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# THE YUGOSLAVIAN AGRICULTURAL ECONOMY

## STRUCTURE, POLICY AND INTERNATIONAL TRADE

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The Yugoslavian Agricultural Economy:  
Structure, Policy, and International Trade<sup>1/</sup>

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Introduction

The organization of the Yugoslav economy is unique. Neither capitalistic--the concept of private capital is irrelevant--nor communistic--centrally controlled socialism is its antithesis--it can best be described as a labor-managed market economy. It is both politically and economically non-aligned: its economic organization does not follow the economic models of either western or eastern nations. There is no textbook model to explain the Yugoslav economic system. Rather, it is uniquely Yugoslavian, or perhaps more accurately, a uniquely Yugoslavian interpretation of socialist economic philosophy.

Yugoslav political nonalignment began to emerge when this country was expelled from the Soviet-dominated Cominform in 1948. The evolution of its unique economic system began a few years later when the "shock wave" of its excommunication from the Soviet Bloc passed, as Yugoslav communists began to question the Soviet economic model and to restudy--and reinterpret--the writings of the classic socialistic thinkers, Marx and Engels.

This report examines the current status of the evolving Yugoslav economy as it relates to the agricultural sector. That economic

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This country report is one of a series being developed following a USDA-sponsored Market Policy Review in southern Europe and the mideast in October-November, 1977. Members of the review team in addition to the author were Fred Woods; SEA-USDA, Martin Christensen; University of Minnesota, Carl Farler; University of Arkansas, and George Campbell; University of Arizona.

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evolution represents a dedication to the Yugoslav concept of independence and is a result of a strong desire to make their system work. Also, this report examines implications of the Yugoslav economic system for future agricultural trade between that country and the U.S. If it also creates the impression that there are potentially valuable lessons to be learned from the Yugoslavs about organizing an agricultural economy, such is not without intent.

#### Evolution of The Yugoslav Nation

What is now Yugoslavia was split into two general zones with the division of the Roman Empire in 395 A.D. The northern and western parts, largely under Frankish and Byzantine rule, aligned with Western Europe and eventually came under Austrian rule during the Ottoman Empire. The south and east came under Turkish rule. Economic development in this part stagnated while the northwestern sections took part in the economic, cultural and social development of Western Europe. With the weakening of the Turkish Empire in the eighteenth century, various parts of southern and eastern Yugoslavia gained increased independence. These later combined with Slovenia and Croatia from the Austro-Hungarian Empire to form the country's modern boundaries.

Yugoslavia was created in 1918 among people of diverse backgrounds when the Austro-Hungarian Empire was dissolved at the end of the first world war. The diverse backgrounds of the people of this country are of keen importance to its development and structure. In fact, the first name for the new country, the Kingdom of the Serbs, Croats, and Slovenes, highlights the divisions that were caused by sharply different cultural, religious and economic traditions.

The diversity of backgrounds has resulted in the characterization of the country as a federation of six constituent republics, five nations,

four languages, three religious, two alphabets and one political party. It has also been characterized by sharp political differences between ethnic groups which prevented any lasting political stability until agreement between the Serbs and the Croats emerged in 1939. German-Italian forces invaded the country in April 1941, and the subsequent events of the second world war led to the emergence, for the first time, of a truly Yugoslav national feeling.

Yugoslavia, bordered by the Adriatic Sea, Italy, Austria, Hungary, Romania, Bulgaria, Greece, and Albania, is about the size of Wyoming (63.2 million acres) and has a population of about 22 million persons. It consists of six republics--Serbia, Croatia, Slovenia, Bosnia and Herzegovina, Macedonia, and Montenegro--and two autonomous provinces within Serbia, Vajvodina and Kosovo. The people of each republic and autonomous province have strong and unique national heritages.

Politically, each republic and autonomous province maintains a high degree of control over both internal and external affairs (6). Local sovereignty extends to the executive branch of the Federal government where the Presidency is composed of one elected representative of each province and autonomous republic, plus the president of the League of Communists of Yugoslavia (LCY). Josip Broz-Tito holds the lifetime position of President of the Republic and head of the Presidency as an exception to the constitution, "in view of his historical merits" (3). Thus, the transition of power in the Federal government upon the eventual passing of President Tito is already well in place in a manner which ensures strong republic and provincial autonomy.

