



OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as "developed", "industrialized" and "developing" are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact <u>publications@unido.org</u> for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org



054/3



Distr. LIMITED ID/WG.171/10 4 April 1974

ORIGINAL: ENGLISH

United Nations Industrial Development Organization

International Consultation on Agro-Trdustrial Development Yugoslavia, Belgrade, May 13-18 1974

MANAGEMENT IN AGRO-INDUSTRY
WITH PARTICULAR REFERENCE TO
THE AGRICULTURAL COMBINE "BEOGRAD" 1

by Ilija Radović and Miron Rohalj *

*I. Radović, Deruty Director, Planning System and Business Analysis Department, M. Rohalj, Agr-Industrial Combine "Beograd", Yugoslavia

The views and opinions expressed in this paper are those of the authors and do not necessarily reflect the views of the Secretariat of UNIDO. This document has been reproduced without formal editing.

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

NTENES

	Page
Preface	1
General Considerations	1
Vertical Integration	2
Organization and Management of the Combine	3
Constitution and Functional Structure of the Combine	5
The Agricultural Combine Beograd	6
Common Services	6
Punctional Structure and Basic Characteristics of Management and Administration	7
Business Policies, Planning Systems and Development Programmes	11
Mutual Economic, Relations and their Regulation	13
Co-operation with the Individual Producers	16
Development of Cybernetic Information Systems	17

Preface

Except for land and other means on private peasant farms, not exceeding 10 hostares (about 25 actres) of cultivated land, artisanal workshops, small inns using family labour and the like, all other enterprises and means of production in Yugoslavia are the property of the nation i.e. <u>social ownership</u>. Owing to the social ownership of the means of production and self-management in enterprises and other organizations, there are neither employers nor employees in Yugoslavia. Therefore, in this paper, as in the other papers contributed by the Yugoslav authors, specific terms are used which are explained below.

Workers working in an organization are not employees, they are mutual associates through their labour. Hence, she form "basic organization of associated labour" (OOUR) should read "simple exterprise", or, in relation to a complex enterprise, "basic unit".

A number of simple enterprises may merge to form an organization of united labour (abbreviated OOUR), i.e. a larger enterprise consisting of several simple enterprises or basic organizations of associated labour. The term "enterprise" is sometimes replaced by the term "working organization".

Simplified translations of some common Yugoslav terms used in this paper are given in the footnotes.

General Considerations

The present development of the forces of production and the scientific, technical and technological revolution here led to an ever-increasing concentration of means and labour, as well as to an ever-increasing integration of basic production, processing and marketing with a tendency towards specific techno-economic systems, which provide the conditions for continual development and higher economic stability of integrated business activities and their individual phases within the uniform business system.

According to Kautzky, at a certain level of development of the productive forces the union of industry and agriculture becomes a general rule of the entire social production. Social development in agriculture is similar to development in industry: social needs and conditions necessitate a large socialized production linking agriculture and industry in a firm entirety.

In the narrower sense of the term, an agro-industrial complex includes: agriculture (primary production); food industry (secondary and final processing) and the

^{1/} K. Kautzky: Agrarno pitanje "Kultura", Beograd, 1955 page 289

marketing of the food products. The integration of agricultural production and food processing is based on the following correlation:

- a higher level of the economic development is followed by processes of concentration;
- processes of economic concentration resul in a concentration of the population;
- concentration of the population also implies a concentration of consumers, i.e. a concentration of demand;
- concentration of demand requires large-scale standardized production;
- large-scale standardized production requires an organization operating on several levels within the same business complex, i.e. vertical integration.

Agricultural markets of the traditional type cannot satisfy the new demands of industry under such conditions. It is not adjusted to an industrial rhythm and it reacts slowly. The sole solution lies in a contractual economy or integration in the full sense of the word.

Integration in Yugoslavia was more intensive i 1965, following the economic reform. However, in 1970, the process of integration was most intensive in business and catering (33.1%), followed by agriculture (31.3%), while integration in industry was low (14.2%).

