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05412



Distr.
LIMITED
ID/WG.171/9
1 April 1974
ORIGINAL: ENGLISH

United Nations Industrial Development Organization

International Consultation on
Agro-Industrial Development

Belgrade, Yugoslavia, 13-18 May, 1974

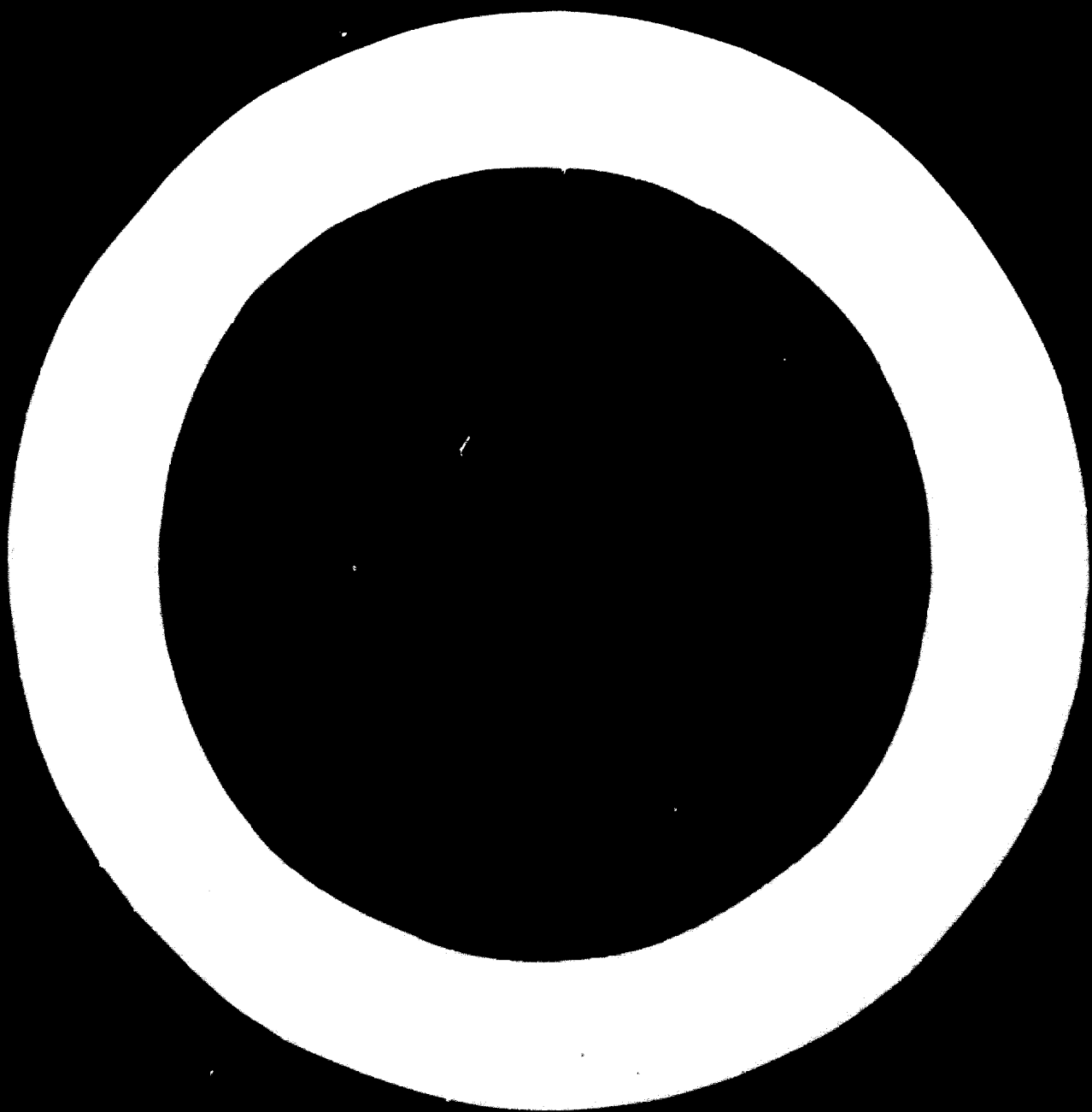
HIGHER FORMS OF AGRO-INDUSTRIAL INTEGRATION
WITH PARTICULAR REFERENCE TO THE AGRO-INDUSTRIAL COMBINE "SIRMIUM" ✓

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INTRODUCTION

The purpose of this paper is to give a survey of the situation and relations in the existing basic forms of integration, in the agro-industrial complex, and especially of the attempts at further integration in Yugoslavia. This will be shown in the example of the agro-industrial combine "Sirmium" and other complex enterprises in the field of agriculture, food industry, trade and other activities closely connected with the abovementioned activities.

