for domestic use and export. Generally, IBC coffee is sold to domestic roasters and to the soluble coffee industry at subsidized prices and recently has been sold at about 50 percent of the current export prices.

As an incentive to importers, IBC initially offers coffee at reduced prices. For every two bags at the regular market price, IBC would provide from its overseas stock one bag at a price slightly lower than the current market price.

Commercial exporters

There are about 85 exporters which represent a 72-percent decrease since 1970. Exporters sell coffee to foreign markets throughout the world.

Exporters purchase 70 to 90 percent of their coffee from brokers and the remainder from producers, millers, and cooperatives and store it from 30 to 90 days in their own storage facilities or in public or private warehouses.

Financial assistance available to exporters

The Bank of Brazil provides low-cost credit for warehousing and cash advances for export sales. Loans for warehousing are extended against the coffee in storage at interest rates 10- to 12-percent below regular commercial rates. Cash advances for export sales are extended on confirmation of the sale even though coffee has not been shipped.

Exporters' costs

Exporters' operational costs have increased substantially since 1975, chiefly because of the increase in the internal price of a bag of coffee, which has risen 900 percent since April 1975 to $300. Transportation, warehousing, blending, and bag cost add up to about $2 per 60-kilo bag.

Coffee destined for export is assessed a tax by IBC. The export tax or contribution quota provides revenues for the Coffee Fund Account at the Central Bank. These revenues are used only for programs and activities which benefit the coffee industry. The tax increased from $21 a bag before the frost to $134 in April 1977. Therefore, in April 1977 the cost to export a 60-kilo bag of coffee was $436 ($300 paid to producer plus $2 transportation, processing, and bag cost plus $134 export tax). The per pound cost to the exporter was about $3.29 at the time coffee was selling at $3.69 ex-dock New York.

In addition, Brazil has a minimum price at which exporters can register sales, and at April 1977 the minimum registration price was $3.20 a bag.

APPENDIX III

COLOMBIA

Colombia's predominantly agricultural economy is one of Latin America's strongest in terms of growth, with a per capita gross domestic product of $586 in 1976. Its real gross domestic product increased by about 7 percent in 1976, up from about 5 percent in 1975. The growth of the agricultural sector has averaged about 5 percent annually from 1970 through 1976. Colombia's main export commodities are coffee, sugar, cotton, and rice.

Colombia has cultivated and exported coffee since the early 19th century, but only during the early part of this century has coffee become economically important. Today Colombia ranks as the second largest coffee producer in the world and coffee production and marketing is its major economic activity. Coffee constitutes over 25 percent of total agriculture production and nearly 10 percent of the gross domestic product. In 1976, 7.7 million bags valued at almost $1 billion were exported, representing 53 percent of total export earnings. In recent years coffee has accounted for 9 percent of total government revenues and the industry is the main source of employment for about 10 percent of the population, about 2 million people.

Colombian coffees are considered by many to be the richest and mildest grown. The best known Colombians are medellins.

COFFEE PRODUCTION AND MARKETING SYSTEM

The Colombian National Federation of Coffee Growers is a private, nonprofit guild association founded to promote and protect the cultivation of coffee in Colombia and to develop markets abroad. Its board of directors consists of ministers of government agencies and representatives from the coffee industry. The Federation, while a spokesman for coffee interests, is an agent of government policy. It is involved in all aspects of coffee production and marketing and (1) assists coffee growers through public works, technical assistance, and cooperative purchasing, (2) stabilizes internal coffee prices by guaranteeing a minimum price for growers and managing coffee stocks through the National Coffee Fund, (3) promotes the consumption of coffee, and (4) administers the system of export and retention taxes and the required currency repatriation on exports.

APPENDIX III

Part of the revenues from the retention tax are used by the Federation for future development projects and activities and the remainder are held in the Central Bank for investments in current social development activities in the coffee growing areas. The Federation provides funds to build roads, bridges, and schools; to operate rural health posts; and to carry out projects to extend rural electrification and potable water.

By the end of 1977, it is expected that the amount in the Central Bank being held for future development will be $800 million.

Coffee production

The area available for coffee production in Colombia totals about 4.8 million hectares with about 1.1 million under production by about 302,000 producers. Farms range in size from 1 to over 100 hectares, and about 61 percent consist of 3 to 11 hectares.