The concentrated integration of agricultural production with the food industry and commerce facilitated the constitution of several large-scale agro-industrial systems, within which both private and social agriculture are associated with the processing plants and sales network. This combination provides a permanent base for a stable development of the operations of all the participants under almost equal conditions.

A significant contribution to the concentration and constitution of specific agroindustrial systems was made by the agricultural combine "Beograd", comprising fortytwo different complementary organizations throughout Yugoslavia, dating from 1968
and earlier.

Vertical Integration

It is well-known that vertical integration entails the integration of various productions and operations in a single entity. They supplement each other and are interdependent, representing the individual phases of a single production process.

The outcome is that with a higher degree of integration, the difference between

the finished products and their market value increases. Thus, upon the vertical integration of an enterprise, the net value added during processing increases through integration, a basic material increases in value as it becomes a finished product. This relationship is manifest in the supply of raw and other materials and in the delivery of products and services.

Calculations of this relationship in the agro-industrial system on the agricultural combine "Beograd" show that the degree of integration achieved in supply is relatively high (over 80%) whereas it is lower in delivery. (50%). The degree of integration in delivery is lower because the value of finished products and services is always higher than that of materials which are consumed for their production.

The degree of integration in some combine operations and organizational units can be judged on the pasis of the supply of raw and auxiliary materials and the delivery of products. Agricultural and livestock operations are highly integrated, both in the supply (about 90%) and delivery sectors (over 80%). On the other hand, there are operations and organizational units which buy and sell in small quantities on the internal market in the combine. This group comprises the plant producing artificial casings and processing natural casings, and, to some degree, the plant processing meat and meat products. However, the latter plant is tending towards a higher degree of integration in purchasing operations, but the degree of integration in deliveries is low.

Operations and organizational units which are highly integrated in both purchase and delivery belong to the third group, comprising the dairy processing plant which has a highly integrated purchasing plant (99-100%), the unrefined vegetable oil plant as well as the meat and animal feedstuff plants which rank in an intermediary position as integration is high in both purchase and delivery operations (80-90%).

nymnisation and Management of the Combine

The agricultural combine "Beograd" was founded in 1946, at which time it had 17,000 hectares of land area, of which 4,800 hectares were arable land.

Until 1953 the basic activities of the combine were crop-farming and stockbreeding; however the intensification of production necessitated the construction of processing facilities.

A further phase of combine development is reached when primary agricultural production, processing and the delivery of the finished products to final consumer are merged.

Integration processes in the combine began in 1954, since then they have developed continuously. The most intensive period of integration in agriculture and the food industry was from 1968 to 1971.

In that period, forty-two enterprises joined the combine, whereafter it developed into a large business system, the organizational units of which were located throughout the country. As a result of this integration and the intensitication of the production processes, major techno-economic changes have taken place in the combine, contributing to rapid development of the most important production capacities as shown in the following table.

Item	Unit of Measure	1965	Y	E 1970	A	R 1973
Employed workers	number	100		315		413
Total land area	hectares	100		317		369
Number of cows	heads	100	•	182		201
Number of sows	heads	100		443		479
Production of wheat	metric tons	100		246		377
Production of sugar beet	metric tons	100		3 2 8		443
Production of milk	thousand litres	100		. 2 5 5		291
Export	thousand dinars	100		1,375		1,641
Income	mil. dinars	100		341		507

As a result of the integration process the number of employees increased fourfold (4:1), the agricultural areas threefold (3.6) and revenue fivefold (5.0) compared with 1965.

Based on the gross revenue of 1972, the combine ranked eleventh among the 200 major economic enterprises, and it is the largest agro-industrial complex in Yugoslavia.

An indication of the magnitude of this enterprise is best shown by data relating to its dairy herd and production in the socialized sector of Yugoslavia which has continued to expand despite the cyclical fluctuations. The herd has increased by 92% since 1966 and milk production by 145%, the milk yield per cow increasing from 3,424 to 4,500 litres. The combine's herd represents 18.87% (as opposed to the previous figure of 28.96%) of the cow ropulation of Serbia. In 1972, the combine was responsible for 26.65% of the milk production in socially-owned agricultural sector and 44.39% of the production in Serbia.