Recent developments in agriculture and food industry have been characterised by an intensive process of integration between agricultural organizations, food-processing and trade organizations, the outcome being that strong agro-industrial complexes are developed in the form of agro-industrial combines and other forms of association.

The results achieved in this sphere in the post-war period have been very important. Agricultural production output in relation to the pre-war situation has been doubled. Considerable developments have been achieved in the food industry, the manufacture of agricultural machinery and the chemical industry, total social agriculture, especially the agro-industrial complex, playing an important role.

The integration of agricultural organizations, agro-industrial combines and other organizations in the agro-industrial sector with the trade, the suppliers of agricultural equipment, primary products and auxiliary materials, as well as with science and other social activities essential to agriculture has been developed to ensure the full utilization of all available natural resources and possibilities. However, much better production and economic results have yet to be achieved.

The basic organizational forms in the agro-industrial complex, although self-management is still in the course of development are the following:

1. basic units (plants, simple enterprises) and farmers' co-operatives;
2. working organizations (enterprises which may consist of several basic

- units, plants or simple enterprises);
3. complexes comprising an association of agricultural, food processing and marketing units (combines, associate organizations, agricultural marketing);
 4. unions comprising a number of basic organizations in a working complex;
 5. business associations and branch associations;
 6. specialized associations, and
 7. business communities and interested communities (self-managed funds, organisations for the improvement and development of agriculture) established by interested enterprises or associations.

BASIC ORGANIZATIONAL FORMS IN AGRO-INDUSTRIAL COMPLEXES

Basic association of labour organizations and farmers' co-operatives

The basic unit (plant or simple enterprise) is a basic form of labour integration in which the workers directly and equally realize their socio-economic and managerial rights. The basic unit enjoys complete economic and legal independence; it constitutes the productive forces of society and a basic component in the process of further integration.

In 1973, thirty-one basic units were constituted to form the agro-industrial combine "Sirmium", of which nineteen were agricultural production units, seven food processing units and five professional service units. All units merged to form the agro-industrial combine "Sirmium", a complex enterprise. The basic reasons for the integration were as follows:

1. Vertical link between specialized production processes extending from the raw materials to the sale of the final products on the market
 - a) sugar beet - sugar,
 - b) maize - feedstuff plant - cattle breeding - industrial slaughterhouse and canning plant - retail shops,
 - c) maize - industrial processing of maize for human food,
 - d) milk - dairy-retail shops;
2. Joint establishment of production programmes for the purpose of specializing and dividing labour, co-ordinating agricultural production capacities and food processing resources, intensifying production through the application of modern, uniform technology and techniques, and establishing and utilising specialized techno-economic services on a joint basis;
3. Pooling resources in order to implement joint development programmes, thus ensuring a more rational and efficient reconstruction and modernisation of existing plants and the construction of new plants.
4. Joint marketing operations, (purchases and sales) contributing considerably to economic and efficient trading.

Apart from production on the basis of publicly owned resources, a

number of basic agricultural units work with farmers (co-operation)^{1/} who have their own means of production (land, cattle, buildings, machinery, etc.). Two basic units are exclusively engaged in co-operation with private sector.

At the end of 1973, a process of important reorganization commenced in the combine. Of the existing agricultural basic units those are specialized basic units whose exclusive activity is the integration of labour and resources of farmers and workers in the social sector for the purpose of further improving agricultural production in the private sector and continually expanding the economic foundations of labour and self-management.

Unions of basic units

Apart from merging into enterprises comprising several units and plants, basic units may also set up unions of basic units in order to implement certain joint activities and functions more rationally and efficiently, either on a territorial basis or as a large production entity. An example of this is the combine "Sirmium", where basic units have set up unions as an intermediate stage between a basic unit and the combine.

In the agro-industrial combine "Sirmium" three unions have been formed: two in the agricultural sector (Agrorum and Mitrosrem) and one in the food sector (slaughterhouse and canning plant Mitros).

