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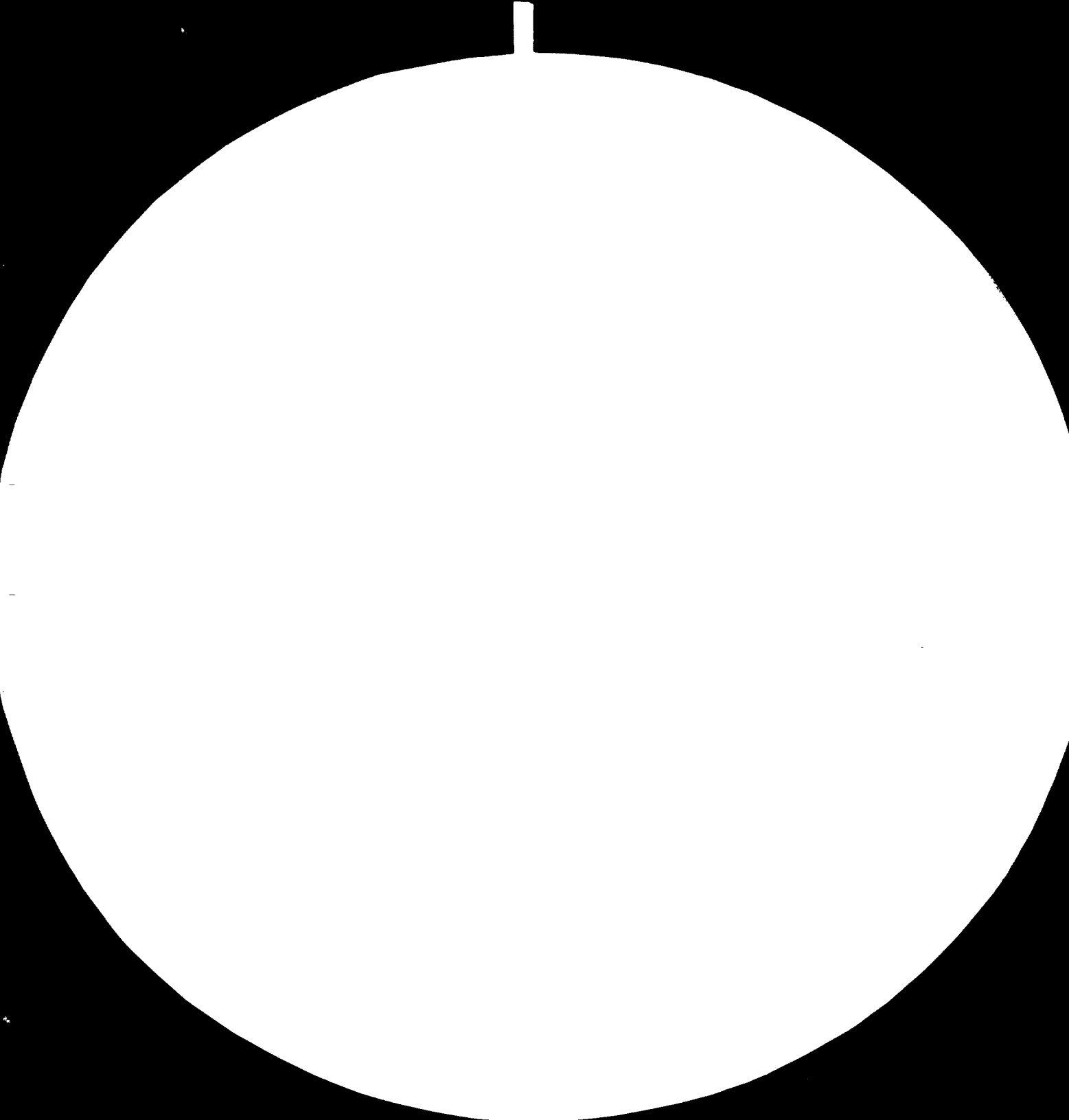
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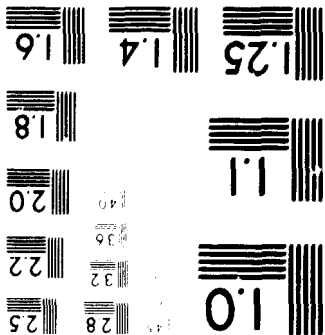
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CASE STUDY ON AGRO INDUSTRY: "PODRAVKA",
YUGOSLAVIA*

by

EKONOMSKI INSTITUT ZAGREB

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TABLES

		<u>Page</u>
Table 1	Production from 1957-1967	2
Table 2	Basic development indicators, 1967-1979	3
Table 3	Land area under cultivation and yields of basic field crops on Podravka's holdings and on farms in the commune of Koprivnica, 1971-1979, with estimates for 1980	6
Table 4	Amount of funds invested by Podravka in co-operation with farmers, value of produce purchased from them, in millions of dinars, and number of co-operating farmers, 1971-1979	9
Table 5	Livestock output and milk deliveries on Podravka's own holdings and in co-operation with farmers through its organizational unit, Podravka-Kooperacija, 1972-1979	9
Table 6	New and innovated products and new forms of product presentation in the period 1971-1979	12
Table 7	Investment outlays and share of Podravka's own resources, 1967-1980	18
Table 8	Exports from 1962 to 1979 and planned target for 1980	19 and 20
Table 9	Vocational composition of the staff employed in Podravka in 1957, 1967 and 1978	21
Table 10	Scholarships granted by Podravka for personnel training by basic group of education in 1973, 1976 and 1979	22

1. INTRODUCTION

The Podravka agro-industrial complex is a combination of the entire agricultural and industrial food production industry in the commune of Koprivnica/Podravina. This commune is located in a fertile region of the Pannonian Plains, along the Drava River. In the 1971 census there were 61,086 inhabitants in an area of 715 km. The Podravka agro-industrial complex has developed in this traditionally agrarian area, which at the time of its establishment ranked among the less developed regions in the Republic of Croatia. Today, it ranks among the medium developed ones. The influence exercised by this complex on the economic development of the commune of Koprivnica is, among others, illustrated by the rise in its contribution to the commune's gross product: from 25.4% in 1970 to 46.0% in 1978. This rise has been accompanied by notable changes in the social composition of the population. According to the 1961 census, 62.7% of the population was involved in agricultural activities compared with 32.3% in 1979. In the same period, the volume of agricultural production grew at an average annual rate of 6.3%. That period saw the beginning of a steady and significant increase in agricultural surpluses, as shown by data on Podravka's purchases of agricultural produce from farmers, which grew at an average annual rate of 10.2%.