On the combine, productivity in the milk production sector was 2.03 hours of labour

for 100 litres of milk, using milking machines. These data, undoubtedly, show that the combine is the largest milk producer, and by producing more than thirty various dairy products, it supplies Belgrade with about 90% of its total dairy product requirements.

Comparative surveys of the productive and economic effects achieved indicate that the development concept of the agricultural combine "Beograd" is being favourably realized, the following advantages having seen identified hitherto.

- complexity of production;
- concentration of means;
- united investment policy:
- specialization and possibilities of realization of large-scale production:
- united concept of the development of delivery and purchase of goods;
- concentration of staff and higher application of scientific research work; and
- improvement of workers' standard of living.

Constitution and functional structure of the combine.

The organization of the combine constitutes a systematic entity as on the technical, technological and economical whole with the maximum business and economic independence of each component part (the basic unit [OCUR]).

The combine, as a business system, comprises several organizations which deal with agricultural and forest production, business co-operation with individudal producers, industrial processing, trade, tourism and catering operations, as well as rendering various production and consultancy services.

At the end of 1973, the agricultural combine "Beograd" comprised sixty-seven basic organizations of associated labour \(\frac{1}{2} \) which, depending on the nature of their operations, are associated in business groups to ensure better co-ordination and synchronization. Such business groups are:

- farming and livestock production, fruit and grape growing with wine production, business co-operation with individual producers, industrial processing of plant products/sugar industry, fruit and vegetable processing, animal feedstuff production, milling industry, unrefined vegetable oil production, chocolate industry, graphics industry, industrial processing of animal products (industrial processing of meat, production of meat meal and bone meal and bone glue), industrial processing of milk, forest and water management and wood working industry, market, tourism and catering operations, provision of production and other services.

Basic organisation of associated labour = simple enterprise or basic unit of a complex enterprise.

Upon constitution of the business groups, full consideration is given to the economic principles and mutual interests of the units and the combine as a whole.

The organization of the combine can be presented schematically as follows:

- working post
- work groups
- sub-units
- production units
- basic organization (OOUR)
- business group
- agricultural combine "Becgrii"

The agricultural combine Beograd"

All the basic organizations of associated labour in the agricultural combine "Beograd" have complete economic independence and in their business relations in Yugoslavia they act as legal and economic entities.

Mutual rights and obligations of the basic organizations of associated labour as well as rights and obligations to third persons are regulated by an agreement of association pertaining to working organizations in the agricultural combine. The agreement stresses the unit co-ordination of basic principles of calcultation and distribution of income to personal incomes and funds.

B

t

0;

1

The principles of calculation and distribution of income and worker remuneration proceed from the specific job, work groups through the production unit to the basic organization of associated labour. Worker incentives are based on the productive and economic effects achieved, which are quantified on a daily, weekly, monthly or other recountancy basis, depending upon the type of production processes within a basic organization of associated labour. The criterion of daily worker performance has been introduced whereever possible and is adjusted monthly or periodically through the income obtained.

Common services

In order to ensure synchronization of all economic trends at combine level, common operations of interest to all basic units have been defined:

- scientific research work;
- long-term programming, current planning and operational analysis;
- investments, current and long-term programming;

personal income = wages and salaries; funds = savings

- account-keeping and financial relations;
- computer processing of financial, statistical and other data;
- organisational and personnel matters, matters pertaining to joint organs of management and internal regulations;
- legal matters or mutual interest:
- market, tourism and catering;
- advertising activity and information of the workers of the combine;
- land temure matters
- housing construction and maintenance
- occupational safety, fire prevention, safeguards and national defence.