Current yields are about 9 bags a hectare, but modified planting techniques with new varieties of trees are expected to improve yield considerably.

The 1969, 1970, and 1972 freezes in Brazil indicated to the Federation that the pattern of world coffee production was going to change and that Brazil's share of the world market was going to decrease, so it adopted a policy to increase its share by increasing production to 10 million bags by the 1978-79 crop year. To do so, the Federation emphasized increased productivity; currently, some producers are getting about 50 bags per hectare. To bring about increased productivity, the Federation is making available to producers from 1977 through 1979 about 2.5 billion pesos 1/ in low-interest-rate loans. The loans provide for growing and processing (drying, dehulling, classifying) coffee, new plantings of a higher yielding variety of trees, and purchasing fertilizer and pesticides. The producers are given credit at interest rates of about 12 to 18 percent compared with commercial rates of about 27 to 30 percent.

1/In April 1977, 36.5 pesos were equal to one dollar.

Marketing

The Federation buys coffee directly from cooperatives and intermediaries. For the 1974-75 crop year it purchased about 70 percent of the total coffee produced, most of it from cooperatives. Coffee purchased by the Federation directly is sold to domestic roasters, buyers in Europe and Japan, and exporters. The Federation does not usually sell directly to the United States.

The Federation guarantees growers a minimum price for coffee. In April 1977 the support price was $136 per 70 kilos. The internal price is left to fluctuate in response to supply and demand as long as it remains above the minimum price. When prices drop below that level, the Federation buys all coffee offered at the minimum price and stores it for sale in times of higher prices. At the time of the 1975 frost, Federation stocks were about 3.2 million bags. Stock levels in early 1977 were estimated at about 1 million bags and were to be reduced to about 800,000 bags, which is the minimum level that must be maintained to keep the export pipeline open.

Cooperatives

There are 44 producer cooperatives in Colombia which buy most of the coffee production. The coffee is usually purchased within 8 days after the harvest and moved to warehouses. Cooperatives buy coffee only from member producers for their account or for the account of the Federation under the support price program. The producer pays transportation costs to the storage facilities which, for a typical large cooperative, has a storage capacity of a million kilos.

Generally, a cooperative sells to the Federation except when prices paid by exporters are higher than the support price, and it sells directly to exporters. A cooperative receives a commission of 9 pesos per 11.5 kilos when buying coffee for the Federation, and the Federation pays the cooperatives' operating costs. When selling to an exporter, cooperatives receive 2 percent of the selling price.

Intermediaries

In Colombia there are about 23 intermediaries--private operators who buy, grade according to quality, and sell coffee. Intermediaries provide growers with certain services, such as loans for food and supplies and other personal assistance.

APPENDIX III

An intermediary purchases coffee from all producers, including those who belong to cooperatives. Most purchases are from producers who have traditionally sold their coffee to the intermediary and the producer pays transportation costs to the intermediary's warehouse where the coffee is stored until sold.

Sales are normally made to exporters; however during periods of low prices, oversupply, or when exporters are not buying, sales are made to the Federation. The intermediary pays the transportation costs to the purchaser's storage facilities.

Exporters

The approximately 43 exporters in Colombia buy most of their coffee from intermediaries, although some is purchased from large producer cooperatives. The exporter mills and classifies the coffee according to quality and stores it usually for no more than a month. Exporters sell green coffee primarily in the U.S. and European markets.

Before the exporter can ship a 70-kilo bag of coffee, it must pay export and retention taxes, which in April 1977 amounted to about 66 percent of the export price, and repatriate foreign currency (reintegro) to the government, for which it receives pesos and notes in exchange. In April 1977 the reintegro was $477 per 70-kilo bag. This is in effect a minimum export price. The export tax is based on 17 percent of the reintegro. The retention tax is paid partly in coffee and partly in cash.

To export a 70-kilo bag of coffee and pay the coffee portion of the retention tax, the importer must purchase 130 kilos of unclassified coffee, which when processed yields 100 kilos of export coffee and 6.5 kilos of lower grade coffee, resulting in a 23.5-kilo loss. The lower grade coffee and 30 kilos of the export coffee are remitted to fulfill the coffee portion of the retention tax, leaving 70 kilos for export. The level of taxes and the percentage that may be paid in cash change frequently in response to market and monetary conditions.