This union of basic units is a legal entity, enjoying its own banking facilities. The scope of activities, the rights and duties of the Union as well as the relationship between the associated basic units are determined by the self-management agreement on integration.

The basic reasons for integration of this kind may differ, but they

^{1/} "Co-operation", collaboration is the term used to describe the collaboration of co-operatives, combines or their "basic units" with farmers on the basis of contracts which define the rights and obligations of both parties. This form is extensively used in Yugoslavia, and agricultural production and productivity are substantially improved as a result, even on small peasant farms. Through this kooperacija, combines or co-operatives supply farmers with up-to-date means of production, necessary services and "know-how", if necessary on credit, and serve as market outlets for the associate farmers, thus securing raw materials for their own processing plants.

are mainly the wish to establish joint development programmes and pool resources and services (accountancy, marketing and for planning) as well as draft a common policy for co-operation and specialization of production.

The unions in the agro-industrial combine "Sirmium" are as large as or even larger than a large number of agricultural organizations and combines in Yugoslavia, some of which have a total revenue of 420-500 million dinars, and all of which employ a permanent staff of over 1,000 people.

Agro-industrial combine/complex

Despite the intensive integration process in agriculture and the food industry over the past few years, there are still a considerable number of agricultural organizations, farmers' co-operatives and food industry enterprises which operate independently outside the agro-industrial complexes. These organizations are decreasing in number as they merge and form new combines, or more often join existing ones. The technical and technological revolution based on the economies of scale, greater economic integration in keeping with the international pattern of the division of labour, competition on local and foreign markets, and the regulations of the new constitution promoting the process of integration are the factors which further accelerate the merging and integration of enterprises into production-cum-marketing complexes as well as strengthen their ties with science and banks.

Within the framework of the agro-industrial complex, the following organisational forms have been formed: agricultural, food, agro-industrial or industrial-agro combines.

In respect to their status, they are either complex organisations or integrated enterprises or, of late, complex enterprises. Regardless of the legal-economic characteristics and socio-economic relations, which have been formed in some combines, the largest number of combines are complex organisations incorporating production, processing and marketing activities. According to their basic production capacities, number of workers, volume of output, sales and other criteria, these are large-scale organisations, which are an important factor on the local and

export markets, and they accumulate considerable resources. Agro-industrial combines up to now have been a progressive form of integration, and important agents of food industry and agricultural development introducing and promoting modern technology and techniques, specializing in production, raising labour productivity, and modernizing marketing practices, etc. They are, also, a basis for further positive trends in the creation of production complexes.

Basic economic and legal features of the agro-industrial combine "Sirmium"

The agro-industrial combine was established in 1963. At present, it has the following production capacities:

- Total surface of land, hectares	35,000
- Cropland, hectares	30,000
- Land worked in co-operation (property of farmers, co-operators), hectares	30,000
- Fattening of pigs, heads annually	70,000
- Fattening of bullocks, heads annually	10,500
- Annual processing of sugar beet, metric tons	500,000
- Pigs slaughtered annually, heads	150-180,000
- Bullocks slaughtered annually, metric tons	30-35,000
- Mixed feed production, metric tons	60,000
- Milk processed dairy, litres	35,40,000
- Production of beer, 000 litres	15,000
- Industrial processing of maize for human food, metric tons	26,000

Employees number 4,700 and the average fixed and working capital amounts to 1.2 billion dinars.

The combine "Sirmium" annually produces or purchases:

- 80,000 tons of wheat, 80-100,000 tons of maize, 10,000 tons of sunflower seed and 400,000 tons of sugar beet;
- 120-180,000 porkers, 15-20,000 fattened bullocks and some 3.5 million litres of milk;
- 25,000 tons of meat and meat products, 50.5 million tons of sugar, 15 million litres of beer, etc.

The total output value is around 2 billion dinars, and exports amount to about US\$10 million.

According to the statistics for 1972, Sirmium is the twenty-fourth largest enterprise in Yugoslavia, and one of the five largest agro-industrial combines in the country.