Of these common services, a special place is taken by the egro-economic institute which deals with:

- applied, development and fundamental research in agricultural production, food industry, forestry, commerce, long-term, medium-term and short-term planning, business programmes and other analyses as well as completion of studies and projects based on the needs of the combine and other organisations in the country and abroad.

Functional structure and basic characteristics of parament and administration

Management at all organisational levels is carried out by the staff directly through meetings and referends and indirectly through the self-management conference, workers assembly and its executive organs: the executive committee, workers' councils, executive committees of the basic units and the council of the unit of associated labour.

The management and administration systems of the combine can be shown schemetically as follows:

Management Chart

Administration Chart Self-management conference of General Manager of the combine the combine Deputy General Manager of the Workers' Assembly of the combine combine Executive committee of the Assistants to the General Workers' Assembly of the Manager of the combine combine Director of business group Meeting of workers of OOUR of OOURs Workers' council of OCUR Assistant to Director of business group of OOURs becuting_committee of COUR Director of OOUR Meeting of production unit Assistant to Director of OCUR Council of production unit Manager of production unit

Assistant to the manager of

production unit

By the agreement on self-management and the merging of the basic units into a working organization in the agricultural combine "Beograd", the workers expressed their willingness to merge their work and the socially-owned means they use to establish mutual relations with other organizations and to agree on other questions of mutual interest to the basic units and the combine.

Furthermore, this agreement establishes the joint organs of management, collective executive organs and sole business organs, the way they are elected and constituted, their competence and responsibilities.

It is provided that the Workers' Assembly be the highest representative organ of unit management in the combine and all units are equally represented by each of two delegates and their deputies who are elected to the assembly. Administrative organs which perform administrative functions on an independent basis cannot be elected.

Delegates participate in the work of the assembly in accordance with the guidelines set by the Workers' Council of their basic unit and the workers who elected them.

The workers assembly, as a joint magement organ is empowered to:

- a) prepare self-management agreements and other self-management acts and declare them accepted and adopted:
- b) establish and approve, after consideration and acceptance by the basic units, plans of work, development programmes and measures for implementation of joint pusiness policies as well as regulations pertaining to organization, safeguards, rationalisation and technical improvement;
- o) make decisions on credit obligations at home and abroad, provision of financial means, conclusion of agreements, establishment of banks etc., with the prior consent of the basic units;
- d) elect, nominate and recall the president of workers' assembly and his deputies, nembers of Executive Committee, General Manager and his deputies and assistants, and the secretary of the Workers community of common businesses and specialised services.

The executive committee is the collective executive organ of the Workers'
Assembly of the agricultural combine "Beograd" and all the business groups must be
represented. It considers drafts and prepares draft agreements, plans, measures and
decisions for the approval by the Workers' Assembly.

By its internal acts the OCUR regulates the management functions on the basis of the constitution, was and self-management agreement of the association.

Co-ordination of work is achieved through administration. The General Manager, with the co-operation and expert help of the Deputy General Manager, assistant to General Manager, directors of operations and business groups of the OOURs and the directors of the OOURs, co-ordinates work and administers businesses of common interest to the associated OOURs.

The directors of the business groups of the OCURs co-ordinate administration and operations. The business groups co-ordinate the implementation of duties in order to facilitate the decisions of the joint organs of management, the collective executive and the sole business organ.

ha.

Du B

eco ous

bo-

ng

cí.

19

und

The directors of the OOURs co-ordinate the work of the respective OOURs administering their businesses and implementing the decisions of the Workers' council in a similar manner.

The general manager performs the following duties:

- i) Ensures that the decisions of Workers' Assembly are implemented and the legal regulations of the socio-political authorities are applied;
- ii) Ensures that the principles of self-management are applied and participates in the work of common self-management through the executive organs, submitting proposals and suggestions on specific questions and decisions:
- iii) Co-ordinates the work of directors of the business groups and OOURs through joint programmes of work and development;
- iv) Ensures that the organization's work and operations are improved in co-operation with the staff and other specialized collective organs.

The general manager is responsible to the Workers' Assembly and, in respect of the legality of work and the accomplishment of legal obligations, to the competent organs of socio-political authorities.

