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JPRS-EEI-84-034

20 March 1984

East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

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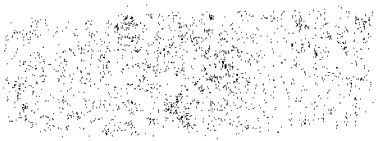

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EAST EUROPE REPORT

ECONOMIC AND INDUSTRIAL AFFAIRS

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CZECH, SLOVAK 1983 PLAN FULFILLMENT PUBLISHED

Prague RUDE PRAVO in Czech 2 Feb 84 p 2

[Report by the Czech and Slovak Bureau of Statistics on the development and fulfillment of the national economic plan in the CSR and SSR in 1983: "Generally Favorable Growth"]

> [Text] The results for 1983 demonstrate that another step has been made in the intensification of our national economy. Conservation of energy and materials improved, as did efficiency and quality of labor. A higher standard of management and more systematic application of the Set of Measures favorably affected positive achievements in 1983. Along with the positive characteristics of the development, such as shortcomings as an irregular fulfillment of the plan and delay of production in some important capacities were also in evidence this year. Despite a certain progress in R&D, the dynamism of the processes of innovation and improvement of the technical standard of production still cannot meet the needs of our national economy.

Czech Socialist Republic

In 1983 positive tendencies prevailed in the national economy of the CSR; the main tasks of the plan were fulfilled. According to the stipulations of the main directive, economic development was accelerated in agreement with the plan under even more stringent conditions. The results for 1983 helped meet the objectives of the CPCZ economic policy in the Seventh 5-Year Plan.

With a generally favorable development, however, some shortcomings and weak spots in the national economy on the territory of the CSR continue, although our economy has the necessary prerequisites and potential to cope with them. The structure of production and deliveries failed to meet all our needs. The planned objectives in earning higher prices for our products sold in foreign markets have not been achieved. Objective tasks of the plan for capital investment--the deadlines set for the construction and planned schedules for starting operation in certain facilities--are still unfulfilled. Lower drawing of capital assets and shortcomings in the management of inventories also weakened the results of common labor.

In 1983 R&D was indisputably successful, although the dynamism of the processes of innovation and improvement of the technical standard of production still fell short of our national economic needs. On the basis of the state plan for technological development in 1983, organizations on the CSR territory solved 260 R&D tasks, 99.6 percent of which were completed on schedule and with the technical economic parameters as planned.

The share of new products in industry on CSR territory increased from 15.2 percent in 1982 to 17.4 percent.

In capital investment (not including Action Z and projects built privately by the population), investment works and deliveries in the national economy of the CSR amounted to Kcs 91.2 billion, i.e., 5 percent above the plan. The works and deliveries were increasingly concentrated in construction projects designated as mandatory tasks of the state plan. Nevertheless, all planned construction projects were not finished on schedule.

In all types of housing construction 55,700 new housing units were completed. The planned number of finished housing units, mainly in individual construction, was 2 percent below the plan. The planned volume of works on technical facilities in residential settlements was 9 percent above the plan, and on public facilities 6 percent above the plan. The tasks planned in the modernization of housing units were not fulfilled; the plan was met only in the krajs of Central Bohemia and North Moravia.

The plan for industrial production was 0.8 percent overfulfilled in the centrally managed industry on the territory of the CSR, which was 2.2 percent above the 1982 volume of production. In accordance with the objectives of the 5-year plan, efficient structural changes continued to be implemented in the industry of the CSR. Production was developed on priority basis particularly in the electrical engineering and wood-processing industries and in general engineering. In the food and pharmaceutical industries the growth of production was also above average. The volume of production in the industry managed by the Government of the CSR was 0.6 percent above the plan and 1.6 percent higher than in 1982.

Deliveries to individual economic branches marketing industrial products increased. The industry managed by the Government of the CSR overfulfilled its deliveries for the domestic market by 0.2 percent (in retail prices); its deliveries were 1.1 percent higher than in 1982. Deliveries planned for exports to socialist countries (in prices quoted as all charges paid to CSSR border) were 8.2 percent overfulfilled and their volume was up 9.7 percent as compared with 1982. Deliveries planned for exports to nonsocialist countries were 1.3 percent above the plan (all charges paid) and their volume increased 2.4 percent over 1982.