Over the past few years, the combine has purchased around 6,000 hectares of land, completely mechanized agricultural production, constructed the necessary number of dehydrating plants, grain elevators, modern efficient yards, roads, some 500 hectares of orchard, six modern pig farms with a total capacity of 60,000 porkers, etc. The combine has built two feed mixing plants and one plant processing maize for human consumption; it has expanded a sugar mill from 200 to 500,000 metric tons of processed beet annually. The reconstructed brewery and dairy have more than doubled their processing capacities.

These activities represent only part, albeit the larger part of the combine's investment in the last ten years.

Plant expansion, reconstruction and modernization, the introduction of modern technology, specialization of production, increasing labour productivity and output by 150 per cent are the result of the integration and joint work which has made the combine renowned for its development thrust not only locally, but also throughout the Province of Vojvodina and even further.

Socio-economic relations in the combine are characterised by a high degree of self-determination and the principle of agreement and contracts.

Relations between basic units are set at a business level and are based on the principles of equality, economic interests and solidarity. The income is determined and calculated at basic unit level and the units fully dispose of their own funds and decide independently on the distribution thereof.

Any savings remain in the unit funds which are pooled with other unit funds for joint investments according to agreements concluded between the basic units concerned.

The following joint services and sections have been established within the combines:

- Development sections,
- Internal bank,
- Agricultural station,
- Trading section,
- Section for co-operation with farmers,
- Section for self-management and general activities.

Over the past few years, greater emphasis has been laid on development, marketing and financing, all of which have become important factors in joint activities.

The investigation of development possibilities, market surveys, purchases and sales, acquisition of funds, production of programming, planning and implementing projects - all of these are major, yet expensive activities, which can be effected and further developed more efficiently in large and complex enterprises. They contribute significantly to cohesion and integration, especially when other integration prerequisites exist.

HIGHER FORMS OF ASSOCIATION BETWEEN COMBINES AND OTHER ORGANIZATIONS

The example of the agro-industrial combine "Sirmium" show that the production units in agriculture and the food industry are conceived either as basic units (agricultural estates, livestock farms, farmers' co-operatives) or as comparatively complex enterprises (agro-industrial combines). It follows that agro-industrial combines are the highest form of organized production unit, in which integration and industrial processing play the dominant role, a secondary factor being the growing significance of trade and tourist organizations.

This degree of integration, however, does not permit the maximum utilization of all the possibilities offered by co-operation, specialization, and readily available goods and money. Hence, integration on an even higher level is required.

The forms of integration at a level higher than agro-industrial combines are very different, with a continual tendency towards change and improvement.

There are voluntary forms of integration, such as various business associations; they can also be legally constituted, such as economic chambers, or specialized, such as specialized business associations, or even complex, such as business communities, and joint funds. They can also be forms of integration covering particular regions or republics, or even the whole of Yugoslavia.

The combine as a whole or particular organizations within the combine, if interested, may become members of certain integrated groups, depending on the activity of the association, as demonstrated by the membership of the combine "Sirmium" and some of its basic organizations.

Economic chambers

All enterprises are full members of the principal economic chamber, which in the case of the agro-industrial combine "Sirmium" is the Economic Chamber of the Socialist Autonomous Province of Vojvodina, and the Economic Chamber of Yugoslavia.

The economic chamber of the Socialist Autonomous Province of Vojvodina (SAFV) is an association comprising all economic organizations in the Province. The chamber is not a business organization, but an organization formed to decide on all questions of economic policy, to discuss the current status of particular branches of the economy, development prospects, momentary and other problems, as well as relations with state bodies. The chamber acts through its Assembly and Management Board - or through particular councils for particular economic branches and groupings. In all the chambers, there are councils for agriculture and the food industry.

Specialized business associations

Business associations are voluntary associations formed by economic organizations to carry out jointly certain activities in particular economic fields. Examples of such associations are:

1. Hybrid, an association of maize seed producers

Hybrid is one of the specialized business associations, the combine "Sirmium" being a co-founder. The Association was established by organizations engaged in the production of hybrid maize seed and scientific institutions engaged in the selection and new varieties of hybrid maize. The associated organizations carry out the following activities:

- I) Agree upon a long-term development plan and programme for maize seed production, on the basis of which annual production plans are drafted with a view to sales in Yugoslavia and abroad;
- II) Determine a publicity programme for new hybrids;
- III) Sell the maize seed produced;
- IV) Finance in part research into maize selection;
- V) Promote the technology of maize seed production, mechanisation, finishing, drying, storage and marketing.
- VI) Effect business on behalf of the units through an association bureau, the association having its own management.