The general manager may be recalled before his terms expires

- if he fails to observe regulations and rules of self-management and other acts of the combine;
- if he rejects for no good reason decisions of the Workers! Assembly; and
- if he jeopardizes the combine or the social community by his irresponsible work.2

^{1/} Socio-political authority = government (local, state or national)

^{2/} Social community = nation.

ger,

nterest

and or to

ive

ncil

egal

en.

ch.

ſ

ration

cts

Proposals for the recall of the General Manager may be submitted by:

- crgans of socio-political organizations 1/ upon agreement with their organizations (members' assemblies);
- executive committee of the agricultural combine "Beograd";
- at least ten members of the workers' assembly and
- at least two OOURs

The workers' assembly makes a decision to recall the General Manager by a simple hajority.

The self-management agreement stipulates settlement procedures.

dusiness policies, planning systems and development programmes

The common business policies of all the basic organizations are realised through economic plans and developing programmes which constitute the basis of the combine's business activities.

The planning developed in an agro-industrial system such as the agricultural combine "Beograd" not only defines current economic activities but it also informs, co-ordinates, directs and adjusts.

The process of planning and long-term programming is performed through the following kinds of plans:

- long-term development programmes;
- medium-term development programmes;
- regional development programmes;
- annual economic plans, and
- operational plans.

The strategy of long-term development of the basic operations of the combine is crimed by means of long-term and medium-term development programmes, the: further laboration of which is built into the annual economic plans of each basic organisation.

The method of planning and programming is based on the co-ordinating, directing and regulating functions of the economic relations.

Socio-political organization = trade union, and other political organizations of the workers of the combine.

The function of economic planning lies, in fact, within the organization of associated labour, but it does not imply planning autorky for each organizational component which would lead to the economic distribustation of the combine.

In order to eliminate the negative consequences of both centralized and for autarkical planning, a model/directed planning and programming has been developing over the years through the Agro-Economic Institute, i.e. its department for plannings system are operational analysis.

ZO'

þi

lo.

r

The primary duty of the department is to provide the appropriate planning methodology and the right formation of systematic investigation into the mutual economic relations of all the organizational parts of the combine. This is done so that no unit is confronted with more unfavourable operational conditions as this would make the association meaningless.

The department in co-operation with other specialized departments of the Institute also provides the technological, organizational and economic parameters and standards needed to balance calculations and the distribution of income amongst the basic units.

A special role of all the departments in the Institute is the definition of a long-term capital development programme essential to all organizational units interested in financing their construction, this applies especially to most processing and commercial units in the combine.

For example, the problem of reconstruction and the expansion capacities of the animal feedstuff plants, slaughter houses and dairy plant is not only a problem affecting the people working in the units but also those associated with the production of meat and milk. A slew-down or technological stagnation and a lack of adequate equipment in one sector make the expansion of production and progress impossible in others. Development has been achieved both in the primary production sector and in the processing industry, and economic and human relationships within the combine have been improving. Instead of restricting oneself to partial and short-term interests of certain organizational units a strategy and business policy has been adopted, which offers clearly defined permanent relations and improvements in the standard of living of all employees.

Mutual economic relations for the current year are, in fact, regulated by the annual economic plans of the OCURs through a price policy for products and services affecting not only internal transfer but also joint marketing operations, direct or through specialized units.

Each year the regulation of these relations gains in importance for the combine. Partical integration ensures a greater output of higher value with an increased turnover on the domestic market, which in turn calls for an appropriate business relicy and the correct redistribution of income. In order to realize the basic concepts of a business policy respecting the individual and common interests of the associated units, there are three kinds of prices for products and derives which govern mutual economic relations.

- Products and services whose prices are regulated by the market;
- Products and services whose prices are guaranteed by the state;
- Products and services that are exchangeable only within the combine and which, as a rule, do not appear at the market.

is governed. The value equivalent of most of the combine's products and services/by the market brice which in many cases is contingent upon supply and demand fluctuations. In brder to reduce the cyclical changes the economic plan for the current year establishes, upon agreement with the interested organizations, fixed market prices which can be djusted by mutual consent.