The Yugoslav economy is endowed with considerable natural resources, including timber, water, large expanses of arable land, and numerous ferrous, nonferrous, and precious metals, plus an industrious population.

Since WWII, the economy has steadily expanded. Per capita income, growing at an annual rate of about 5 percent, exceeds \$1700 per annum. Yugoslavs now enjoy a considerably higher standard of consumer welfare than other socialistic states, as well as a notably greater degree of personal freedom (8).

The industrial sector of the economy has expanded twelvefold in the post war period, and now accounts for over 57 percent of total employment (Table 1). Major industries include electric power, steel, nonferrous metals, food processing, chemicals, machinery, and textiles. In recent years, production of durable consumer goods has increased appreciably. Tourism has become a major industry as the Mediterranean climate of the Adriatic Coast and the unparalleled scenic beauty of the Dinaric Alps have combined with the abolition of travel restrictions to attract several million foreign visitors each year. Yugoslavia also maintains an extensive transportation system, including the Danube River, which constitutes the most important land routes from Western Europe to the Aegean Sea and Turkish Straits and the most important water route to the Black Sea.

TABLE 1: YUGOSLAV POPULATION AND WORK FORCE

Year	Total Population (000 omitted)	Total Work Force (000 omitted)	Percent Employed In Agriculture
1965	19,434	8,734	56.8
1970	20,371	9,175	49.8
1975	21,352	9,792	43.5
1976	21,520	9,919	42.3

Source: Food and Agriculture Organization of The United Nations, Production Yearbook, various issues.

### Agriculture

Agriculture accounts for about 45 percent of the Yugoslav labor force (Table 1) and utilizes approximately 60 percent of the total land area. Much of the remaining land area is too mountainous for farming (5). About 70 percent of the agricultural land is arable (25 million acres), roughly the same amount of arable land as in Illinois. The climate is generally moderate with seasonal variations, comparable to the U.S. east coast between Virginia and Rhode Island. Average rainfall in the major agricultural areas is comparable to the U.S. midwest, although somewhat less predictable. Prior to the late 1950's severe droughts struck the country on the average of once every four years (8).

In the past 20 years, considerable progress has been achieved in making Yugoslavian agriculture less vulnerable to drought. Efforts have included the development of an extensive canal system to aid in flood control, irrigation and drainage, the development of higher yielding and more drought resistant plant varieties, and the increased availability of chemical fertilizers (5). As a result of these and related measures, crop production has expanded appreciably. Since the early 1960's, production of sugarbeets has more than doubled, corn output has increased by more than 75 percent, and wheat and tobacco production has grown 50 percent or more (Table 2).

The country is self sufficient in the production of wheat and vegetable oil while producing exportable surpluses of tobacco, potatoes, prunes and miscellaneous other fruits and vegetables, and hops (Table 4, p. 9). Production of corn and other feed grains varies from modest exportable surpluses to supplies somewhat short of domestic needs depending upon

TABLE 2: YUGOSLAV PRODUCTION OF SELECTED AGRICULTURAL CROPS

Year	Commodity				
	Corn	Wheat	Potatoes	Sugarbeets	Tobacco
	1000 Metric Tons				
1961-65	5,618	3,599	2,711	2,344	44
1970	6,930	3,790	2,960	2,950	
1972	7,930	4,843	2,406	3,274	62
1974	8,030	6,282	3,127	4,300	59
1975	9,389	4,404	2,394	4,213	70
1976	9,106	5,979	2,690	4,707	74
1977	9,870	5,585	3,034	5,286	65

Source: U.S. Department of Agriculture, Foreign Agriculture Circular, various issues; U.S. Department of Agriculture, The Agricultural Situation in Eastern Europe, Foreign Agricultural Economic Report No. 117; U.S. Department of Agriculture, Eastern Europe Agricultural Situation, various issues; Food and Agriculture Organization of The United Nations, Production Yearbook, various issues.

annual growing conditions, although there are exportable supplies in most years. The major deficiency in crop production is in feed proteins (see Table 4, p.9). Considerable effort is now being made to develop soybean varieties suitable for Yugoslav soil conditions, but little commercial soybean production has yet occurred.