2. Association for the mechanization of agriculture

This association was established by agricultural enterprises, large repair and maintenance organizations, or commercial organizations engaged in agricultural machinery and spare parts.

The associated organizations work on problems relating to the standardization of tractors and other agricultural machines, the import of tractors and spare parts, co-operation with local agricultural equipment manufacturers, as well as the maintenance and repair of equipment.

3. Koprodukt, an association of the producers and processors of livestock, meat, milk and feedstuffs.

This is a large-scale association founded by agricultural organizations, the producers of livestock and milk, the feedstuff industry, slaughterhouses and dairies. Members of this association are mostly from the province of Vojvodina, and are automatically members of the national association STOPO, the Promotional Fund for the Production, Processing and Marketing of Cattle and Cattle Products.

Its functions are manifold, some of which are:

- I) Joint acquisition of loans to finance the production and processing of livestock, feedstuffs, meat and milk;
- II) Joint contracting and procurement of raw materials (livestock for fattening, imports of protein-rich feeds, and industrial auxiliaries);
- III) Joint drafting of annual and long-term production and development plans;
- IV) Joint employment of scientific institutions to study specific subjects and apply scientific findings to integrated organizations;
- V) Survey of market demands at home and abroad;
- VI) Organization of imports, joint sales, etc.

Groups of associated organizations carry out the following activities:

The producers of raw materials for livestock adjust their production in terms of output, structure and quality to the programmed requirements of the associate feed mixing plants. The feedstuff plants plan their operations (output, structure and quality) according to the needs of the livestock producers and local and foreign market demand.

The livestock producers organize their output according to the needs of the associate slaughterhouses and meat packing plants, as well as possible sales on local and foreign markets. The meat processing industry purchases livestock in keeping with the sales potential of meat and meat products on local and foreign markets. The milk industry effects its purchases on the same principle.

In view of the above, the association has the following sub-groups:

- Producers of raw materials;
- Feedstuff factories;
- Livestock producers;
- Meat processing plants;
- Dairy processing plants.

The association as a whole is managed by its Assembly and Management Board, whereas the sub-groups are controlled by management boards, consisting of delegates of associated organizations. Operational activities on behalf of associate members are carried out by the office which has a professional staff and others in a supporting capacity.

4. Promotional fund for the production, processing and marketing of cattle and cattle products (STOFO)

This fund is similar in structure and activities to Koprodukt, however it is a country-wide association specifically for the producers of livestock, milk, meat and feedstuffs.

Membership is open to enterprises and their regional business associations engaged in the production, processing and marketing of livestock, feedstuffs, meat and milk. The aims of the fund being:

- i) to improve and stabilize production, processing and exports/imports of products in the field of livestock production;

- ii) to co-ordinate its members' activities in order to establish a corporate image on foreign markets.
- iii) to balance the exports and imports of livestock products and local market supplies, thus contributing to price stabilization.

In order to achieve these objectives, the members draft livestock production and sales programmes on the basis of programmes prepared by the associate groups and in accordance with local demand and export requirements. They also collect information on up-to-date achievements in livestock production and processing and assist the members to take advantage of the same. They set up joint funds to finance common projects, and assign responsibilities for the realization of production programmes and livestock sales and the marketing of livestock products. They also prepare on a joint basis policy measures necessary for the realization of the production and sales programmes for suggestion to the respective government bodies and other institutions. They also assign responsibilities to associate enterprises in the implementation of activities of common interest and settle problems arising during implementation of the programmes.

5. Business association of the Yugoslav sugar industry

The association was founded by sugar mills attached to agro-industrial combines, the aim being to promote the production of sugar beet and sugar using the latest technology and to sell sugar products on a joint basis. More specifically, the area of joint activity is:

- I) Co-operation in the development and utilization of sugar mills;
- II) Co-operation with local and foreign equipment manufacturers in investment in and reconstruction of mills;
- III) Co-operation with scientific and professional institutions in the promotion of sugar beet and sugar production;
- IV) Protection of the sugar industry's interests in federal and other bodies when policy measures pertaining to the sugar industry are being decided;
- V) Collaboration in the elaboration of annual and long-term development programmes; and
- VI) Joint sugar sales, etc.