In its development Podravka has passed through a number of characteristic phases. In its first years of development (1946-1957) it recorded no major successes; its labour force averaged about 200 workers. In that period production was confined to fruit and vegetable processing (various kinds of jams, preserved fruits etc) on the basis of locally supplied raw materials. The abolition of centralized management of the economy and the introduction of worker's self-management at the beginning of the 1950s provided new incentives and initiatives for further development.

This method of development was based on a good knowledge of the development possibilities of local agriculture, employment of agricultural labour surpluses, and domestic marketing possibilities.

During that period also, new production lines were launched which were expected to make better use of domestic productive capacity and to produce goods acceptable on the domestic market. In 1957, production of soup concentrates and food additives was initiated; this subsequently proved to have

been a successful business move. On the basis of processing techniques designed by Podravka's own experts, and of a potentially large demand in the Yugoslav market, the production of soup concentrates and food additives began to grow at a high rate, marking a turning point in Podravka's further development. Thus, in 10 years (1957-1967), the output of soup concentrates rose from 47 tons to 2,810 tons, and of food additives from 0.6 tons in 1959 to 2,356 tons in 1967 (table 1). At the end of that period, Podravka met about 80% of Yugoslavia's overall demand for soup concentrates. The success achieved in the sale of soup concentrates and food additives resulted in an increased demand for other Podravka products and in a relatively fast increase in their production. This expansion of production was accompanied by a corresponding rise in employment: from 1957 to 1967 Podravka's staff increased from 285 to 1,750 (table 2).

Table 1. Production from 1957-1967

(In tons)

Product	1957	1962	1967
Soup concentrates	47	2,057	2,810
Food additives	-	117	2,356
Marmalades	1,141	2,032	6,926
Jams	102	302	257
Pickled vegetables	113	534	2,304
Canned meat products	0.3	985	1,918
Fresh meat	-	270	1,541
Total *	2,117	7,275	24,088

* Totals do not entirely agree because some minor products have been omitted.

Table 2. Basic development indicators, 1967-1979*

Year	Income (Millions of dollars)	Number of workers	Income per worker
1967	3.2	1,750	1,800
1969	5.6	1,899	2,900
1971	8.0	2,577	3,100
1973	14.7	3,017	4,900
1975	27.6	3,754	7,400
1977	51.2	4,971	10,300
1979	80.0	6,330	12,600

* Exchange rates: Up to 1970 \$1 = 12.5 dinars.
 In 1971 \$1 = 15.0 dinars.
 From 1972-1978 \$1 = 17.0 dinars.
 In 1979 \$1 = 19.0 dinars.

Since 1967, Podravka's development has been characterized by large investments and integration with related enterprises from other regions of Yugoslavia. An important step towards ensuring a better supply of raw materials was the integration with socialized farms in the commune of Koprivnica in 1972. After 1967 several new and important products were added. In the early 1970s a modern slaughter-house (annual capacity 60,000 head of cattle), a cooling plant and a meat-canning factory (annual capacity 13,500 tons) were built. At the same time, a pharmaceutical and chemical plant, based on the use of slaughter-house by-products (animal blood etc.), was put into operation, as well as the production of alcoholic and non-alcoholic beverages (mineral waters, fruit juices, spirits, beer), infant food, yeast (fermentation programme), confectionery etc. In 1974, Podravka employed 3,705 people and produced 158,852 tons of various products.

During the last decade, all the above production lines have continued to expand. In 1980, Podravka employed 7,500 staff and produced about 270,000 tons of various products.

The same period has been marked by a marked expansion of exports. The main articles have been soups and food additives, fresh meat and canned meat products, infant food, beer etc. As a result, Podravka has gradually reduced its negative balance of payments and is expected to achieve a positive balance in the early 1980s.

Podravka today produces about 600 kinds of food products and about 300 various pharmaceutical and chemical articles. As a result of this steady expansion, Podravka has now ranged itself among large Yugoslav enterprises: in terms of gross income it took 91st place in Yugoslavia in 1970; it has moved ahead to 25th place in 1979.

Today Podravka has 40 organizational manufacturing units. An important role in production and marketing is also played by other organizational units, for example, the planning and development centre, the research institute, the marketing centre, the centre for co-operation with farmers, the centre for co-operation with foreign countries etc., which all employ teams of specialists and experts.

2. RAW MATERIAL SUPPLY

At the beginning of Podravka's development, agricultural production in the nearby area primarily met the needs of the local agricultural population. Agricultural surpluses were small and mainly consisted of livestock. Podravka's influence on the transformation of agricultural production has manifested itself in several respects: a rise in farmers' productivity, an increase in agricultural surpluses, and the adjustment of the structure of agricultural production to industrial processing requirements. This influence has been especially notable in the area directly surrounding Podravka. However, since this area only meets one fifth of its raw material requirements, Podravka also exercises a beneficial influence on the development of agriculture within broader national frameworks. Thus, for example, in the Mediterranean region of Istria and in Macedonia, Podravka has started growing tomatoes in co-operation with farmers, producing brewer's barley in Vojvodina etc. Closer to home, Podravka has contributed to a considerable expansion of some sectors of production, notably livestock fattening (50% of the requirements of its slaughterhouses is met here), cereal grain growing (about 55% of grain processing requirements), and vegetable processing (about 30% of requirements).

In its area of direct influence, Podravka obtains part of the necessary raw materials from its own farms, while the bulk comes from co-operation with farmers. Needless to say, production on Podravka's own farms is directly linked to its industrial needs. In line with this, these farms (about 3,600 hectares, or 8% of the total agricultural area of the commune of Koprivnica) is predominantly under crops intended for industrial processing (for example brewer's barley, parship, peas, rape seeds, sugar beet etc.), see table 3.