The livestock sector is sizeable, with about 6 million cattle, almost 8 million hogs, and over 8 million sheep. Additionally, there are over 55 million poultry. Development has occurred more rapidly in this sector during the past 15-20 years than in crop production. Since the early 1960's, poultry production has expanded nearly threefold and egg output has increased by about 160 percent. The dairy and swine industries are the most important, and both have more than doubled in size in this period while beef output has nearly kept pace. Annual red meat production totals over 1 million tons, about 60 percent of which is pork (Table 3). Exports of meat and meat products are considerable, averaging 125-175 million dollars annually in recent years.

Farming in the primary areas of arable land, which form a rough oval stretching from near the Austrian border in the northwest to near the Bulgarian border in the southeast, generally utilizes quite modern production technology. Crop mechanization is extensive, land units are large, and confinement livestock production is widespread. In sharp contrast, farming in the mountainous areas where much of the land is nonarable, is notably primitive. Small landholdings, little mechanization, and an aging work force are characteristic. These areas are increasingly beset with social and economic problems as young people emigrate to towns and cities throughout Yugoslavia and Western Europe and as commercial agriculture increasingly concentrates in large-scale



TABLE 3: YUGOSLAV PRODUCTION OF SELECTED LIVESTOCK PRODUCTS

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Year	Beef And Veal <sup>1/</sup>	Pork <sup>1/</sup>	Lamb And Mutton <sup>1/</sup>	Poultry Meat	Cow Milk	Eggs
1000 Metric Tons						
1961-65	188	294	46	71	2,236	77
1970	260	540	50	140	2,740	139
1972	277	561	50	144	2,968	148
1974	328	645	49	181	3,640	184
1975	351	646	56	188	3,802	180
1976	356	608	61	204	3,991	191
1977	346	642	57	211	4,580	200

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<sup>1/</sup>Carcass Weight

Source: U.S. Department of Agriculture, Eastern Europe Agricultural Situation, various issues; U.S. Department of Agriculture, The Agricultural Situation in Eastern Europe, Foreign Agricultural Economic Report No. 117; Food and Agriculture Organization of The United Nations, Production Yearbook, various issues.

TABLE 4. YUGOSLAV FOREIGN TRADE IN SELECTED AGRICULTURAL PRODUCTS

Product Category	1960		1965		1970		1975	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
All Agricultural Products (\$1,000,000)			350.4	302.6	352.1	343.7	769.2	482.1
<u>Crops and Products</u> (1,000 Metric Tons)								
Corn	3.8	513.5	0.7	51.4	2.0	297.5	*	51.8
Wheat	67.9	157.3	1,223.3	0	14.2	*	4.0	7.7
Potatoes	10.2	1.2	25.1	0.3	1.6	70.5	0.1	27.4
Sugar (Raw Eq.)	133.3	92.9	102.4	0	11.0	61.4	119.4	2.3
Oilseed Meal	26.2	2.0	137.9	19.0	196.3	53.8	149.7	0.3
Tobacco		18.5	0.1	23.2	4.5	18.9	6.3	24.9
<u>Livestock Products</u> (1,000 Metric Tons)								
Meat, Fresh	2.1	45.2	1.4	130.2	13.2	73.6	7.5	63.5
Meat, Canned	0.1	21.4	*	38.0	0.4	25.7	0.6	21.4

\*Less than 100 metric tons

Source: Food and Agriculture Organization of The United Nations, Trade Yearbook, various issues.

operations in the more fertile regions.

Economic Structure

The Yugoslav economy has two distinct sectors: private and social. Resources are owned by individuals in private sector, whereas resources in the social sector belong to all of the people of Yugoslavia. A large number of people work in the private sector, but much of the country's economic production is generated in the social sector as it includes virtually all of the industrialized economy. Further, the relative importance of the social sector is steadily expanding as any shift in economic resources from one sector to another can occur only from the private sector to the social sector. That is, while resources can be reorganized from the private to the social sector, the reverse shift cannot occur. It is also the organization of the social sector--and its interface with the private sector in agriculture--that makes the Yugoslav economic system unique.