The centrally managed industry on the territory of the CSR as well as the industry managed by the CSR Government exceeded the plan of adjusted value added by 2.1 percent.

The plan for gross agricultural production was 3.4 percent overfulfilled. As compared with 1982, the volume of its production was up 2.4 percent; however, the planned acceleration of the growth of vegetable production over livestock production has not been achieved. The planned yield of grain crops and rape was exceeded; on the other hand, the harvest of certain other crops, especially sugar beets, potatoes and fodder, fell short of the plan.

Planned state procurement of all main animal products was exceeded, with 1,078,700 tons of slaughter livestock, i.e., 4.2 percent more than in 1982, 4,172.1 million liters of milk (11.6 percent more), 2,000.6 million eggs (up 4.2 percent) and 149,400 tons of slaughter poultry, i.e., 5.6 percent below 1982.

The planned production in the food industry was 1.7 percent overfulfilled and its volume was 2.0 percent higher than in 1982.

The branch of transportation satisfied all vital needs of transport in the national economy. The plan for railroad loading was 1.6 percent overfulfilled; the freight was 1.4 percent above 1982.

Cash earnings of the population in the CSR increased by Kcs 6.9 billion, i.e., 2.6 percent above the previous year.

Public consumption of the population continued to be a dynamic factor in the living standard. In particular, expenditures for the educational and health systems increased in 1983.

Total social security payments were up Kcs 1.7 billion, i.e., 3.2 percent as compared with 1982. Kcs 35.4 billion was paid in pension benefits and Kcs 18.8 billion in medical insurance. Children's benefits represented Kcs 9.9 billion, i.e., 1.7 percent more than in 1982.

Retail sales in all systems were 2.8 percent higher than in 1982; sales of food products were up 1.8 percent and of industrial goods up 3.7 percent. The plan was 1.1 percent overfulfilled in main commercial systems. As compared with 1982, retail trade increased by 2.7 percent, including 2.8 percent in the commercial network and 2.6 percent in public dining facilities. Deliveries to our domestic market were in general smooth and supplies of many types of industrial goods increased.

The population of the CSR was 10,329,000 as of 31 December 1983.

Slovak Socialist Republic

The economic development of the SSR in 1983 followed in general the basic objectives of the state operational plan which focuses on greater dynamism in the development of the national economy and on more comprehensive growth of its efficiency on the basis of greater intensification for the purpose of maintaining and improving the quality of the living standard of our population.

The favorable development in the consumption in production was positively reflected in the accumulation of national income in the SSR, which increased by 3 percent. Tasks in the creation of material resources and utilization of manufactured products were fulfilled, which encouraged continuous growth of private and public consumption of the population.

Nevertheless, certain shortcomings were in evidence and caused deviations from the planned objectives in the structure of the creation and utilization of resources. Efficient achievements slowed down the growth of the inventories in several branches. The required share of R&D in the growth and improvement of the quality of goods could not be achieved.

The state plan for R&D involved 118 tasks focused on national economic needs, primarily on more thorough utilization and conservation of raw materials, materials, fuels and energy and on innovation of products with qualitatively higher technical and economic parameters.

The works and deliveries completed last year in capital investment (not including Action Z and individual housing construction) amounted to Kcs 47.6 billion, and thus the funds expended over the planned estimate amounted to Kcs 2.8 billion. Tasks were completed on 23 of the 27 construction projects scheduled for test run.

Industrial enterprises fulfilled their plans for 1983 in most of the decisive indicators and achieved faster dynamism of their production than in 1982, with better utilization of raw materials, materials and energy.

The volume of the production in centrally planned industry increased 3.9 percent over the preceding year, or 1.2 percent more than the state plan had stipulated. In accordance with the plan, the production of the electrical engineering, machine engineering and pharmaceutical industries advanced at a faster rate.

Total deliveries of goods produced by enterprises of the centrally managed industry increased by 3.4 percent over 1982. Deliveries for export, the domestic market and capital investment achieved a faster rate of growth than stipulated by the state plan; the plan for deliveries in those final branches was exceeded by a total of Kcs 3.4 billion, i.e., 4.2 percent; however, part of the overproduction was stockpiled.