On the basis of information furnished by the Federation, the cost to export a 70-kilo bag of coffee in April 1977 was $460 ($136 paid to producer plus $4 milling, transportation, packaging, and port costs, plus $81 in export and $239 in retention taxes). The price received by the exporter was $485, providing an apparent profit of $25 a bag.

Producers receive about 28 percent of the export price. This is a major incentive for illegal exporting, and an estimated one million bags of coffee, representing about 13 percent of total production, left Colombia as contraband during 1976.

EL SALVADOR

The economy of El Salvador is primarily agricultural. Major products are coffee, cotton, sugar, corn, sorghum, and meat. Agriculture uses about 67 percent of the land and furnishes employment for about 47 percent of the population. The gross domestic product, increasing by about 5 percent annually since 1970, was $2 billion in 1976, and could increase by 7 percent in 1977.

El Salvador is the fifth largest coffee producer in the world, and coffee represents 41 percent of its total value of exports. El Salvador consistently had a trade deficit until 1976 when it had a surplus of $65 million due mainly to the increase in world coffee prices. Between 1975 and 1976, coffee revenues increased from $169 million to $400 million, and for 1977 they are projected at $740 million. In 1976 revenues from export taxes on coffee represented 23 percent of all revenue received by the government.

For the 1976-77 marketing year coffee production is estimated at 3 million bags, an increase of about 1 million bags over the poor 1974-75 crop. In 1976 El Salvador exported 2,203,000 bags of coffee.

COFFEE PRODUCTION AND MARKETING SYSTEM

The government's National Coffee Department establishes coffee marketing policy, rules, and regulations. The rules and regulations promulgated by the Department are implemented by the El Salvador Coffee Company, which was established after World War II as a private institution to serve the coffee industry. The majority of any profits are put into a fund used to stabilize coffee prices. All segments of the coffee industry are represented on the Company's Board of Directors.

Production

In El Salvador coffee is grown on almost all of the land which is suitable for coffee production. Most of the coffee is grown at altitudes between 500 meters and 1,000 meters, where the terrain is mountainous and is not suited for other agricultural crops. Approximately 40,800 coffee growers have over 147,000 hectares of land under cultivation. More than 67 percent of production is obtained from 1,564 farms averaging 63 hectares. The remaining 39,215 farms average less than 1 hectare of land.

El Salvador coffee growers are described as being very efficient. The average number of trees per hectare is about 1,400 with some plantations exceeding 8,500 trees per hectare. This high density is achieved with a locally developed dwarf tree variety known as pacas. The trees are grown without shade and about 850 pounds of fertilizer per hectare is applied each season. These experiments have yielded about 48 bags per hectare but the national production average in 1976-77 was 20 bags per hectare.

There is no formal program to encourage increased coffee production. We were told that most land suitable for growing coffee is currently in production, and the remainder, estimated at about 5,000 hectares, is being planted "right to the last square inch."

Coffee Producers Association

The El Salvador Coffee Producers Association exclusively represents the interest of about 3,000 growers large and small. It rigorously watches the coffee industry to make sure that producer interests are taken into account in such areas as pricing and availability of adequate financing. The Association is represented on the Boards of Directors of the National Coffee Company and the National Mortgage Bank.

Coffee rust

The greatest concern of producers is the disease known as coffee rust (roya). The fungus, which attacks the leaves, is now in Nicaragua. Producers are organizing to fight this potential threat and have begun to stockpile fungicides, construct water storage facilities with credit assistance provided by the Central Bank, and train personnel in combating the fungus. Should the rust appear in El Salvador, spraying would be mandatory. The cost of the control program is estimated at $284 per hectare. Even at this cost, it is considered more economical to fight the rust than to replace the existing trees with rust resistant trees. The president of the producers association estimated that coffee production would drop by about 30 to 35 percent if the rust spreads to El Salvador, despite efforts to control the problem.

Assistance to producers

Private exporters and the El Salvador Coffee Company provide financing to the growers. Short-term loans are granted and generally repaid when the coffee is picked and sold. The exporters also arrange transportation from the

farm to the processing plant and supply the necessary bags. As a result many growers sell to the same exporters each year.

Processors and exporters

The growers have several options available when selling their coffee. They can sell to private processors, private exporters, the El Salvador Coffee Company, or they can process and export their own coffee.