Most of the country's farms, shops and catering establishments are in the private sector, and the private pursuit of business is guaranteed in law under precisely stipulated conditions. Most of the non-farm private business enterprises are also individually controlled. However, many privately-owned farms are part of agricultural cooperatives. Thus, many privately-owned farms, including both crop and livestock units, are operated collectively through cooperation among individual landholders. Federal policy has encouraged the development of farming cooperatives through mechanisms such as priority allocation of machinery, fertilizer and other manufactured inputs to cooperatives and a 25 acre limitation on individual land ownership and operation(5). While some

emphasis has been put on gradual reorganization of agricultural production into the social sector, where essentially all operations are collectively managed, little progress has been made and most farmland transactions continue to be between individuals. Thus, cooperatives continue to play an important role in Federal attempts to consolidate farming operations into large scale, efficient units.

About 85 percent of the farm land is privately owned; the remaining 15 percent is socially owned. Most farms in the mountainous areas are privately owned, while a larger share of the farms in the primary arable areas are in the social sector. It is difficult to determine what share of the privately owned farms are collectively operated under some form of cooperative organization, but it seems likely that at least one half of all private-sector agriculture is part of some farming cooperative.<sup>3/</sup>

While the private sector, including cooperatives, accounts for about 85 percent of the land in farms, it accounts for only about 70 percent of total farm production and about 55 percent of the commercially marketed farm production. The private sector's smaller share of total production is explained by the higher share of both arable land and livestock production in the social sector than of farm land in total, and its even smaller share of commercially-marketed production results because all peasant and subsistence agriculture is in the private sector. Again, there are no available data to indicate what portion

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<sup>3/</sup>Incomplete data (5, p. 49) suggest that about 75 percent of the land which is collectively farmed is cooperatively organized by private landowners; the remaining 25 percent is in the social sector. Assuming that the 15 percent of the land in the social sector represents 25 percent of the collectively-farmed land, then about 60 percent of all land (15% ÷ 25%) is collectively farmed. Deducting the 15 percent from the social sector, where all operations are collective, yields an estimate of 45 percent of all land being cooperatively farmed. This equates with about 53 percent of all privately owned land being part of some farming cooperative--a share that does not appear inconsistent with general observation.

of the commercially marketed production in the private sector is associated with cooperative farming, but general observation would suggest more than half.

It is not apparent to what extent effective managerial control over private agriculture has shifted to cooperatives. Given the emphasis that has been placed upon cooperative farming as a matter of public policy and the estimate that somewhat more than half of all private agriculture is part of the cooperative system, one might expect that a fairly significant amount of control and decision-making over the operation of these private farms rests with the cooperative rather than the individual landowner. However, available literature on these cooperatives suggest that their primary functions have been in the provision of credit, procurement of supplies, marketing of farm-produced products and, to a lesser extent, ownership and operation of farm machinery (5). Therefore, except for the machinery activities, the Yugoslav agricultural cooperatives may not function too much differently than do many U.S. farm cooperatives, which suggests that the cooperatives themselves may not exercise major control over private farming operations.

The balance of production agriculture, essentially all other industry including food processing and manufacturing, and much of commercial distribution, retailing, and housing is in the social sector. It is in this sector where the uniqueness of the Yugoslav economic organization is most apparent.

The social sector is characterized by two factors which distinguish it from other forms of economic organization: social ownership and self management. Unlike private ownership in capitalistic systems

or state ownership in communistic systems, social ownership is really no ownership. That is, no individual or group of persons holds title to property. Rather, the various enterprises hold assets in trust for the Yugoslav people, and the legal title to the means of production belongs to the Yugoslav people as a whole. Essentially, the concept of ownership has no meaning; it doesn't exist. Management and use rights to property, however, are assigned to business or "social" (i.e. societal) enterprises, and the worker-manager participants in these enterprises have the right to dispose of the profits or surplus value arising from the use of property (4, Ch. 2).

Unlike capitalism where management rights are vested with capital owners or communism where management rights rest with the state, management in the Yugoslavian form of socialism is vested in the workers of each enterprise. The basic organizational unit of an enterprise is the "Basic Organization of Associated Labor" (Osnova Organizacija Udruzenog Rada, OOUR) and is made up of "a group of workers who produce a (common) product or service which has recognizable value and is capable of fetching a price on the market."<sup>4/</sup> Enterprises, or work organizations (Radna Organizacija) consist of two or more associated or related OOUR. For example, a social farming enterprise would have one OOUR for feedgrain production, another for cattle husbandry and so on.<sup>5/</sup> These groups of workers directly manage their OOUR and indirectly, the enterprise of which they are a part. They also share directly in the profits earned by the enterprise. Worker

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<sup>4/</sup> Lascelles, David, "Constituted Amendments," Financial Times, April 26, 1973.