On farms which make up about 96% of arable land in the commune of Koprivnica, maize has become almost the only crop: it is estimated that in 1980, maize will have been sown on about 17,000 hectares, while wheat will have "retreated" to about 6,100 hectares, an enormous change when compared with previous years. This change is partly attributable to the low price of wheat in the last few years, but primarily to Podravka's rapidly developing meat industry, which requires increasing quantities of maize.

Because of this, farmers today virtually sell no maize but ensilage it as animal feed (Podravka provides farmers with the necessary instructions and credits for this purpose.) In addition to this important change in the pattern of field crop farming, increasing areas are under clover and other fodder crops for the same reason. With regard to other industrial crops and vegetables, only during the last three years have greenhouses been erected in the commune of Koprivnica, while at the same time there has been a revival of fruit-growing and viticulture. In 1980, Podravka's own shops dealing with agricultural supplies have sold 65,000 grape-vine seedlings, compared with only 5,000 in 1975, and 6,500 fruit-tree seedlings, compared with 1,200 in 1975. The number of tractors in the commune of Koprivnica increased over the last ten years more than eight times, reaching a figure of about 3,500 in 1979. There has also been a rise in the number of other farming machines and implements.

The development of cattle production for the market has been linked to the newly established meat complex and slaughter-houses and processing plants which stimulates cattle raising. Farming has also been geared to crops required by stock-breeders. Ensilaged maize, fodder crops, and continuous and secured milk purchases stimulate their production. In the area of the commune 63 milk collection stations are now in operation. A greater increase in livestock output is hindered by relatively unstable prices, hence the still-marked cyclic

Table 3. Land area under cultivation and yields of basic field crops on Podravka's Holdings and on farms in the commune of Koprivnica, 1971-1979, with estimates for 1980

		1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 estimates
1. Podravka's own output											
Wheat	Area : Hectares	-	1,230	1,191	915	853	959	897	919	880	915
	Yield: 100 kg/hectare	-	-	-	46.6	39.1	49.7	44.6	43.7	40.7	
Maize	Area : Hectares	-	1,340	1,476	1,683	1,764	1,585	910	770	1,301	938
	Yield: 100 kg/hectare	-	-	-	57.2	47.5	50.4	46.7	60.6	59.7	
Brewer's barley	Area: hectare	-	-	-	-	-	300	249	164	44	122
Oats	Area: hectare	-	-	-	-	-	7	20	41	45	60
Sugar beet	Area: hectare	-	-	-	-	-	-	-	20	59	150
Rape seeds	Area: hectare	-	-	6	-	-	-	351	495	450	520
Parsnip	Area: hectare	-	-	-	10	12	13	94	50	50	100
Soya	Area: hectare	-	-	53	25	5	5	-	-	-	-
Peas	Area: hectare	-	-	-	-	-	-	92	112	77	158
Legumes, grass	Area: hectare	-	-	-	-	72	17	22	44	34	34
2. Output in co-operation with farmers											
Wheat	Area : Hectares	10,113	8,880	11,248	11,950	9,924	9,525	9,625	9,860	7,120	6,100
	Yield: 100 kg/hectare	32.2	13.6	30.6	34.6	31.7	31.0	34.0	30.0	38.1	
Maize	Area : Hectares	12,232	10,831	11,895	11,665	11,962	13,657	13,509	13,905	15,302	17,000
	Yield: 100 kg/hectare	28.7	32.4	36.5	35.8	40.3	40.7	47.9	46.0	46.1	

fluctuations in stock-breeding, the difficulties in increasing feed production owing to the statutory limit of 10 hectares set for the size of privately owned farms, lack of manpower etc. Since more than 45,000 head of cattle in 1979 were killed in Podravka's slaughter-houses, it is evident that local industry is extremely interested in increased cattle production in the region. In 1971, slightly more than 17,000 head of cattle were slaughtered.

It is obvious that farming and stock-breeding can be increased primarily on private farms, since they account for almost all arable land in the area. Podravka's own holdings have already recorded an enviable progress, so that Podravka pays special attention to the systematic development of co-operation with farmers. Such arrangements are primarily based on mutual production contracts which guarantee production and marketing security and provides industry with the necessary raw materials.

In addition, co-operating farmers share in the distribution of surplus income, and sit on Podravka's organs of self-management, which means that they jointly decide on various production problems and on questions concerning the earning and distribution of income.

The lowest level of this kind of co-operation are contracts which stipulate advance payments for production: farmers receive advance payments either in money or in animal feed, or loans for construction of farm buildings and purchases of mechanized equipment; in exchange they provide an adequate return in livestock or field crops. However, there is an increasing number of contracts which envisage stronger links between farmers and Podravka. This primarily relates to stock-breeding where Podravka provides under contract, virtually everything except facilities (stables) and labour. In other words, the farmers do the work and provide stables, and Podravka provides sucking pigs and calves, animal feed-stuff, veterinary supervision and professional training to stock-breeders, guarantees the purchase price and purchases of animals within the terms of the contract. All these elements are determined by contracts entered into between Podravka and co-operating farmers. If so wished by farmers, only some of these elements may be stipulated by contract (for example, the contract may relate only to the supply of feed-stuff or to the purchase of fattened

animals etc). Recently, there have been instances of regular labour relationships established between stock-breeders and Podravka for the provision of stock-breeding and fattening services (land remains in the farmers' possession).

In addition, in co-operation with Podravska banka (Bank of Podravina) of Koprivnica (whose principal client it is), Podravka provides farmers with loans under favourable terms (with low interest rates of 6%) for the construction of farm buildings and the purchase of farming equipment. Podravka has recently also subsidized its partners in the purchase of fuel for agricultural machinery and has organized seminars during the winter months to train them in various farm operations. Some of the major and more active co-operating farmers earn an income equalling or exceeding that of a skilled industrial worker. This is, however, not the only source of earnings for such farmers since they can also have other marketable surpluses, or they may produce varied quantities of food for their own consumption.

Through such co-operation some farmers have achieved a relatively high technological level in livestock production. Through their example, development of other farmers is stimulated as well.

Contracts formed between Podravka and farmers can be of a short-term such as one year or long-term duration, up to five years or more. Through such contracts, especially when the farmers provide only labour such as in cattle fattening, all the rest is supplied by Podravka. Farmers are ensured a guaranteed price which gives them security and makes them independent of market fluctuations. This ensures continuity in cattle deliveries. Co-operating farmers can also repay loans obtained from Podravka through produce deliveries. In addition, together with banks, Podravka gives farmers very favourable loans for the construction of farm buildings and purchases of equipment. During the last ten years, the number of farmers in the commune of Koprivnica, including a number from other communes, has stabilized around 3,000-3,500, but they constantly increase and improve their production (see tables 4 and 5).