Processors own and operate 133 plants capable of processing coffee only to the parchment state. Once this initial stage is complete, coffee can be stored usually not more than one year, according to one exporter. Exporters own and operate 85 plants capable of processing coffee to the parchment and green bean state.

Exporters, including the El Salvador Coffee Company, are able to export from 5,000 to 500,000 70-kilo bags in one season. Although 70-kilo bags are shipped; for reporting purposes, weights are converted to standard 60-kilo bags.

The exporters sell to their traditional customers first. Since the 1974-75 coffee year, most of the export coffee has gone to European markets, but the United States still imports about 35 percent of it.

The El Salvador Coffee Company buys, processes, stores, and exports coffee. It also operates one roasting plant to supply the domestic market. Coffee growing regions are served by a network of collection stations where growers can bring their coffee for transportation to the main processing plants.

The Coffee Company competes openly with private exporters to acquire coffee cherry or parchment from a seller and publishes daily quotes in the local newspapers. The prices offered are usually based on the world price. Private exporters occasionally complain that the price is too high as the quotes do not always follow the "downturns" of the world price. However, the holder of coffee cherry or parchment can sell below the daily price offered by the company.

As an exporter, the company's share of the export business increased from 11 percent in coffee year 1974-75 to 40 percent in 1976-77. The increase is due to the exporting of stocks which the company had accumulated since 1974.

APPENDIX IV

Exporters are required to submit to the company a copy of each export sales contract along with green bean samples for quality testing. The company has the option of purchasing the coffee from the exporter if it believes the agreed sale price is not consistent with the current world price.

In 1972 El Salvador began to withhold 20 percent of its production. This restriction was in effect until December 9, 1975, when the National Coffee Department released the entire 1975-76 crop for export. An estimated 1.26 million bags were in stock at that time.

The reason given for increasing exports and eliminating stocks was that October 1, 1976, was the beginning of a 2-year period which can be used as the base period if new world export quotas are established under the ICA, and El Salvador wants to increase its percentage of the world market. The director stated that his goal was to have a zero balance of stock on hand for the September 30 ICO counts in 1976 and 1977.

Private exporters were prohibited from exporting coffee from October 1 to December 31, 1976, when the company was selling off its stocks. However, according to the director, the current policy is to export all available coffee. The goal for 1976-77 was to export 3.3 million bags.

The government requires also that some coffee be retained for the domestic market. To export low grade coffee, the exporter must deliver one bag to the company for every four bags exported. About 200,000 bags of low grade coffee are processed each year. While this quota system supplies about 40,000 bags to the domestic market, domestic consumption is projected at about 175,000 bags.

Cost of coffee

The cost to produce coffee varies among growers. The Ministry of Agriculture estimates of coffee production costs ranged from 32 cents to 39 cents per pound of green coffee, depending on efficiency, for the 1976-77 crop year.

In March 1977 the average amount received by producers was about $1.82 per pound for a profit of between $1.43 to $1.50 per pound. The cost of processing the coffee to the green bean stage was about 9 cents per pound.

El Salvador taxes export coffee on the basis of sales price computed on a sliding scale.

Price per pound	Tax rate
Up to 30 cents	10 percent
31 to 35 cents	3 cents plus 20 percent on amount over 30 cents
36 to 40 cents	4 cents plus 25 percent on amount over 35 cents
41 cents and above	5.25 cents plus 30 percent on amount over 40 cents

The proceeds from the tax, based on a tax established in 1949, go to the general treasury.

On the basis of a $3 per pound sales price at the beginning of March 1977, the cost to exporters would have been $2.74 ($1.82 paid to producer plus $0.09 for processing and $0.83 for export tax).

Exporters pay the cost of transportation, so their profit would have been somewhat less than the indicated $0.26 per pound.

APPENDIX V

IVORY COAST

Ivory Coast's predominantly agricultural economy is one of Africa's most prosperous, with a current per capita income of over $500. From 1970 through 1975 the gross domestic product grew at an average rate of 6.2 percent in constant prices. Agriculture uses about 52 percent of the land, employs nearly 85 percent of the population, and accounted for 26 to 28 percent of the $3.7 billion gross domestic product in 1975. Major products are coffee, cocoa, timber, and tropical fruits. Ivory Coast has an export-led economy and depends on its agricultural products to provide the foreign exchange for imports from the United States, France, and other European countries.