<sup>5/</sup> Not only business enterprises are organized in this manner, but also institutions, hospitals and other social agencies.

control is normally exercised through elected workers councils in each OOUR, which in turn set basic operational policy and hire management for their specific work unit. Each OOUR council is, in turn, represented on the workers self-management council for the overall enterprise. OOUR's have the right to leave one enterprise and join or help establish another (4, ch. 2).

Business enterprises function in a market environment, and plan accordingly. Apparently, over 60 percent of all prices in the economy are freely formed in response to market pressures typical of any market-oriented system, although Federal price controls have been imposed periodically as an anti-inflation measure. Other prices are subject to various degrees of government control, such as minimum buy-up prices for basic agricultural commodities.

Because enterprises respond basically to market prices and because profits earned by the enterprise belong to the worker-managers, they behave much like profit-motivated capitalistic firms. That is, other than accruing profits as labor income rather than as return to invested capital, the same type of income (or profit) enhancing incentive for efficiency exists in both systems. Some theorists argue that the efficiency motive is actually greater under labor management than capitalism because profits accrue directly to the workers who are most responsible for such efficiencies (9, Ch. 12). However, the lack of reported efficiency data on Yugoslav industry does not allow comparison of the relative efficiencies of the two systems at this point in time.

Even though business enterprises are self-managed, there are certain restrictions imposed upon their operations. For example,

while each work organization can set its own wage scale, regulations generally prevent the highest wage in any specific organization from exceeding a ratio of five times the lowest (4, p. 107). Also, while an enterprise's profits belong to its workers, there are limitations on how they can be distributed, and the country's tax system is based largely upon these earnings. Bonuses paid directly to workers are generally limited to a ratio or percentage of annual wages, such as the equivalent of two months wages per year or 20 percent of a worker's annual fixed wage. Profits not paid as worker bonuses can be allocated by the workers councils to "consumption funds" and business investment. The consumption fund is used to provide consumer goods such as housing, recreational facilities and health care, for the workers in the organization.

In the recent past, about 20 percent of enterprise profits have been retained for business investment, on the average, while 80 percent has gone into consumption accounts, including worker bonuses (7). The share retained for business investment has been limited in the past by Constitutional provisions which prevented the workers from accruing a vested interest in the assets of their work organization. That is, if a worker left an enterprise, he could not "cash in" his share of the business assets purchased by the enterprise out of past profits or retained earnings. Rather, he had the right only to those goods accumulated out of individual wages and bonuses. As a result, most business capital has come through commercial credit channels, informal credit extensions (mainly accounts payable) and, to a declining extent, government allocations. A new Constitutional provision now entitles workers to continuing benefits from their past contributions to an enterprise, in order to encourage expanded retainment of earnings for investment purposes. It is not yet clear,



however, how this principle will be applied in practice.

Emphasis on social organization in agriculture has, since about 1965, increasingly focused upon the combination of related enterprises into a united organization, the agricultural-industrial combine, or kombinat. The kombinat is essentially an integrated agricultural production and processing firm, typically encompassing several distinct but related worker-managed enterprises, and is quite large by U.S. standards. One typical kombinat, for example, raises 32,000 acres of corn, 25,000 acres of wheat, 11,000 acres of sugar beets, and 8600 acres of forage crops; feeds 12,000 head of baby beef, 60,000 hogs and 2.5 million broilers annually; and operates a slaughter house that processes 150,000 hogs, 35,000 cattle and 3.5 million chickens annually, a 160,000 pound per day milk plant, a 300,000 metric ton per year sugar beet refinery, and numerous related facilities. In total, about 35,000 workers are involved in this kombinat, of which about one-fourth are directly engaged in crop and livestock production.

The kombinat dominates the social agriculture sector. Available data do not indicate the proportion of socially owned agriculture that is organized into kombinats, but general observation suggests that very little is not. Furthermore, an estimated 70 percent of all agricultural processing enterprises are part of various kombinats (based upon 5, pp. 73-76). Thus, vertical integration dominates in the social agriculture sector. Vertical integration is extended to the private agriculture sector as well, through extensive use of production contracts. That is, processing enterprises contract with private farm operators for most of their input needs above those supplied within their kombinat. For most private farmers, this contract production is their only viable commercial market other than direct-to-consumer sales of fresh products.