Labor productivity calculated by adjusted value added was up 6.3 percent and by gross production 2.7 percent. Higher labor productivity increased adjusted value added by 84 percent. Average monthly wages in industry were up 2.5 percent as compared with 1982.

Construction organizations fulfilled their planned tasks in the volume of construction works. The volume of works in basic construction production amounted to Kcs 29.6 billion, 2.9 percent above 1982, and the plan was 0.9 percent overfulfilled. Enterprises managed by the Ministry of Construction of the SSR completed works at a value of Kcs 21.5 billion, or 0.8 percent above the stipulation of the state plan. Last year there were shortcomings in the fluency of

operations and in the completion of construction projects. Construction organizations failed to meet the objectives of the plan for greater economy in their operations.

The volume of gross agricultural production increased 1.8 percent as compared with 1982 and amounted to Kcs 34.9 billion. Crop production declined by 0.3 percent, livestock production was up 3.7 percent. An unprecedented per hectare yield of main crops was achieved and, consequently, their production was 139,000 tons higher than the plan. Furthermore, the planned harvest of grapes was exceeded and the planned yield of legumes and oleoginous crops was obtained. Shortfalls were reported in the yields of potatoes, maize for grain, sugar beets, vegetables and fruits. In vegetable production the plan for procurement of all grain crops was 100.1 percent fulfilled, or rape 88.5 percent, table potatoes 96.1 percent, and of sugar beets 79.8 percent fulfilled.

Tasks in the procurement of main types of animal products were met. The planned procurement of slaughter livestock was 2.2 percent overfulfilled, (2.5 percent above the level of 1982), of slaughter poultry 3.5 percent (4.8 percent), of milk 5.5 percent (8.2 percent) and eggs for consumption 8.6 percent (10 percent) overfulfilled.

Personal consumption of the population was up 2.0 percent over 1982 and the objectives stipulated for the area of public consumption were achieved.

Total cash earnings of the SSR population increased by 3.8 percent over the preceding year, i.e., by Kcs 4.5 billion. Wages shared 67 percent and social incomes 23 percent in this increase.

In all types of housing construction 38,389 housing units were completed, which is 1,011 housing units below the state plan. Contractor construction organizations built 473 housing units above their task. The construction of 31,700 housing units was launched during 1983.

The total population of the SSR numbered 5,109,000 persons.

9004
CSO: 2400/207

NEW SCIENTIFIC BRANCH OF BIOTECHNOLOGY EXPLAINED

Prague ZEMEDELEC Supplement to ZEMEDELSKE NOVINY in Czech 8 Feb 84 pp 1,4

[Article by Prof Eng Vladimir Kruphanzl, Doctor of Science]

[Text] Biotechnology represents a set of production techniques and processes based on the technological utilization of substance transformations, their single mechanisms and other functional manifestations of living systems of all types and categories, including not only living microbial and micro-organismic ststems generally, but also lower and higher plants and animals, including man.

The breadth of the working research paths of biotechnology demonstrates a significantly inter disciplinary character. Its development is being shared in by a number of biological, natural and technical sciences. The basis of this innovational capacity lies in fundamentally new technologies and methodological approaches which have been brought about mainly by research in cell biology, molecular biology and molecular genetics, and by advances in system and process engineering. These techniques have also given rise to new technologies and procedures such as the manipulation of inherired material(genetic and cellular engineering) and the large-scale cultivation of animal cells and, in the future, plant cells. This also includes new enzyme technologies, namely the utilization of specialized natural substances through managed biotransformations. In terms of industrial utilization, biotechnologies makes the greatest use currently of microbial fermentation technology, which developmentally is their oldest technical discipline and which, in conjunction with new techniques, will also be the basic production mechanism of modern applied microbiology.

Inexhaustible Source of Biomass

In terms of production (bioproduction), biotechnologies are focused on the production of cellular material (of microorganisms, plants and animals) and on the processing of biomass, primarily of plant origin, as inexhaustible, renewable sources of basic and specialized fodder and foodstuff components, of materials important for medicine, chemistry, plant and livestock production, environmental protection and power generation. In addition, biotechnologies may be considered to include production-oriented biological techniques and process for the isolation, purification and economically advantageous valuation

of an entire spectrum of organic, inorganic and man-made substances as socially and commercially important products.