Table 4. Amount of funds invested by Podravka
in co-operation with farmers, value of produce purchased from them,
in millions of dirars, and number of co-operating farmers,
1971-1979

	1971	1972	1973	1974	1975	1976	1977	1978	1979
Funds invested	44.9	55.7	70.6	84.9	85.1	109.7	147.1	234.2	280.1
Value of produce	70.0	85.3	101.0	108.3	128.7	194.2	263.7	279.5	421.9
Number of co-operating farmers	4,321	4,201	3,970	3,621	4,120	3,572	3,473	3,370	3,321

Table 5. Livestock output and milk deliveries on Podravka's
own holdings and in co-operation with farmers
through its organizational unit, Podravka-Kooperacija,
1972-1979

	<u>Heifers and other bovine cattle for the market</u>				<u>Milk deliveries in million litres</u>	<u>Pigs raised in co-operation</u>	
	<u>Own production</u>		<u>In co-operation</u>			<u>Head</u>	<u>Tons</u>
	<u>Head</u>	<u>Tons</u>	<u>Head</u>	<u>Tons</u>			
1972	2,723	1,132	12,345	2,590	2.9	42,640	4,308
1973	2,324	933	16,375	4,438	4.9	33,392	3,355
1974	2,118	855	14,430	3,619	6.3	41,265	4,283
1975	4,173	1,767	14,960	4,812	8.8	38,429	3,994
1976	4,664	1,930	14,800	4,820	10.5	40,264	4,055
1977	3,203	1,391	14,230	3,842	13.1	53,912	5,452
1978	3,466	1,538	14,560	3,902	12.8	44,498	4,515
1979	3,120	1,418	14,872	4,910	14.1	62,041	6,448

The ways in which industrial plants are supplied with raw materials from other sources are varied and complex, but have in recent years become increasingly organized and reliable. Podravka imports only small quantities of raw materials, slightly over 6%, so that for many years it has striven to develop and improve business relations with most agricultural areas in Yugoslavia.

Podravka has long-term contracts with most raw material suppliers which are broader in scope than conventional sales contracts. In addition to provisions relating to conditions for and the mode of delivery of agricultural raw materials, such contracts also contain other clauses such as those providing for co-operation in planning, financing, personnel training etc. In this way, Podravka today co-operates with over 600 producers from various regions of Yugoslavia.

Through a policy of long-term linkage of raw material producers and its processing plants, Podravka directly promotes the development of agricultural production and similar branches in various parts of the country.

3. SELECTION OF FOOD PRODUCTION TECHNOLOGY

From modest beginnings after the Second World War, when production was confined to jams, compotes and pickled vegetables, Podravka's production expanded considerably and now includes about 300 different food and pharmaceutical and chemical products. Every year, large amounts of resources and efforts are invested in the development of new products, combined with endeavours to inter-link scientific research and practice as efficiently as possible. Approximately 5.5% of Podravka's annual income is devoted to research activities.

In recent years steps have been taken to develop an industry based on by-products. In the new complex of Koprivnica's industrial zone, plants are under construction to process what has until now been waste materials, primarily from the meat industry. The intention is to make full use of such materials as slaughter-house offals. For example, a large pharmaceutical works has been built near the slaughter-houses and will process blood and offals into a whole range of products for human and veterinary medicine, as well as feed-stuff for animals. Production has already started to make animal feed from communal garbage waste and beer slops.

High quality has been Podravka's primary concern for many years, and has been accompanied by continuous research to develop new products and technologies, either in its own research institute, or in co-operation with domestic and foreign partners.

As early as 1950, a relatively well-equipped laboratory was established which, in addition to day-to-day quality control, also carried out research related to the development of new products. This laboratory was reconstructed and considerably enlarged in 1963, providing a basis for the establishment in 1972, of a separate institute, Podravka Institut, which was subsequently enlarged again in 1976. Product quality is today controlled, new products developed and existing ones improved by a team of experienced specialists. The Institute employs almost 100 staff members, with high qualifications such as graduate engineers and pharmacists.

The Institute's staff, either on the basis of their own experience or in co-operation with local and foreign firms and institutes, propose the introduction of new products, and following market research carried out by marketing and sales-promotion teams, it is decided whether a particular product will be manufactured or not. New and innovated products presented in 1971-1979 are shown in table 6.

At the beginning of the 1970s it was found that the domestic market lacked infant foods while there was raw materials available for their production. After careful studies a licence was purchased for infant formulas, which soon proved to have been successful. Podravka now exports infant foods to a number of countries. A similar example is that of yeast (dry, winery and baker's yeast), production of which started in 1979. Research had shown that the bulk of the demand for yeast was met by import; however, not far from a sugar mill nearby, there were sufficient quantities of the necessary raw material, molasses. By all appearances this was also successful.

Table 5. New and innovated products and new forms of product presentation in the period 1971-1979

	1971	1972	1973	1974	1975	1976	1977	1978	1979/80
New products	6	8	11	12	27	24	32	72	85
In-novated products	-	11	-	3	2	-	-	3	7
New presentations	12	3	12	18	10	11	13	13	-
Total	18	21	23	33	39	35	45	88	92

Podravka's development has primarily been aimed at satisfying the needs of the Yugoslav market. It is only in the last few years that this agro-industrial complex has recorded significant export gains, to some extent due to a partial saturation of the domestic market and the growing need for foreign exchange. Podravka's export products are almost entirely based on domestic raw materials.

At present, export considerations primarily influence the expansion of production of products which sell well on foreign markets: food additives, canned meat products etc. At the same time, extensive programmes are being drawn up which will give priority to improving existing products or to manufacturing quite new products intended for foreign markets. Export has largely been oriented towards developed West European countries: about 80% of the total quantity, but steps are now being taken so as to pay greater attention to third world countries.