Most processing enterprises are, in turn, members of a "business family" or trade association. Essentially, these trade associations are merchandising organizations which both market products of their member-processors and plan and coordinate processing and production consistent with market needs. They are generally product-specific and have considerable marketing expertise. Koprodukt and Centrokoop, two major trade associations for meats, provide excellent examples. Both have developed branded product lines of fresh and processed meat products and are aggressive competitors in domestic and foreign markets. Both have established precise standards for their products, and work closely with their respective member-processors to assure that those standards are upheld throughout processing. Their member-processors, in turn, closely coordinate both quality and quantity of production with private farmers and social farming enterprises to assure consistent production.

Each trade association coordinates the activities of numerous kombinats and other processing enterprises: members of Koprodukt include 11 large kombinats who are involved in meatpacking and Centrokoop apparently coordinates the activities of more than 20 member meatpacking enterprises. Different trade associations provide similar functions for other products, and large kombinats with several processing enterprises are members of a different trade association for each of their various product lines.

Through this system, market needs are assessed by specialized marketing organizations (trade associations) who in general are reasonably accurate in making such projections. These needs are then coordinated back through the processing and production enterprises via contracts or agreements among the trade associations, kombinats and other processing and production enterprises and private farmers. Terms of contract are negotiated between the relevant worker councils within the trade associations, kombinats and other social enterprises. For private farms, cooperatives

are often involved in negotiating contract terms. Others deal individually.

To help facilitate the process of price determination, a commodities exchange is operated in Novi Sad, the "Chicago" of Yugoslav agricultural marketing. Many merchandising and processing enterprises reserve a small share of their purchases and sales--perhaps 5 percent on average--for trading on the exchange rather than total commitment to contracts and other agreements. Prices on the exchange are, in turn, often used as reference prices for contract settlements.

The structure of the Yugoslav agricultural economy is, therefore, one designed to facilitate efficient coordination of farm production with market needs while depending upon freely formed market prices to provide overall guidance in resource use and income distribution. At the same time, most decision-making rests in the collective hands of farmers and other workers in the system.

#### Agricultural Policy

The basic instrument for agricultural policy in Yugoslavia is the "Green Plan." The first Green Plan was implemented in 1973 and was superceded by the current Plan in 1976. Development of the third Plan corresponds with implementation in 1981. The Federal Committee for Agriculture, roughly the equivalent of the Agricultural Ministry in other countries, is responsible for coordinating both the formulation and exercise of the Green Plan.

The formulation of public policy in Yugoslavia, including agricultural policy, is such a unique process that it deserves brief elaboration. As each province and republic has a great deal of political autonomy, the Green Plan (or most any other Federal policy for that matter) represents a consensus among them. Republic and provincial policy, in turn, represents a consensus of their communities and OOUR's. To assure that policy

formulation is rooted with the working people, the system of political representation begins with the work unit, or enterprise. Each basic work organization elects, by secret ballot, local assemblies. Delegates to both the Federal and the republic and provincial assemblies, or parliaments, are selected by the LCY from these local assemblies.

Because finalization of the Green Plan requires wide consensus, its development is a rather lengthy process characterized by local, regional, and national debate. The first Plan was about three years in development and the second, two years. It is a product of considerable debate and compromise. Many of its features originate with the work organizations which are ultimately responsible to carry out its provisions. As a result, the plan and resulting policies tend to be realistic and achievable. For example, the 1976-80 plan calls for an overall four percent annual growth rate in agricultural production, compared to an average of 2.7 percent between 1961 and 1975. In actuality, agricultural output grew by 4.5 percent in each of the first two years under the plan, and the target four percent average may well be exceeded for the five-year period (11).

Furthermore, the Plan is not a bidding document, but serves as a general statement of the country's objectives for its food and agriculture sector and as a guide to the means for achieving those objectives. That is, it functions more as a guideline for the agricultural sector, rather than a program of specific activities which must be carried out.

Specific policy goals for Yugoslav agriculture embodied in the current Green Plan include:

1. Stimulate agricultural production in the social sector and encourage shifts in agricultural production from the private sector to the social sector.