Biotechnologies are important for agricultural production and for the biopharmaceutical industry, and are becoming important for the chemical industry for heavy industrial chemistry primarily in the branch of wood chemistry, and for light industrial chemistry in the fields of specialized half-synthesis and the chemistry of bioplastics. It plays an important role in the biological processing and enrichment of low-grade ores, biometallurgy, and is stimulating the rapid development of specialized, commercially attractive machine industry products which go by the name of bioinstrumentation (the design and production of cell cultivators, enzyme bioreactors and special instruments for the analysis and synthesis of natural substances, including automatic equipment for gene synthesis). Last but not least, biotechnologies are giving rise to a new branch of information science, bioinformation science, which is directed at the monitoring of special natural substances and functional properities of living systems during health and sickness of an individual by means of sensitive biocells hooked up to microprocessors.

Wasteless Production Cycles

The processes of the biotechnologies are not very energy-intensive because they take place most often at the body temperature of the producing living systems that are being utilized. They are independent of climatic conditions and of soil quality because they may be realized in the closed systems of production and process tanks. Their application to production makes it possible to introduce wasteless production cycles which do not intrude on the environment and which reduce energy consumption. They may be directly applied to generating economic benefit in cities by harnessing the transformations and accumulations of energy that result from the destruction of agricultural, food industry, wood and paper industry wastes and wasted energy from power plants (both conventional and nuclear). They are also of importance in the production of microorganism cellular material that is important in the fodder and food industries and in the fermentational production of biofuels (alcohols and gases) and basic compounds important for a number of industrial sectors. They also represent real opportunities for the expansion of natural techniques for further increasing plant production while reducing the consumption of artificial fertilizers, and for further increasing livestock production. This is a matter of systematically influencing the symbiosis between soil organisms and cultivated plants, of increasing the natural resistance of these plants to harmful insects, viruses and mold-related diseases, and of the management of the growth and physiological well-being of economic animals.

In all of these areas biotechnologies represent the only type of promising industrial technologies capable of dealing with the complex and delicate fundamental problems of our planet: food, power generation and the environment. This reality is one of the important motive forces behind its current development, when the world is being threatened by a decline in primary energy resources, a shortage of food and a worsening environment caused by conventional production technologies.

Contribution of Genetic Engineering

A further intensification of biotechnologies, in addition to their automation and optimalization of the components of contemporary technology, relates to new possibilities for a targeted, production-oriented programming of the inherited characteristics of microorganism cells, and from new possibilities for a targeted, production-oriented influencing of the inherited characteristics of plant and animal cells (including human cells) by means of radically new technologies for handling inherited material based on cell and genetic engineering.

The production application of these technologies in conjunction with the techniques of applied microbiology and other biotechnologies opens new, unanticipated possibilities for expanding the production of a wide spectrum of important natural substances, including rare and important proteins (which heretofore could not be produced or were unknown), and also a wide spectrum of service processes with important economic and commercial implications.

All of the above are examples of why biotechnologies are becoming a focus of attention not only in our country, but in a number of industrially advanced countries which have also included the development of this area in their plans for research and development and for economic development for the 1990's.

The extent of investment being allotted both worldwide and in our republic to the development of biotechnologies is in itself persuasive proof that these technologies have already been included among the so-called strong technologies, those which are expected over the next 10 years to force basic and fundamental changes in the industrial and production spheres. They are undoubtedly becoming a new component in the scientific and technical revolution, just as nuclear power generation, microelectronics and robotics have before them. There is also no doubt that the mutual interpenetration of physical, chemical and biological processes and the mutual stimulation of each other's development will continue to expand. For the time being we find ourselves at the very beginning of the development of biotechnologies, because their full development, in comparison with the current level of microelectronics, can be expected after 10-15 years. This represents a huge opportunity which our socialist Czechoslovak should not pass up.

Broad Spectrum of Research Tasks

In the area of biotechnologies, Czechoslovak research and development is concerning itself with a broad spectrum of problems, the resolution of which has led, in isolated instances, to interesting results. Firm foundations for further development have been established in technical microbiology, molecular genetics, chemistry and the biochemistry of peptide hormones, and in a number of other fields such as virology, experimental botany, physiology, entymology, parasitology, etc.