Domestic market research is carried out by about 70 experts in teams of economics, psychology etc., who analyze the available statistical data and conduct independent surveys and interviews with large-scale producers, and assess the marketing possibilities. In addition, a team of some 20 persons visit consumer centres all over Yugoslavia and organize the tasting of Podravka products. The appraisal of such tastings are also taken into account when analyzing the marketing possibilities.

Of all Podravka products which are now produced and marketed, over 60% are produced as a result of the firm's own research. Podravka has also begun to sell its own technology to other firms, at home and abroad. In addition, on the basis of long-term contracts Podravka co-operates with numerous universities and institutes in trying to solve various technological and technical problems, especially with the technological, agricultural, veterinary, mechanical engineering, pharmaceutical and economics faculties at Zagreb, the agricultural faculties at Novi Sad and Belgrade, the Institute of Technology of Animal Products, the Republican Health Office, the Institute for Diabetes, the Institute of Economics, the Drug Control Institute, the Food Technology Institute, all at Zagreb, the Republican Health Office and the Drug Control Institute of Belgrade, as well as with other institutes throughout the country.

Close co-operation with foreign companies, which has developed from the usual licensing arrangements into broad business and technical co-operation, dates back to 1957. In the course of 20 years Podravka has co-operated with over 30 of the best-known food producing and pharmaceutical firms in Europe, the USA and Japan, notably with Aji-no-moto in 1957. Dr. Oetker in 1967, Dr. Ritter in 1968, Mautner-Markhoff in 1968, Jacobs in 1968, Nestlé in 1969, Tuborg in 1970, FFF in 1972. This co-operation primarily relates to licences for individual products such as Maggi soups, Tuborg beer, Dr. Oetker powdered products, Jacobs coffee, Mautner-Markhoff mustard etc., but it also relates to exchanges and training of experts, joint research, exchanges of information on a wide range of technological and marketing matters, joint investment in new productive capacity, joint ventures etc. For example, in 1979 a contract was signed with the Japanese firm, Aji-no-moto, for the construction of a large glutamate factory in Koprivnica. This will not only be the first plant of its kind in Yugoslavia, but also in Europe.

There is no doubt that licensing contracts, no matter how much they contribute to the introduction of modern technology, contain elements which limit development since in most cases they cover a whole array of restricting clauses, especially with regard to exports. Moreover, most firms which sell licences strive to achieve the highest possible price. Because of this, it is necessary to make all the preparations before purchasing a licence, primarily the provision of experts. Furthermore, to make the best use of a licensing contract

it is essential to oblige the licensor to keep his partner continuously informed of all developments in the relevant field for the contract's duration. The purchasing of licences under such conditions has helped Podravka experts gain insight into the technological processes of foreign firms, and to make use of a wide range of information concerning new developments in the European and world food industry. As a result, all licences are further developed in Podravka laboratories, and there have even been instances of Podravka's solutions having exceeded in scope those of its partners.

This intensive research and the linkage of know-how and practice, as well as the attention paid to the market, have won Podravka products in Yugoslavia and abroad a great many prizes and awards for consistency and high quality. With regard to the introduction of new technologies, exceptional attention is devoted to the protection of the human environment. This is necessary since Podravka plants and factories are potentially great environment polluters, especially the meat and pharmaceutical and chemical industries. Considerable effort put into water-purification facilities, and exceptional care to improve the conditions of work and to humanize work-places, have conferred upon Podravka the highest Yugoslav and Croatian awards, including in 1979, the silver badge of the Yugoslav Institute for the Protection and Improvement of the Human Environment.

Podravka has also achieved results in its efforts to become an industry without waste. For example, all meat industry waste (especially in animal blood processing plant and in the pharmaceutical factory) is processed and being made use of, and so are beer slops, the by-products of meat-extract processing, coffee and other products.

4. IMPORTANCE OF THE SALES NETWORK AND MARKETING

Simultaneously with the development of new lines of production and research into new products and technologies, Podravka has intensively striven to develop the new marketing function, adapted to Yugoslav market conditions. In line with its targets, it has developed specialized services to carry out market research and sales promotion, draw up new marketing programmes, conduct economic publicity, promote consumer education throughout the country, establish a network of warehouses with its own and consigned stocks, organize transport on its own

account, and found a network of representative offices and agencies. A special organizational unit, RO Podravka-Trgovina, for commerce, alone employs over 800 experts and other staff whose basic duty is to investigate, promote and foster contacts with the Yugoslav market.

The Yugoslav market is today supplied with Podravka products through three basic distribution networks. First, service for the sale of foodstuffs. Secondly, service for the sale of beverages. Thirdly, service for the sale of pharmaceuticals and chemical products. Each of these networks is organized in a specific way, depending on the character of products it sells, and on their consumers. The distribution network for the sale of foodstuffs has main representatives offices at Belgrade, Ljubljana, Sarajevo, Skopje and Zagreb, which employ a large number of experts, and which direct distribution over a wide area, in line with instructions from and in consultation with the head office in Koprivnica. There are, in addition, regional representative offices in Koprivnica, Kragujevac, Niš, Novi Becej, Osijek, Rijeka, Sisak and Split. Furthermore, the entire Yugoslav territory is divided into sectors covered by teams of salesmen and experienced tasters who organize product tasting in shops, schools, companies etc.

In addition, Podravka has invested large amounts for many years in the build-up of its own distribution warehouses throughout the country in order to accelerate delivery of goods to buyers. It has large distribution warehouses of its own in Koprivnica, Nis, Rijeka, Skopje, Umag and Zagreb. It also makes use of the storage facilities of other enterprises in Bar, Dubrovnik, Grosuplje, Kragujevac, Maribor, Novi Becej, Sarajevo and Split. All these warehouses are supplied with goods from the large central storehouse in Koprivnica. In 1979, Podravka placed on the Yugoslav market through its own warehouses, 49.6% of its goods, the rest being distributed through consignment stocks operated by other enterprises. The services of the latter are rather expensive; their prices amounting on an average to 4-4.5% of the value of the goods. Because of the importance of efficient transport of goods, Podravka has over years of investment managed to build up its own transport service which now consists of almost 400 units. Despite this large number of vehicles, Podravka's transport on its own account on the Yugoslav market accounts for only about 29% of the

total amount of its goods sold. Other road carriers account for about 52%, and railways for the remaining 19%. With the construction of its factory lines, the share of railways has increased.