Ivory Coast is Africa's largest coffee producer and the third largest producer in the world ranking behind Brazil and Colombia. In 1976 coffee accounted for about 9 percent of the country's gross domestic product, 26 percent of total exports, and 24 percent of total foreign exchange earnings. An estimated 35 percent of the population is engaged in coffee production, marketing, and processing.

In the early 1970s Ivory Coast coffee exports produced an average of $100 million a year in foreign exchange. Since the Brazilian frost of July 1975, however, coffee earnings have risen dramatically. Total production for crop year 1976-77 was 5.1 million bags. As a result, Ivory Coast estimates its foreign exchange earnings at over $1 billion.

Ivory Coast produces almost exclusively Robusta coffee and is the world's largest producer of this variety. Robusta is better suited to the growing conditions in the Ivory Coast but has less flavor and aroma and contains much more caffeine than the milder Arabica grown in South and Central America. Its main use, therefore, is for blending with the higher quality coffees into soluble coffee. A small percentage of Ivory Coast production is used to make instant coffee at a processing plant in Abidjan.

COFFEE PRODUCTION AND MARKETING SYSTEM

The Ivory Coast Government maintains close involvement in all aspects of the production and marketing of Ivorian coffee through an agricultural commodity price stabilization and support fund, the Caisse de Stabilisation des Prix (Caisse).

The Caisse, a state trading corporation established in its present form in 1964, fixes the price to be paid to the

coffee grower and the profit margins allowed the purchasing agents and exporters. It also establishes the minimum export price and realizes any losses or gains that result from world market price levels.

Under Caisse regulations, 60 percent of the Caisse profits must be returned to Caisse reserves where they are used to stabilize the prices of other commodities, and 30 percent go toward economic and social development projects primarily designed to develop Ivory Coast's infrastructure. These projects include road construction, port facilities, and technical assistance to growers. The remaining 10 percent of the profit is used to make small agricultural development loans to growers. The loans can be used to buy fertilizer, pesticides, inexpensive equipment, and tools.

Coffee production

Most Ivory Coast coffee is grown on about 350,000 farms of 5 to 12 acres. Only an estimated 1 to 2 percent of all coffee is grown on large plantations.

Coffee trees are sometimes intermingled with cocoa trees and are often neglected in favor of the food crops. The yield of these coffee trees is quite low, estimated at about 300 kilograms of cleaned coffee per hectare (or about 250 pounds an acre). Under ideal plantation cultivation conditions, the Robusta variety of coffee could yield 2.4 metric tons per hectare (or over 2,000 pounds an acre). The yield has increased very little over the years, as cultivation methods continue to be primitive.

Normally production totals about 268,000 metric tons. In the 1973-74 crop year it fell as low as 196,000 metric tons due to bad weather. Because of a lack of rain in January and February 1977, many of the coffee trees did not bloom in April and may not yield coffee this season. Estimates of 1977-78 production are as low as 210,000 metric tons.

After coffee cherries are picked, they are dried and the cherry is removed to expose the bean. This process is typically done in the general area of the farm, and is very labor-intensive. Because of a labor shortage in Ivory Coast, much of this seasonal labor is provided by migrant workers from neighboring Upper Volta and Guinea. The lack of labor to care for the coffee trees and to pick and dehusk the coffee has been a major limitation on the Ivory Coast's ability to expand its coffee production. One exporter estimated that 20,000 metric tons of coffee cherries went unpicked last year because of this labor shortage.

Ivory Coast has one modern plant for dehusking, located in the center of the coffee-growing region near Bouake. During the 1974-75 season, this plant--operated by a quasi-government agency known as SERIC--took in 60,000 metric tons of coffee cherries and produced 32,000 metric tons of coffee beans. This was a little over 10 percent of the country's total coffee production that season. The government plans to build 20 more of these plants, of smaller sizes, capable of processing all the coffee cherries grown. This would eliminate much of the labor problem and allow coffee growers to concentrate on the growing and picking. These plants would also reduce by about 75 percent the number of beans broken during dehusking, which would increase the amount of coffee available for export by about 4,000 metric tons without any increase in production.

Support price

Through the Caisse, the government sets the price to be paid to coffee growers. The Caisse's main objective is to guarantee a stable income to the growers of eight different agricultural commodities, including coffee. By paying growers a minimum support price for their commodities, the Caisse is able to insulate growers from market instabilities and to guarantee an income regardless of the price of their commodities in world markets. The Caisse will limit the price, however, based on the international market price of each commoditiy it controls and on the status of its reserves.