The results of research and development are also intended to have a rapid impact on traditional food industry, biotechnological products (beer, wine, vinegar, yeast), the production of L-Lysine, citric acid, and antibiotics, above all in

terms of increasing efficiency. The development of other technical products such as proteins, amino acids, enzymes, medicines, diagnostic materials, and others are strongly dependent on a restricted raw materials base. There are no reserves currently in the CSSR for the development of biotechnologies related to the production of traditional sugar and starch-related agricultural products, and the anticipated intensification in agricultural production will primarily serve to cover current and expected future shortfalls. This is primarily a matter of increasing the sugar content of the sugar beet, and of focusing on corn as a fodder crop with a higher grain yield in comparison with the usual types of fodder grains. Corn starch is also an appropriate raw material for sweetening syrups and for use as biotechnological substrates.

Joint efforts of the Czechoslovak Academy of Sciences, the Federal Ministry of Technological and Investment Development and other concerned ministries led to the preparation of the foundations for CSSR Government Resolution No 377, dated 9 December 1982, concerning the development of biological technologies. This resolution approves a set of measures for the development of biological technologies in the CSSR and directs the appropriate government vice chairmen fully to carry out the tasks included in this approved set of measures.

The objective of these measures is to introduce biotechnologies into agriculture and to improve the fodder base while at the same time reducing foreign currency demands for importing fodder proteins (1 ton of fodder yeasts fully replaces biologically 0.6 tons of imported fish meal or 0.8 tons of soy groats). This production will begin in October 1984 at the cellulose plant in Paskov in northern Moravia, where sulfite wastes will be turned into quality fodder protein for agricultural purposes, at the same time preserving the environment around the cellulose plant (which has been polluted by production wastes).

In the future, construction of a similar facility for the production of fodder proteins with a capacity of 10,000 tons annually is planned at the Vetrni paper mill.

Upon completion of both of these investment projects the annual volume of yeast production should amount to about Kcs 220 million, with profits of Kcs 55 million, while annual foreign currency savings from not importing an equal amount of product should amount to about Kcs 184 million.

To assure that science is always ahead of social practice, state research and development projects which will be focused on problems in selected promising areas of basic and applied research will be implemented, one of which is represented by the government resolution on the development of biotechnologies in the CSSR. Our scientists and researchers will determine, however, how rapidly this development will take place, so that science can truly serve the people and the socialist society.

9276
CSO: 2400/189

IMPORTANCE OF EFFICIENT INVENTORY MANAGEMENT STRESSED

Prague HOSPODARSKE NOVINY in Czech 20 Jan 84 p 6

[Article by Jiri Horak and Eng Lubomir Rajdl, State Planning Commission: "Comments to Discussion of Management of Idle Inventories--The Notice Applies to Everybody"]

> [Text] Inventory management is quite a broad area. The effect of the decree of the State Planning Commission and the State Arbitration in the CSSR SBIRKA No 49/1981 on managing idle inventories also belongs here. Critical comments in response to this decree have been voiced in the article "To Some The Notice Does Not Apply" by Eng Ludmila Malikova from Klement Gottwald, printed in HOSPODARSKE NOVINY No 17/1983. Ten workers from the khozraschet area have reacted to it in their contributions. Their comments concerned themselves primarily with the non-observance and circumvention of individual provisions of the decree. In this connection we consider it necessary to supply some basic information on the results to date of the decree in SBIRKA No 49/1981 and to take a position to the published articles.

To intensify the identification of idle inventories, the CSSR Government and the governments of the republics passed several resolutions in the years 1981-1982. The last was CSSR Government Resolution No 157/1982 on the provisions for utilization of idle inventories in the year 1982 and for securing this planned development in future years of the Seventh 5-Year Plan.

In accordance with this resolution, idle inventories were identified by their condition as of 30 September 1982. In industry and construction idle inventories in the value of Kcs 7.3 billion were identified, as were idle inventories in agricultural organizations in the value of Kcs 478 million. Their assortment was quite heterogeneous. Spare parts and materials from unfinished construction, small overhead material and single-purpose products constituted a large share. Even machinery and spare parts from import, various deficit materials and balanced production were no exception.