As a result of the continuous efforts over a period of 20 years to expand marketing operations, and to a more business-oriented attitude towards market requirements, Podravka is known in Yugoslavia as a model of efficient marketing and distribution network. In addition to local awards, Podravka was the first enterprise from a socialist country to receive the US award "TOP 20", which was conferred by the Sales and Marketing Executives International of New York in 1968. In 1977, Podravka received the national award, "Gold Mercury".

5. FINANCING

The provision of financial resources such as long-term and short-term credits, and the circulation of resources within organizational units and their relationships, have always been and remained an important objective of Podravka's financial experts and economists. Initially, this work was largely carried out by the accounting services, in co-operation with the local bank. However, it was soon realized that monetary circulation should be based on a different and more functional basis because of its great importance for the firm's overall development. For this reason, Podravka established in 1971 its own internal bank to liaise with other banks and to guarantee an improved system of distribution and internal monetary circulation within the firm itself, on the basis of detailed self-management agreements based on the principle of solidarity among Podravka's individual units.

Until 10 years ago, sufficient credits for capital development were difficult to obtain and expansion of business was a serious problem. Podravka was not covered by Yugoslavia's general development plans and was compelled primarily to rely on its own capital resources. From the outset, despite numerous difficulties, available resources were largely used for three main purposes: (a) Development of the raw material base; (b) Expansion of existing facilities and construction of new ones; (c) Sales promotion. In addition, considerable investment was made in improving the living standards of its employees, communal infrastructure etc.

Since 1972, Podravka has systematically invested considerable sums in large-scale land reclamation projects on its farms, bringing over 300 hectares of previously less fertile soil into modern cultivation. As a result, not only have yields been increased, but the reclaimed land has also made it possible to cultivate other field crops which are necessary for industrial processing.

Large sums were at the same time allocated for production and construction of farm buildings and the purchase of equipment on private farms both within areas in which Podravka's industrial plants operate and elsewhere. These outlays have made it possible to increase yields in field crops, improve livestock production, and switch to the cultivation of crops which represent indispensable raw materials for industrial use.

Podravka invests exceptionally large amounts of funds in manufacturing capacity, including land reclamation on its own holdings. In this respect it ranks among the most forward enterprises in Yugoslavia (see table 7). Debt-service costs on the lively capital market in Yugoslavia are rather high; so Podravka strives primarily to rely on its own sources of finance, although in recent years increasing resort has been made to raising large bank and other loans in order not to delay implementation of programmes which promise fast returns. From 1967 to 1979, of the total amount of resources invested, 62.6% was financed from Podravka's own accumulated savings; a high figure under Yugoslav conditions. This policy has meant smaller debt-service costs and has made it possible for further capital development.

Podravka pays great attention to the vertical linkage of manufacturing and trade, i.e. co-operation with numerous trade organizations throughout the country; this is also with regard to mutual financial relations. This co-operation includes construction of sales facilities in various consumer centres in Yugoslavia and investment in such facilities on a joint profit- and risk-sharing venture basis. These trade organizations ensure the Podravka achieves sales on a long-term basis and enable it to co-operate in market research and sales promotion. Such relations, based on long-term arrangements and self-management agreements, have been established with department stores and other trade organizations in Belgrade, Kragujevac, Nis, Rijeka, Zagreb and other major cities.

Table 7. Investment outlays and share of
Podravka's own resources, 1967-1980

(Thousands of dinars)

Year	Outlays	Own resources	Percentage
1967	10,208	7,150	70.0
1968	20,524	19,100	93.1
1969	26,549	19,300	72.6
1970	82,140	39,259	47.7
1971	65,132	26,005	39.9
1972	63,415	22,496	35.4
1973	124,871	75,120	60.1
1974	127,489	87,072	68.2
1975	181,196	157,636	87.0
1976	277,844	183,489	64.2
1977	268,350	128,540	47.9
1978	593,785	379,100	63.8
1979	753,358	301,343	40.0
1980 (planned target)	712,005	250,000	32.4

Because of Yugoslavia's complex problem with regard to balance-of-payments deficits, Podravka is also faced with significant difficulties regarding the provision of foreign exchange, in particular for the purchase of equipment and intensive construction of capital projects. For this reason, the orientation towards producing an increasing number of products for foreign markets has in recent years gained in intensity. In the last few years, the firm has increased

exports many times over in order to meet its foreign exchange requirements (see table 3). In spite of these efforts, foreign exchange requirements in 1979 still exceeded the value of exports, so that in 1980 and thereafter, more intensive efforts to foster exports will play a vital role in further expansion. Because of this, a special organizational unit was established in 1978 (Podravka Vanjska Trgovina), for external trade, with teams of experts and a separate marketing service.

Table 8. Exports from 1962 to 1979 and
planned target for 1980

<u>Year</u>	<u>Goods in tons</u>	<u>Value in thousands of dollars</u>
1962	267	89
1963	253	79
1964	1,257	1,000
1965	1,938	1,650
1966	2,365	2,153
1967	2,704	2,657
1968	2,184	2,029
1969	3,080	2,856
1970	4,162	4,179
1971	3,813	4,281
1972	6,629	6,645
1973	6,717	8,285
1974	5,248	6,024
1975	4,601	5,920

Year	Goods in tons	Value in thousands of dollars
1976	14,117	12,194
1977	14,512	13,199
1978	14,030	13,193
1979	19,320	20,150
1980 (planned target)	28,000	31,000

6. STAFF

One strategic question concerning the firm's development from the outset was the problem of obtaining the skilled staff necessary to carry out the increasingly complex tasks imposed by modern business. Since 1957, an appropriate personnel policy, coupled with a restructuring of the production programme and intensive capital development, has been one of the main pillars of Podravka's development. This aim was difficult to attain, because Koprivnica and Podravina had few if any skilled industrial staff, and this agrarian region, located far from Yugoslav centres of higher education, offered little to attract skilled personnel.

These difficulties made it necessary to pursue a specific personnel policy, based on a relatively large investment in providing scholarships for training personnel in secondary and advanced post-secondary schools and at universities, housing for skilled staff through intensive housing construction, and care for their social welfare and standard of living. Finally, further staff training was essential, based on studies combined with employment. It was necessary to invest considerable effort and resources to train the mainly unskilled workers that had left farming, not only to operate production lines, but also to perform business operations and other tasks. However, the outlays made over many years have fully justified themselves, so that Podravka now has relatively highly skilled staff, whose level of training exceeds that found in many large enterprises located in university centres (see table 9).