Ivory Coast farmers receive some of the highest prices in Africa for their products and, by developing country standards, enjoy a comfortable living. Their income is increasing slightly, but their purchasing power is merely keeping pace with inflation. Over the past 13 years, the Caisse has doubled the support price from 90 CFA francs 1/ per kilogram to the current 180 CFA francs. Most of the increase occurred in the past 5 years. Since the 1975 frost the price of Ivorian coffee has increased over 400 percent in the international market.

As a result of the pricing system established by the Caisse, limiting the amount of money that can be paid to growers and the amount of profit exporters can make, much coffee leaves the Ivory Coast as contraband to neighboring countries which have no controls over prices and profits. One

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1/ At June 8, 1977, 249.3 CFA francs equalled $1.

source stated that farmers can sell coffee in one neighboring country for 800 CFA francs per kilogram.

Estimates of how much coffee is being smuggled out of the Ivory Coast ranged from 5,000 to 20,000 metric tons during the 1976-77 season.

Production trends

The Ivory Coast Government believes that its long-term economic security depends on stable production of coffee and a greater diversification of its agricultural export base. By increasing prices paid to producers for other commodities and providing other incentives such as free fertilizer, the government can channel grower efforts into the diversified areas it desires.

The increase in coffee production since 1955 occurred because more land was put into coffee production. This is no longer feasible on any large scale. Coffee can only be grown in a few regions of the country below the 8th parallel, and it must compete with other crops in that area. The U.S. Department of Agriculture currently estimates that as much as 1.9 million acres are presently devoted to coffee and that this will expand significantly.

Despite the diversification policy, the current high world price for coffee has caused the government to promote a short-term increase in coffee production primarily through increased yield on existing acreage. Government incentives in the past few years have increased production from 240,000 metric tons to 300,000 metric tons and further advances are possible up to 360,000 metric tons, or 6 million bags. The government would like to improve cultivation methods and increase coffee yields to 1,000 kilograms per hectare.

The government is also involved in coffee production through research being conducted on a new coffee variety called Arabusta that would be hardy and disease-resistant like Robusta, but would be better tasting with less caffeine, like Arabica. Most sources believe it will be 1985 before Arabusta is perfected and produced in marketable quantities of about 5,000 metric tons annually.

Export marketing

Ivorian agricultural products are marketed by exporters serving as brokers on behalf and under close control of the Caisse for a fixed remuneration. At the beginning of each

growing season, the Caisse determines the percentage of production each exporter will be permitted to sell and the fixed per-kilo remuneration exporters will receive for each marketing function they perform.

Most of Ivory Coast's coffee is being marketed by a few large exporters. During the 1976-77 growing year, 5 of the 34 exporters licensed by the Caisse marketed over 50 percent of the 285,000 metric tons exported. Exporters supply most of the marketing services necessary to move the coffee from field to market.

Exporters' agents generally purchase the coffee using money advanced to them by exporters. The exporter pays all transportation costs and is reimbursed by the Caisse upon submission of a transportation invoice. Coffee exporters are reimbursed about $6 million each year for transportation, or approximately 2 cents per kilo.

Until the coffee is in warehouses in Abidjan, exporters must finance the coffee with high interest, unsecured bank loans. Once in the warehouse, the coffee can be refinanced at a lower rate, and the Caisse reimburses the exporter for storage.

The Caisse normally pays approximately $4 million annually to exporters for coffee storage, however, storage costs have been significantly lower during the past year due to the efforts for faster export.

The sale of most Ivorian coffee is arranged through one of the Caisse's three foreign offices in New York, London, or Paris. Sales services performed by the exporter primarily consist of arranging financing and shipping, sorting, rebagging, and preparing sales documents.

The Caisse arranges the sale of approximately 70 percent of the coffee exports and the exporters arrange the remaining 30 percent subject to Caisse approval. Exporters believe, however, that the Caisse is considering increasing the amount of coffee sales it arranges to 90 percent.

Exporters' remuneration

Exporters are remunerated a fixed 2.3 CFA francs for each kilogram of coffee they export. The Caisse also reimburses the exporters for transportation, storage, shipping, and administrative costs they incur, based either on actual

costs or on standard costs arrived at by the Caisse at the start of each season.