Basic agricultural products such as wheat, maize, sugar beet, sunflower, fattened bigs and cattle, as well as some food products, such as milk, meat, flour, bread and bil, have guaranteed prices which are determined by the authorized state organs. They sted to not always ensure the average revenue stated in the plan, whereupon solutions are sought and prices are adjusted.

autual economic relations and their regulation

1-

on.

f

The basic principles of association between the organizational units are based on:

- The long-term development through joint development programmes;
- Pooling of means for the realization of joint programmes;
- Specialization of production, division of labour and improvement of organisation of work for more complete and effective co-ordination of interdependent labour;
- Pooling of means for joint training of workers and implementation of staff policy; and
- Joint marketing on local and foreign markets.

In fact, the above principles regulate the mutual economic relations between all pasic organizations of associatiated labour in the combine. The complexity of these relations results from functional, technological and economic links which are manifest

in the phases and degree of the production process.

In fact, the degree of integrity of some lines or entire processes of production is so stressed that there are several units which begin and finish their production cycle within a business system on the combine (live-stock production, farming, animal feedstuff industry, etc.)

There are a number of OOURs, the supply and delivery sectors of which are directed entirely towards other organizational parts of the combine (dairy plant, slaughterhouse, live-stock production, trade operations).

The exceptionally high complementary character of primary processing and trade operations is reflected in the ever decreasing share of external sales in the total production of the combine, as shown below:

Year	Total sales	External sales in %
1969	100.00	76.9
1970	. 100.00	6 4. 9
1971	100.00	64.4
1972	100.00	63.1
1973	100.00	55•9

As a result of the rapid bechnological, organizational and economic relationships as well as the interdependence of all organizational components of the combine, the value of the external sales in terms of total sales has dropped because only finished products aimed at the fianl consumers appear on the external market.

High-level links require clearer quantification and definition of mutual economic relations, but it is not the case with less complex enterprises which are not technologically and economically mutually dependent to that extent.

Combine relationships are regulated through:

- Co-ordination of production programmes, i.e. specialization;
- Primary distribution using joint accounting and planned prices;
- Secondary distribution:
- Pooling of means and their realization;
- Regulation of common rights and obligations towards the third persons.

A clear—definition of the above in economic terms ensures the maintenance and improvement of social and economic integrity of all of the organizational components of the combine.

The example of the milk and most producers and processors demonstrates the way in which joint economic interests are established.

n

.1

LC

The milk processing industry octains eighty per cost of its raw materials from the combine farms whose production profitability is just maranteed by the milk prices determined by the state organs. On the other hand, the milk processing industry on oys an above average rate of profitability thanks, primarily, to the regularity of raw materials supply as well as to the standard quality maintained by the combine farms. Contracting at prices higher than those guaranteed to the milk producers (farms) ensures that the economic interest in maintaining and increasing the herd is kept alive, thus permitting the processing industry with its large-scale standard production to remain competetive in conditions where retail prices for milk products are controlled.

The production of percers in 1970-1973 stagnated in the whole country as profitability was very low, and losses often occured owing to discrepancies in feed-stuff prices and pig live-weight prices. Under such conditions, the economic interest in the direct profitability of perker production would lead to a drop not only in fattening but also in breeding stock. However, production increased in the combine as can be seen from the following survey:

Year	Number of fattened pigs
1970	87,040
1971	106,208
1972	110,933
1973	110,500
Index 73/70	126

Stopping pig production would mean the elimination of current pig farm losses. However, the workers employed in that sector have to be employed elsewhere within the combine as their livelihood must not be jeopardized. The overheads of livestock production, which are not low, would occur as a new unenvisaged loss for the combine and would be higher than the current losses in the meat production.

Furthermore, stopping pig production would mean that sixty-five per cent of the animal feedstuff plant would be unutilized and losses would also accrue.