Membership is also open to scientific institutions carrying out

research on behalf of the sugar mills into the application of the latest local and foreign developments.

6. Business association of the dairy industry

The industrial scale dairies in Yugoslavia have established a business association, the aims of which are

- I) Representation of the dairy industry's interest in policy-making bodies and institutions;
- II) Investigation of production and market trends in other countries with a view to adopting dairy product import and export policies and proposing appropriate measures to the government and other institutions;
- III) Development of business and technical co-operation with international and national dairy organizations of other countries;
- IV) If necessary, joint and individual purchase of equipment, auxiliaries and spare parts in keeping with members' requirements, as well as the joint sales of their products;
- V) Organization of joint participation in fairs and exhibitions in Yugoslavia and abroad;
- VI) Elaboration of investment programmes and designs for the reconstruction of existing plants and the construction of new projects, as well as the establishment of a maintenance and repair service; and
- VII) Completion of techno-economic analyses and information services to meet the needs of its members.

7. Business association of the agro-industrial combines of Yugoslavia

This association is the largest association of integrated complex enterprises and agricultural production institutions, involved in the processing and marketing of agricultural products, agricultural science, staff training and agricultural extension services.

The agro-industrial combines and other organizations in this association have the following aims:

I) Co-ordination and promotion of production; collection of information on and application of the latest developments in agriculture and food industry; expansion of collaboration with individual agricultural producers; transfer of production experience and technology; completion of business transactions and internal organization of combines; mutual assistance in the up-grading of know-how through technical assistance, supply with seeds, breeding stock, raw materials and joint investments in particular projects;

II) Joint purchase of equipment and raw materials, as well as joint sales of their products in Yugoslavia and abroad, thus ensuring the most favourable trade conditions through direct purchase and bulk sales

III) Sale in Yugoslavia and abroad of their know-how and technology relating to the agricultural, food processing and feedstuff industries in the form of pre-investment studies, investment projects, construction of complete projects, provision of technical assistance in the development and management of complex enterprises;

IV) Study the supply demand and price trends on local and foreign markets relating to agricultural and food products, raw materials and equipment, in order to ensure best purchase and sales;

V) Study of economic conditions with respect to business activities, organization and efficiency in the agricultural and food industries and the subsequent proposal of measures for improvement, with particular respect to price, credit, taxation and investment policies, foreign exchange, foreign trade systems and policies.

VI) Investigation of possible technical and financial co-operation with local and foreign enterprises, establishment of agencies abroad in order to improve the purchase and sales of goods as well as services in agriculture, food processing and feedstuff manufacture.

Further to the above associations, there are others, such as the oil industry association and the association of vegetable and fruit producers and processors.

Combines or their units co-operate in matters of business and other

associations collaborate on a voluntary basis, in order to operate more rapidly and efficiently and solve problems of mutual interest. The advantages which a combine enjoys when associated with these higher forms of integration may be classified as follows

- I) Common approach when dealing with business partners, banks, state bodies, etc. thus solving particular problems more efficiently.
- II) Employment of scientific institutions on a joint basis in order to carry out research into problems of interest to most or all associated organizations.
- III) Agreement on joint transactions, mutual exchange of experience with respect to long-term planning and programming etc.

It might be noticed that in the process of integration in the agro-industrial complex, a large number of associations have been established, some of which overlap. The basis remains however, that the combines or parts thereof and other organizations within the agro-industrial complex integrate voluntarily to form higher associations, and that through their delegates they manage all activities, entrusting to the associations only those tasks where joint implementation is less expensive and more efficient for its members.