Exporters can sometimes provide the standard cost marketing services for less than the Caisse reimburses them. Their profits depend to a large extent on how efficiently they can provide marketing services, and not on international market conditions.

Caisse profit or loss

The Caisse depends on the price of Ivorian commodities in international markets to cover the fixed grower and exporter payments and all variable costs. Caisse profits or losses are determined by the difference between the world market price for Ivorian coffee paid by importers and the costs of purchasing and marketing the coffee.

For example, using prices and costs in effect during the 1976-77 season, farmers are paid 180 CFA francs for a kilogram of coffee and exporters receive 92 CFA francs per kilogram for costs incurred in bringing the coffee to market, plus their remuneration. Thus, a kilogram of Ivorian coffee ready for export costs the Caisse 272 CFA francs.

The custom duty on coffee is 23 percent of a Caisse-determined base price. Although the rate has not changed in recent years, the base has increased substantially since the Brazilian frost. Thus, the actual duty paid on a kilogram of coffee has risen about 80 percent from 32.2 CFA francs in 1974-75 to 57.5 CFA francs in the current season.

COFFEE EXPORT COST

	(per kilo)
Amount paid to producer	$ .767
Warehouse, transportation, and other incountry costs	.082
Customs duty	.240
Port cost and other export fees	.018
Total	$1.107

On March 1, 1977, Ivorian coffee was selling in New York for 1,600 CFA francs a kilogram, so the Caisse's gross profit on a sale on that date was more than 1,300 CFA francs, or $5.24 per kilo. Overseas shipping and insurance costs, and incountry transportation and storage costs would have to be deducted from this to determine the net profit.

MEXICO

In the 30 years between 1940 and 1970, Mexico's gross domestic product achieved an average annual growth rate of 6.4 percent, which permitted per capita real income to almost triple in 30 years. From 1972 to 1975, the annual growth rate dipped slightly to 6.2 percent. In the 5-year period ended December 31, 1975, exports averaged 4 percent of the gross domestic product and in 1975 amounted to $2.9 billion.

Mexico's mountainous terrain and the relative scarcity of water limit arable land to an estimated 79 million acres, or 16 percent of the total. Agriculture, livestock raising, forestry, and fishing employs 40 percent of the labor force. Major agriculture products include corn, cotton, wheat, coffee, sugar, beans, and rice. In 1975 agriculture accounted for 7.1 percent of total gross domestic product.

Coffee is now Mexico's leading agricultural export commodity and is second only to petroleum as an export earner. Favorable weather conditions increased the 1975-76 coffee output to a record 4.2 million bags. Exports were also higher at 2.8 million bags, 12 percent above the calendar 1975 total of 1.662 million bags. Export prices were much higher in 1976 and the value of coffee exports totaled $343 million, compared with $180 million in calendar year 1975. About 70 percent was exported to the United States. In 1976 Mexico ranked sixth among coffee exporting countries, with a 3.9 percent share of the world market.

COFFEE PRODUCTION AND MARKETING

Production and marketing of coffee in Mexico involves private growers, processors, exporters, and the Mexican Coffee Institute (INMECAFE), which was established in 1958 to help Mexico improve its position in the export markets. It is a quasi-government entity under the department of commerce and its functions have expanded to include technical assistance and marketing. Its operating budget comes from revenues from coffee export taxes. INMECAFE's Chairman is the secretary of agriculture, and the departments of the treasury and foreign affairs, representatives of the coffee industry are on the board of directors.

INMECAFE is involved in all aspects of production and marketing and its activity includes

--setting export quotas,

--distributing export licenses and permits,

--guaranteeing a minimum price to the producer in times of coffee surplus,

--testing and determining the quality of coffee,

--regulating exporters, and

--coordinating joint sales involving export by INMECAFE and private exporters.

Production

There are 97,716 coffee growers in Mexico with a total of 356,253 hectares of land under cultivation. Farms smaller than 4 hectares grow 97 percent of the coffee.

Historically, Mexico has had relatively low production yields, but they are increasing. The government is planning to spend about $200 million over the next 6 years to achieve a production goal of 7 million bags in 1983-84 without placing additional acreage into production. INMECAFE has implemented a formal program providing 171 technicians to work with the growers on better production techniques, and has developed new tree varieties capable of producing almost five times the yield of the most commonly used variety. The seeds of the new varieties are available to growers at no cost.