2. Expand the use of modern agricultural production technology by adapting technology developed elsewhere to Yugoslav conditions, and create incentives for its adoption.
3. Expand and modernize processing capacity for agricultural products to meet domestic food needs and export market opportunities.
4. Strengthen ties between the social sector and private agricultural production through increased emphasis on cooperative efforts.
5. Eliminate imports of wheat, vegetable oil, and sugar.
6. Expand the production of exportable surpluses of livestock and meat, corn, and tobacco.
7. Maintain parity for domestic food and agricultural product prices with prices in world markets.
8. Accumulate government-held stocks of basic agricultural commodities as a contingency reserve.

One important policy instrument for achieving these goals is a price support-government purchase program for basic commodities, somewhat similar to the non-recourse loan program in the United States. Minimum buy-up prices, levels of government stocks, and related import-export targets reflect the national consensus reached in the development of the Green Plan. However, actual purchase and storage activities are carried out by the agricultural committees of the provincial and republic governments rather than the Federal Committee. As a result, there are some regional differences in the conduct of these program activities.

A Federal system of licenses is used to regulate imports of the

basic agricultural commodities which are subject to support, mainly food and feed grains, sugar and vegetable oils. Import licenses are issued on a periodic basis to enterprises and trade associations which specialize in international trade. These organizations, in turn, make import purchases subject to license restrictions mainly on volumes.

The Federal Government is also actively involved in importing and disseminating agricultural technology. Considerable attention has been focused upon animal breeding stock, and imports of Holstein cattle from the U.S. provide much of the foundation of Yugoslav's modern dairy production. Numerous crop varieties have also been imported for adaption to Yugoslav agricultural conditions.

Federal policy also encourages import of industrial technology and know-how, including farm input manufacture and food processing, through joint ventures between Yugoslav enterprises and foreign investors. Almost all such outside investment has come from western nations, with U.S. firms accounting for more than 10 percent during the 1968-74 period (4, p. 204). This includes at least one agribusiness firm, Ralston-Purina. No evidence can be found of joint ventures for agricultural production with foreign firms. Current policy limits joint ventures to areas which directly result in the introduction of modern technology, management practices or application of scientific research. At least a portion of the resulting production must be for the export market as capital repatriation to the foreign partners is restricted to foreign currency earned by the joint venture.

#### Foreign Agricultural Trade

Foreign trade is a significant component of Yugoslavia's economy, accounting for more than 40 percent of the total national income in recent years (11). International dealings have been characterized by a long-standing negative trade balance as imports of industrial goods, sugar, soybeans and oilseed meals have generally outstripped exports of nonferrous

metals, wood products, wine, tobacco and meat products (see Table 4, p. 9). Continuing emphasis on self-sufficiency in crop production, particularly food and feed grains and sugar, expanded merchandising of meat exports in foreign markets, and imposition of a system of flexible import duties similar to the European Community's variable levy system, have combined to reduce the trade gap from about \$3.5 billion in 1974 to around \$2.5 billion by 1977.

To a considerable extent, the negative trade balance has been offset by foreign exchange receipts from other sources in the general magnitude of \$2.5 billion annually. As a result, Yugoslavia's foreign payments have been in reasonable balance with receipts in recent years, with the 1974 \$1 billion payments deficit totally eliminated by 1977. The most significant non-trade sources of foreign earnings are tourism and reparations and other returned income from Yugoslav nationals employed in other European countries.

Because of its location and political nonalignment, Yugoslav foreign trade in agricultural commodities and food products is oriented toward both Western and Eastern Europe. Trade with the European Community accounts for almost 40 percent of the total, and Eastern European nations account for about 30 percent. About half of the latter is with the Soviet Union. While roughly five percent of the agricultural trade occurs with the U.S., her geographic and political position in Europe, combined with the complimentary nature of Yugoslav agriculture with both northern and southern European agriculture, make the natural advantage of trade orientation with other European nations readily apparent.

Nonetheless, trade between the U.S. and Yugoslavia is quite active. Overall, trade approaches about \$600 million annually with slightly

larger Yugoslav exports to the U.S. than vice versa. Agricultural trade accounts for about 25 percent of the total (table 5), with the U.S. characterized primarily as a supplier of soybeans and soybean products and a purchaser of meats and aromatic tobacco. In recent years, Yugoslav exporters have solidified their position in the U.S. market for canned hams and related pork products, and are now the third largest foreign supplier of these products, trailing only Denmark and Poland.