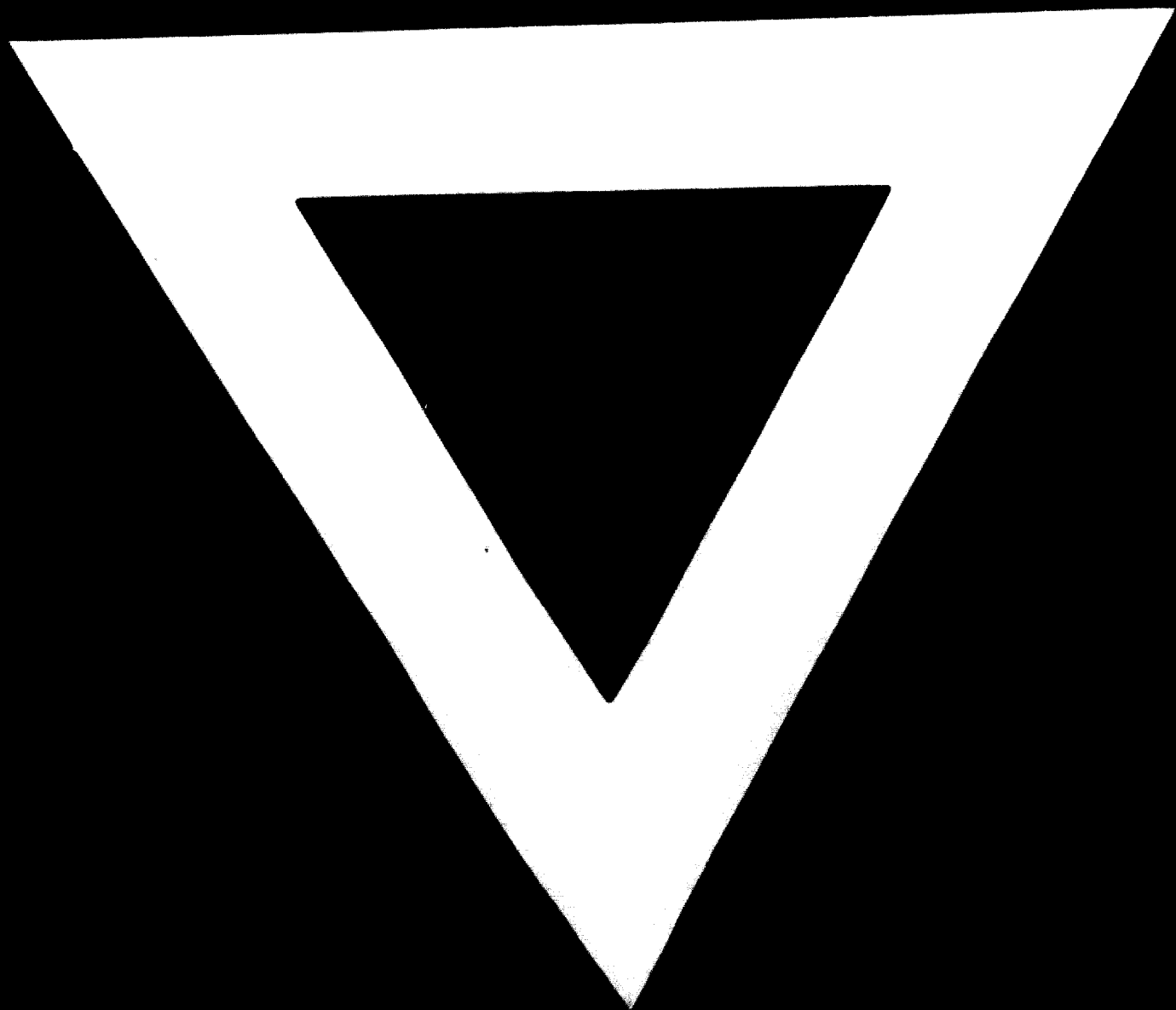
NEW INTEGRATION TRENDS IN THE AGRO-INDUSTRIAL COMPLEX

In accordance with the new Yugoslav Constitution which has just been adopted after a long and extensive public debate, efficient forms of integration are being sought within the agro-industrial complexes, as well as within the trade and insurance organizations, banks and similar bodies.

Investigations and analyses have been carried out with a basic aim of making the existing associations more effective and, if appropriate, reducing their number, developing specialized branches and the vertical integration of particular production lines, starting from primary production in agriculture, through processing, trade and banks to large consumers (supply of major cities, tourist, industry). The possibility is also being examined of linking such associations into a community of food producers. Of no less interest is the business integration of particular associations in the agro-industrial complex with appropriate associations in industry which supply the agro-industrial complex, such as the machinery manufacturers, chemical industry and packaging industry. On the basis of long-term development programmes and agreements on business and technical co-operation, it should be possible to ensure a steady supply of machines, equipment, fertilizers and other materials.

In this way, workers integrated in their basic units and units which in turn are integrated in complex enterprises and associations, solve their problems through their delegates and self-management agreements and work on the accomplishment of their aims. First of all they increase production, productivity and income, before distributing the latter themselves.





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