The slaughterhouse would not employ thirty to thirty-five per cent of its technical capacities and once again negative consequences would appear.

The commercial sector of the commine would not be able to reach the planned turnver owing to the drop in sales of pork, and business would be affected negatively. A part of the everheads of those organizational units and common services of the combine would have to be redistributed which, in turn, would reduce economic effectiveness.

As can be seen, in an integral d system, etappages in one production have farreaching consequences which, taken as a whole, may result in a far higher loss than the one directly brought about in the pass production sector.

Mutual economic relations in the combine are such that the producer of perkers is not in an economically subordinate position, as this production offers associated units far eigher gains than the possible losses in porker production.

The such an economic cycle, a majority of the products never appear on the market or the do not even have an established market price, especially in the case of primary production (alfalfa, silage, manure, crop by-products, as well as many by-products of the processing plants).

When determining the prices of these kinds of products and services, a criterion of average costs is adopted, covering production costs and minimal profits. The agreed prices thus established are defined in the economic plan for the current year.

Clearer and economically more adequate criteria for the internal redistribution of income offer a basis for the more effective functioning of the whole system and the improvement of mutual economic relations in the combine.

Co-operation with the individual producers

Along with the development of its own production and facilities, the combine pays special attention to the development of business co-operation with the individual producers.

Mitherto, the concept of development in both private and social agriculture in Yugoslavia has shown the degree of interdependence. The problem of peasant agriculture is not solved by market surpluses of agricultural products, if their finalization through processing caracities and supply to the final consumer is not provided. A complex technological and organizational economic link between the private and social sector is essential.

The following rusiness principles constitute the basis of integration:

- Association of labour and means of farmers on a long-term basis;
- Definition of long-term production programmes for each holding leading to

stability and permanent orientation towards production of specific products on the individual estate;

- Calculation and distribution of income of associated farmers and workers employed in specialized organizational units of the combine in proportion to their contribution;
- Extended production on private holdings effected in proportion to the joint means and results achieved, including the short and long-term financing necessary to rural development.

The combine develops the principles and draws up this long-term programme for 76,718 agricultural holdings owning 276,170 hectares of arable land, 131,277 head of cattle and 189,287 head of pigs.

On the basis of this concept, the relations and mutual economic interests are developed to an increasing degree.

Development of cybernetic information systems

The present forms of business reports - monthly, quarterly and yearly - used on the combine and in the integrated organizations cannot satisfy the needs of such a complex organization. They do not permit the continuous investigation of internal reserves sor the systematic improvement of the organization's operations.

The basic objective of the development and improvement of business information systems is to provide a sound basis for business decisions and for the improvement of business policy as the first component in management leading on to planning, organization recording, controlling, analysing and informing.

In order to eliminate the information shortcomings of the past and to provide a cybernetic approach to organization the combine started to develop a cybernetic information system.