About Kcs 4 billion worth of inventories were identified during the preceding action in 1981 and not yet liquidated. The available information shows that during the period in force of the decree up to the end of last year about Kcs 10.5 billion worth of inventories were identified. Results of the one-time identification as of 30 September 1982 show that over 60 percent of identified inventories are to be used in our own consumption in future periods. Only about 20 percent of identified inventories were offered to the mediating organizations.

About 80 percent of the inventories destined in the identification for our own consumption were to be used up in 1983; the rest in the following years. With a few exceptions, when our own consumption is more the wish of the organization than a realistically based program, there are serious problems involved in this inventory group. Of course, it presupposes a carefully prepared program of own consumption of idle inventories and a limitation on, or complete stopping of, further purchases of the respective material. Such a program also has to be agreed upon with the financing bank department.

More complicated is the fate of the roughly 20 percent of identified idle inventories ceded to mediating organizations. The sharp edge of critical comments, subjects and inquiries, inspired especially by the article of Eng L. Malikova from Klement Gottwald Nova Huta in Ostrava in HOSPODARSKE NOVINY No 17/1983, has been concentrated on this group. The activity of mediating organizations became the primary center of attention. From contributions of individual authors one can discern several basic problems and deficiencies.

Non-observance of Regulations

Involved everywhere are the non-observance, non-utilization or breaking of regulations, for instance, non-observance of para 5 sec 7 of the decree in SBIRKA No 49/1981, which obligates the mediating organization within 30 days to report on a copy of the method of utilization of the offered idle inventory. The offering organization, however, must repeatedly extract the answers in numerous cases, often with little success. The article "Negative Information Prevails" by authors from CKS Praha's supply factory, in HOSPODARSKE NOVINY No 30/1983, draws attention to this and cites the example of 14 months spent trying to get a reply to the offer sheets sent to Prazske Strojirny. We have investigated the case so it is possible to use it as general documentation of how lack of experience evidenced itself at the start of the period in force of the decree on management of idle inventories.

A production organization, which is a direct supplier of some kinds of mining materials and is, therefore, also a mediating organization, did not accept the delivered offer sheets and returned them to the offering organization, requesting that they be passed on to Ferona as a mediating organization for mining production in general. Then a 4-month correspondence ensued between the offering organization, Ferona--the coordinating organization for mining products--and the production organization before it became clear that the mining material specifically offered to this production organization was not in Ferona's business structure. The duty to mediate its use then truly belongs to the production organization.

Yet, the decree in SBIRKA No 49/1981, in para 5, sec 4, states quite clearly that in cases when the offering organization does not know who is the mediating organization for the material in question and cannot ascertain this without extraordinary difficulties, it sends the offer sheet to the supplier from whom it took the material. If this supplier does not perform the function of a mediating organization himself, he sends the offer sheet within 3 days to the proper mediating organization and reports it also to the offering organization.

At first sight it seems that this procedure is labor-intensive, but in comparison to all the correspondence that would have to be carried out, it is quite simple. It is unimaginable that the producing organization would not know the identity of the mediating organization for the product it produces and sells.

The Mandatory Procedure

In the past year the State Planning Commission received a number of proposals and suggestions for a return of idle inventories. They all presented various elaborations on the basic theme of establishing central or union centers equipped with a computer, in which offers of idle inventories and inquiries about specific kinds of materials would be registered. These suggestions, as well as, for instance, exchanges of idle inventories or advertised sale offers, or sample exhibits of idle inventories, have in the past helped make use of a portion of those inventories. However, they have the disadvantage that supply always exceeds demand quite markedly, which also puts a limit on their success.

That is why sale offers are successful especially with hard-to-obtain products and materials. Products and materials in sufficient supply have little hope of being sold. That is why the decree on management of idle inventories is primarily intended to raise possibilities of actively matching idle inventories with current demands by buyers. The performance function of mediating organizations is, therefore, entrusted to those enterprises which deliver the materials involved in the greatest quantities.

These enterprises are able to offer and deliver idle inventories to cover the current demands of their customers with whose specific needs they are familiar, mostly from previous practice. As of now, this is the only available method of selling idle inventories successfully on a larger scale, and the decree makes full use of it.