Table 9. Vocational composition of the staff employed
in Podravka in 1957, 1967 and 1978

Qualifications	1957		1967		1978	
	Num- ber	%	Num- ber	%	Num- ber	%
University and college education	9	3.1	66	3.8	411	7.6
Post-secondary education	4	1.4	15	0.9	212	3.9
Secondary school education	21	7.4	250	14.3	1,002	18.3
Lower-grade school education	12	4.2	60	3.4	153	2.8
Highly skilled workers	7	2.5	78	4.5	282	5.2
Skilled workers	36	12.7	355	20.3	1,167	21.4
Semi-skilled workers	31	10.8	203	11.5	447	8.2
Unskilled workers	165	57.9	723	41.3	1,776	32.6
Total	285	100	1,750	100	5,448	100

Since 1957, Podravka has rapidly expanded, not only in terms of the total number of staff employed, but also through a radical change in their educational level. This has brought about revolutionary demographic changes in this agrarian region of the commune of Koprivnica. In 1980, one in nine members of the Podravka staff has a post-secondary education or university diploma, and almost one in five staff members has at least secondary education. Some 20 staff hold M.A. and three have D.Sc. diplomas; these degrees have all been obtained while working in the firm.

Table 10. Scholarships granted by Podravka
for personnel training by basic group of education
in 1973, 1976 and 1979

Education group	1973	1976	1979
Secondary school	16	32	91
Post-secondary schools	14	48	109
University	15	23	29
Post-graduate studies	13	52	92
Funds invested (thousands of dinars)	170	1,470	3,600

In addition to granting scholarships to a relatively large number of secondary school students, predominantly in the food branch, and to students at post-secondary schools, colleges and university faculties (see table 10), Podravka organizes each year various seminars and courses, short courses for unskilled and semi-skilled workers, and training courses for a number of indispensable specialized industrial skills in industrial safety, hygiene etc. Several hundreds of workers complete such courses, which are organized in cooperation with Koprivnica and other secondary schools and universities. In 1979, for example, 1,150 employees completed such courses.

Podravka allocates 2.2% of its total income for crediting pupils and students each year. In addition, it apportions considerable funds for the further schooling and training of its workers, (in 1979 a total of 3.6 million dinars was allocated for the purpose).

An important role in attracting staff is the continuous care for employees' living standards and welfare. This primarily relates to housing construction: Podravka has today over 500 dwellings, and for 17 years it has financed private building under favourable terms. As a result, about 1,500 Podravka employees

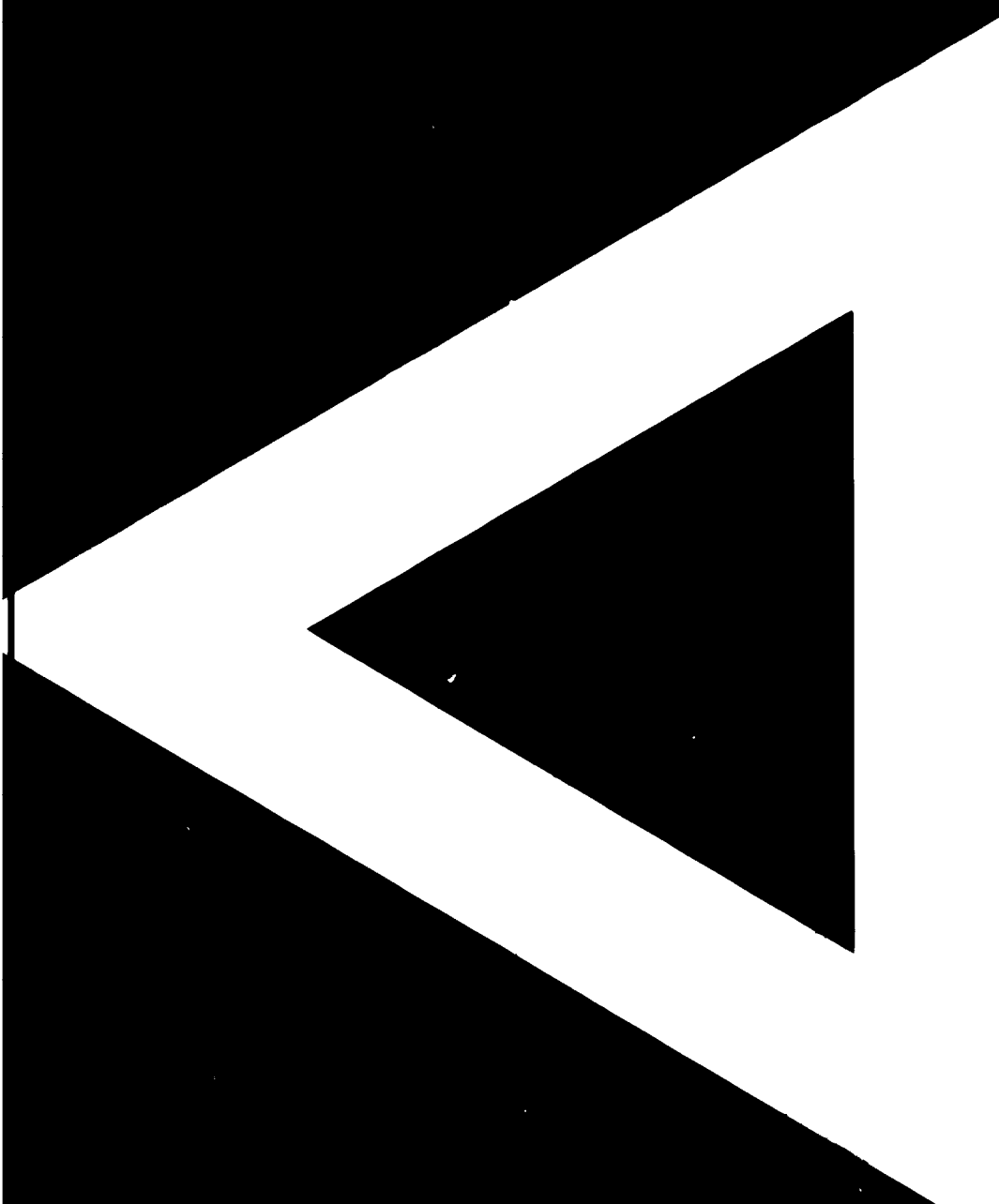
have solved their housing problems. Today, no employee with a family and with over five years' service has not solved his or her housing problem. In addition, Podravka ensures its staff high-quality and low-cost meals during working hours, it has its own workers' rest-centres on the sea coast, and pays great attention to meeting their cultural, educational, sports, recreational and other needs. It is precisely as a result of the results achieved in this field that Podravka is well known to the Yugoslav public. To be added to this is the healthy, creative climate and interpersonal relations prevailing in the firm; a result of years of care for the development of socialist relations of self-management in the collective.