Processing

Coffee growers have access to 1,525 wet and 335 dry processing plants throughout the coffee growing areas. We were informed that no grower is more than 6 miles from the nearest plant. Most wet processing plants, which process to the parchment stage, are owned by processors, exporters, or INMECAFE. Over 70,000 small producers have formed cooperatives capable of processing coffee to the parchment stage. Once the wet process is completed, the parchment can be stored up to 1 year before being sold to an exporter or to INMECAFE for dry processing to the green bean stage. Exporters and INMECAFE own and operate all dry processing plants.

In early 1977 the price exporters paid producers was about $138 for the equivalent of 100 pounds of green coffee. INMECAFE estimates that production costs are about $31 for 100 pounds.

APPENDIX VI

Open competition exists between the exporters and INMECAFE. INMECAFE pays a lower price, but provides several benefits not offered by the exporters, such as social security eligibility, fertilizer at reduced prices, free technical advice and improved seeds, payment of state and federal taxes, and loans at low-interest rates.

Exporters also offer loans on an individual basis to their regular suppliers. These loans are usually at the market rate of 18 percent, compared with loans offered by INMECAFE at 10 percent.

During the period when exporters were paying producers between $133.63 and $138.08 for 100 pounds, INMECAFE was paying $111.36.

Export marketing

INMECAFE, private exporters, and some producers export coffee. In 1976-77 INMECAFE had 15 percent of the export market, private exporters 75 percent, and producers 10 percent. INMECAFE's percentage has dropped in the last few years because of the higher prices paid by private exporters and because government financing available to INMECAFE did not keep pace with the rising price of coffee.

Exporters must have licenses and be registered with the Mexican Department of Commerce and INMECAFE. There are about 800 registered exporters, of which 256 were active in coffee year 1976-77.

INMECAFE has established export quota requirements to insure that coffee will be available to the domestic market. Every 3 months one representative each from INMECAFE, the producers, and the exporters counts export stock in warehouses, from which quarterly quotas are established.

INMECAFE requires each exporter to physically deliver one bag of coffee for domestic use for each two bags to be exported. Domestic consumption is estimated at about 1.2 million bags annually. At most, domestic coffee includes about 120,000 bags of export grade coffee.

If test results show that the coffee meets export standards and when coffee for domestic use has been received, INMECAFE issues an export permit for each sales contract presented by the exporter.

APPENDIX VI

The Government of Mexico receives revenue from the sale of exported coffee through its export tax. This tax has been increased from $12.00 per 60-kilo bag in 1972 to $21.60 in 1975, $58.60 in 1976, and $136.00 as of January 1977.

As the tax is a significant source of revenue, the government is concerned about the export of contraband coffee. It was reported that about 100,000 bags were smuggled out of the country in March 1977, avoiding estimated export taxes of $10 million. An official at the Mexican department of commerce told us that Mexican customs officials are currently working with U.S customs officials to design procedures for dealing with contraband.

On the basis of information furnished by INMECAFE, the cost of exporting 100 pounds of green coffee during early 1977 was $292 ($138 paid to producers plus $18 processing costs plus $136 in export taxes).

At this time Mexican coffee was selling at $315 per 100 pounds on the world market, for an apparent profit of $23.

APPENDIX VII

PRINCIPAL OFFICIALS RESPONSIBLE FOR ADMINISTERING ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of Office			
	From		To	
DEPARTMENT OF THE TREASURY				
SECRETARY OF THE TREASURY:				
W. Michael Blumenthal	Jan.	1977	Present	
William E. Simon	May	1974	Jan.	1977
DEPARTMENT OF STATE				
SECRETARY OF STATE:				
Cyrus R. Vance	Jan.	1977	Present	
Henry A. Kissinger	Sept.	1973	Jan.	1977
DEPARTMENT OF COMMERCE				
SECRETARY OF COMMERCE:				
Juanita M. Kreps	Jan.	1977	Present	
Rogers C. B. Morton	May	1975	Jan.	1977
DEPARTMENT OF AGRICULTURE				
SECRETARY OF AGRICULTURE:				
Bob Bergland	Jan.	1977	Present	
John A. Knebel (Acting)	Oct.	1976	Jan.	1977
Earl L. Butz	Dec.	1971	Oct.	1976

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