Further development of U.S.-Yugoslav agricultural trade appears to be rooted in current trends. At the present, Yugoslavia has a shortage of domestically-produced feed protein, representing a continuing near-term market opportunity for U.S. sales of soybeans and soybean oil meal. However, while there is now essentially no commercial production of soybeans, observation of general growing conditions suggests that the country has substantial capacity to produce soybeans once suitable varieties are developed. Developmental work is currently underway. Thus, the potential for protein feed imports may decline over the longer run.

The potential to export U.S. agricultural production and food processing technology is high. This includes further exports of animal breeding stock and plant varieties as well as industrial and managerial technology. Joint venture between U.S. agribusiness firms and Yugoslav kombinats or other agriculturally-related enterprises appear to be one potential means for actualizing such trade. However, certain changes will probably have to be made in Yugoslav policy. In particular, the current emphasis on export production by joint ventures is a major limitation. However, such a change may occur during the next several years as the Yugoslavs gain confidence in the productive ability of their social economy and thus feel less threatened by foreign management expertise.



TABLE 5. UNITED STATES-YUGOSLAV TRADE IN SELECTED AGRICULTURAL PRODUCTS

	1960	1965	1970	1975	1976	1977
<u>U.S. Exports To Yugoslavia</u>						
Total Agricultural (\$1000)	34,136	103,031	42,330	43,424	37,498	70,286
Wheat (1000 BU)	380	35,429	*	*	*	*
Soybean Oil (1000 LB)	47,485	77,403	102,721	108,141	*	*
Soybeans (1000 BU)	*	*	*	20	*	3,542
Soybean Meal (1000 ST)	*	77	204	14	189	120
Tobacco (1000 LB)				941	1,222	1,435
Cattle Hides (1000)	80	112	460	110	265	479
<u>Yugoslav Exports To The U.S.</u>						
Total Agricultural (\$1000)	9,242	22,345	26,598	62,440	77,045	85,689
Meats (1000 LB)	316	12,982	11,701	26,677	30,419	34,515
Hops (1000 LB)	2,662	772	2,769	3,685	2,803	933
Tobacco (1000 LB)	5,482	12,875	15,825	13,791	17,075	13,796
Feathers, Down (1000 LB)	**	183	226	420	867	1,459

\*Less than 0.5 percent of total U.S. exports to Yugoslavia

\*\*Less than 0.3 percent of total U.S. imports from Yugoslavia

Source: U.S. Department of Agriculture, U.S. Foreign Agricultural Trade Statistical Report, various issues and predecessor publications.

Perspective on The Future

Yugoslavia is in the evolutionary process of constructing a unique labor-managed market economy. As in any functional market economy, this tends to attune economic enterprises to the competitive forces of the marketplace, both domestically and internationally. As a matter of supporting Federal policy, international trade restrictions are generally minimized, consistent with the need for a relatively small country to maintain a reasonable degree of balance in its foreign currency accounts over time.

The economic structure also creates a strong profit motive for economic enterprises, expressed as an incentive to increase labor income. Therefore, it appears realistic to expect the Yugoslav economy to increasingly concentrate its activities in the areas of its greatest competitive and comparative advantages in a "world market" context. This suggests a continuation of Yugoslavia's open posture toward international trade.

This is also a country, relative to its size, abundant in resources well suited for agricultural production along lines similar to that in midwestern United States, that is, food and feed grains, sugar beets and other processing vegetables, and livestock. A significant exportable surplus of livestock products is produced, and these exports should continue to expand as production further modernizes and as international marketing opportunities develop. Domestic production of food and feed grains is generally sufficient to meet domestic needs, including the demands of an expanding livestock sector, and in years of favorable weather some exportable corn supplies are available. Crop production should show steady improvement as farm modernization and the social reorganization of small, private farms continues

The long-run perspective suggests that Yugoslavia and the U.S. will engage in complementary trade in agriculture, with the U.S. buying mainly meat products and selling mainly technology, on an increasingly normalized basis. U.S. exports of crops and crop products will probably be characterized by sales of feed grain in years when Yugoslavian harvests fall below trend, with soybean and soybean oil meal sales moving toward that status over the next several years.

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