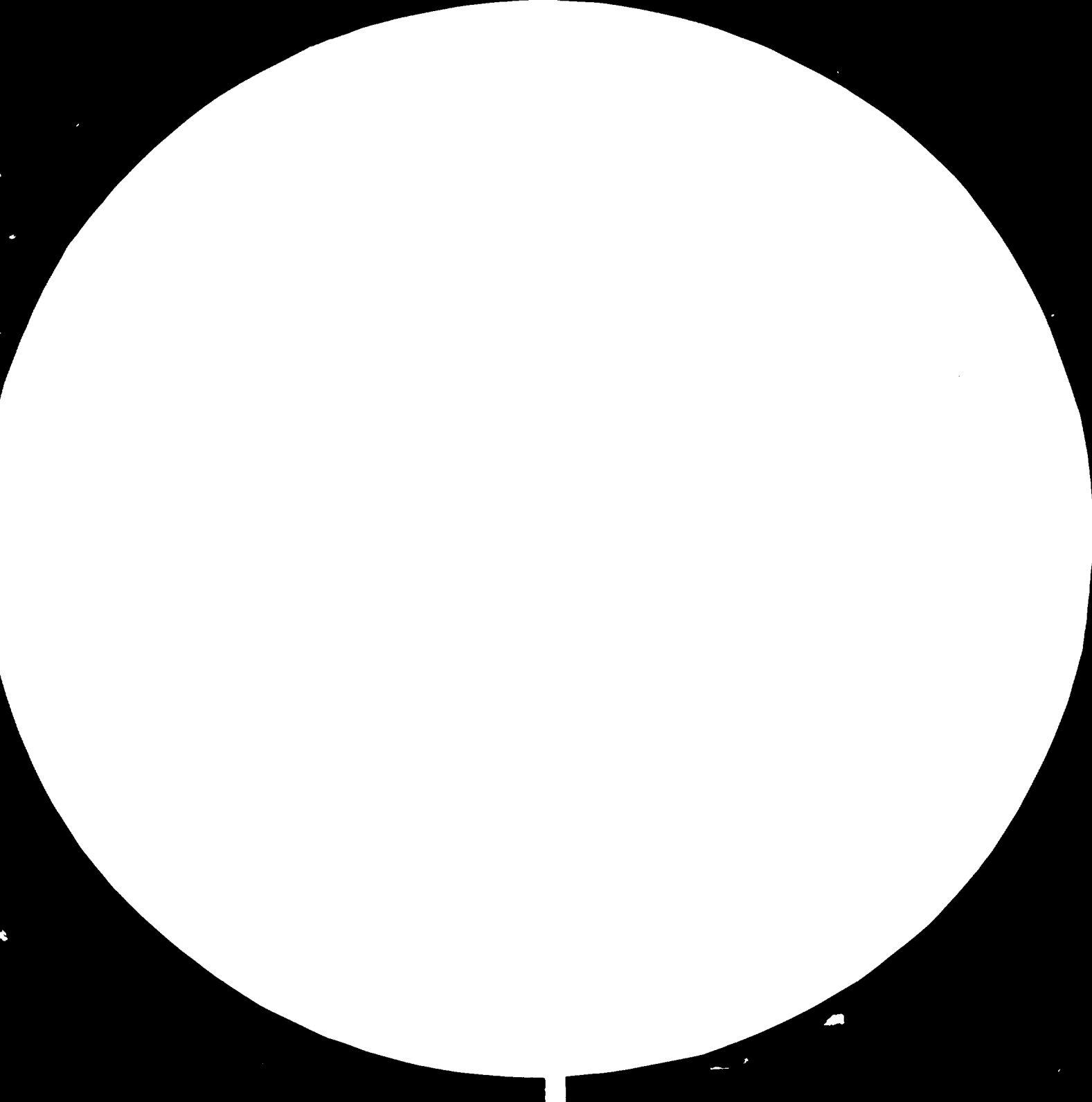
7. GOVERNMENT ROLE IN THE DEVELOPMENT OF PODRAVKA

The role played by the Government in Podravka's development is complex and difficult to measure quantitatively. It manifests itself in various forms from the positive results achieved in co-operation between Podravka and territorial communities and communes, especially those in which its plants are located, to the influence exercised by federal and republican system-related economic and social measures and solutions. Being itself an integral part of this system, Podravka also takes part in its further improvement and development. The influence of the Yugoslav community is primarily reflected in the free system of education and the increasing activity of research in similar institutions, the results of whose work is made ample use of by Podravka in its operations and development. To this should be added services provided by the expanding infrastructure in Yugoslav consumer centres, especially in towns and localities in which Podravka's plants are located. The trade network and distribution of goods improve from year to year, and this also favours the firm's further prosperity. Part of its commercial capital is also invested in the expansion of its own manufacturing capacity.

In the complex question of the role played by the Government in its development, Podravka sees, not for itself only, the great importance of the problems of prices. By subsidizing the production of meat, milk, field crops and other farm products, the community exercises a direct influence on the stability and prosperity of these branches of the economy. Of enormous influence also is the policy of obtaining credits for the construction of capital and other projects. These are primarily implemented through the banks, but also through chambers of economy, territorial communities and other organizations.

In the field of economic and social relations, Podravka strives to find its right place, and judging by the results it has achieved to date, its workers and experts have succeeded in ensuring that the firm achieves an enviable prosperity.







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Corrigendum

Page 8, last paragraph, line 3

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