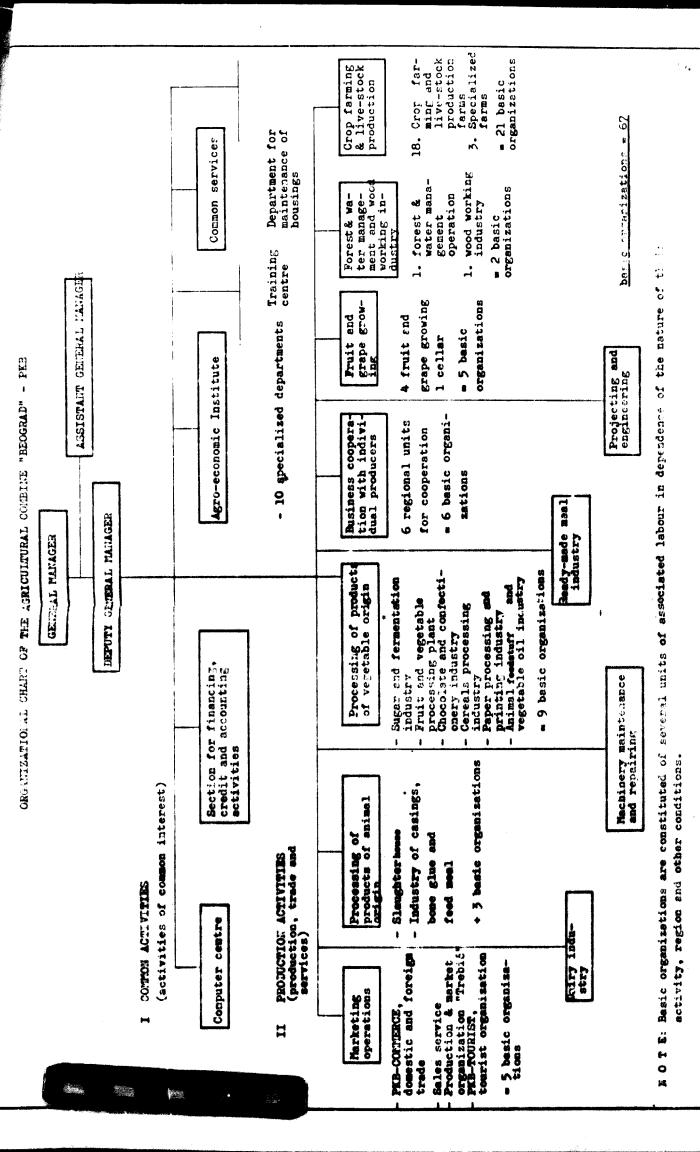
All the processes in the combine and its integral parts are performed through management according to established sequences: issuance of duties or plans, execution of duties or organization and regulation of business processes and analytic control of business processes: a feedback system.

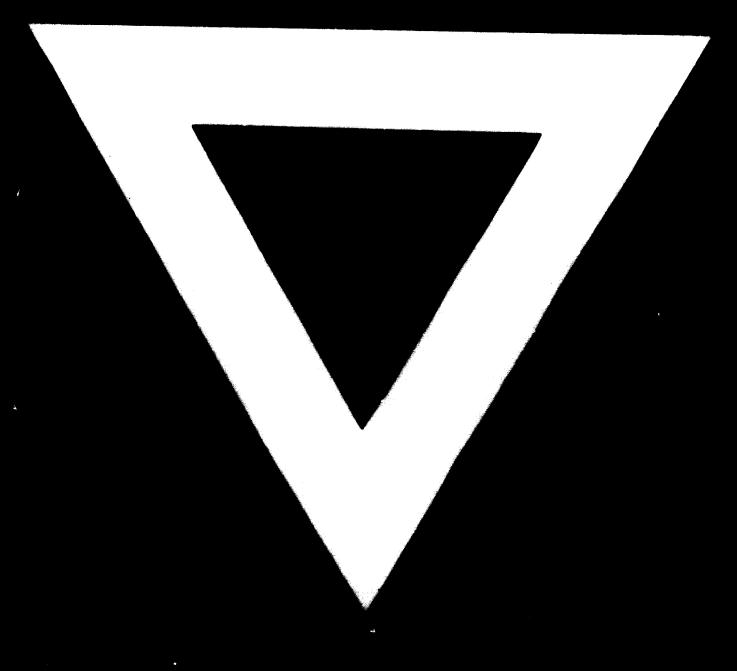
Preper feedback ensures proper management. Thus, on the basis of precisely controlled information, the business system of the combine can be kept within the framework defined in the plant and adjustments or optimization processes effected when necessary.

On the basis of this system the real business information needs of the working organization of this complexity and diversification can be met at the following levels:

- a) Information required for the management of certain organizational components (basic organizations and production units);
- b) Information required for the management of business groups;
- c) Information required for individual parts of the business policy of the combine;
- d) Information required for the co-ordination of the whole business policy.

In developing this cybernetic information system, the combine has decided to develop the programme side of business information for the needs of the information users.





74.09.13