The mandatory procedure for this activity of mediating organizations is unambiguously anchored in para 5 of the decree. A refusal of offer sheets and their return without giving any reasons or with an unsatisfactory, unclear or incomplete reference to a possible buyer is, therefore, a clear violation of the decree. Some organizations have achieved "perfection" in this respect (the case of answers run on a duplicating machine, to which the cited article in HOSPODARSKE NOVINY No 31/1983 also refers). Equally dubious is the behavior of enterprises of Ferona, which complains about a shortage of resources yet at the same time rejected offers of Poldi Kladno, giving as reason that they are materials which are not the object of its business activity, although it purchases the same materials on an ongoing basis.

The mediating organizations limit themselves in some cases to buying out materials not in sufficient supply. They have preferred to invent the so-called "takeover for evidence only," or they simply return the offer sheet without giving any reasons, something the mentioned decree does not permit.

If the offer sheet of idle inventories was properly delivered to the right mediating organization, it can simply return it to the offering organization as per the decree in SBIRKA No 49/1981 in two cases only:

1. If the price of the offered merchandise is lower than Kcs 5,000. In other cases it is up to the agreement with the offering organization whether it will take over such an inventory for mediation or buy it out. Offer sheets of merchandise over Kcs 5,000 the mediating organization cannot refuse because its obligation to mediate starts already with the delivery of the offer sheet (para 8).

2. If the delivered offer sheet is incomplete, especially if some indication of the qualitative condition of the offered inventory or price or another matter originating in para 7 of the decree is missing.

Insufficient Knowledge

A number of further problems originate also from non-adherence to the regulations of para 5, sec 14 letter a) of the decree in SBIRKA No 49/1981, which obligates the mediating organizations to limit their own production or their purchases and to give preference to securing the sale of the offered idle inventory. For different reasons the mediating organizations do not use this possibility and thus, on the one hand, too much is being produced and, on the other, the owner of the idle inventory is looking laboriously for a potential consumer, as in the case of the transformers offered by CKD Praha to their producer, Electrotechnical Enterprises of Julius Fucik, Brno (see "Negative Knowledge Prevails," HOSPODARSKE NOVINY No 30/1983).

Shortcomings occur in the offering organizations, too. The incomplete and inaccurate filling out of the offer sheets and the circumvention of the ban on intersale of offered idle inventories (para 5, sec 5) especially belong here. The example of alleged controvention of the decree by Technomat Brno (see "Administrative Provision is Not Enough," HOSPODARSKE NOVINY No 26/1983) is a testimony to insufficient knowledge of the decree on the part of the offering organization. The procedure by Technomat was in complete agreement with para 5, sec 7 of the decree, which enables the mediating organization to "include the offered quantity of idle inventories in their disposition resources and to determine the time in which it intends to mediate the use of the idle inventory" and further states that "the period should be in accordance with the terms for matching orders and demands with the disposal sources but not longer than 1 year from receipt of the order sheet."

The decree in SBIRKA No 49/1981 fully intentionally gives the mediating organization the right to the mentioned procedure. A forced buyout of the whole quantity of offered and idle inventories would transfer the whole risk and a major part of costs to the mediating organization only, and for no reason would give

unfair advantage to the organization which produced the idle inventories. The 1-year term for mediation offers the mediating organization, within the framework of its normal business activity, the possibility of securing a sale of offered idle inventories and thus of covering current needs of its buyers while respecting the terms customary in seller-buyer relations. If the offering organization considers the time allocated for the use of the offered inventory to be too long, it may request the mediating organization's consent to try to sell it itself.

This consent of the mediating organization is essential because the initiative sale of inventories, after they have been offered to a mediating organization, could possibly ruin even the very laborious activity of the mediating organization for the purpose of selling the offered idle inventory. The decree forbids such a prodecure in para 5, sec 5 expressly and unambiguously.

The offer sheet sent by the mediating organization to a buyer has the character of a delivery contract draft. That is why, when the offer sheet is confirmed by the buyer, an economic agreement to deliver materializes between the offering organization and the buyer. If the offering organization should sell the offered inventory in the meantime itself, or possibly get rid of it some other way, it understandably could not deliver it to the buyer for whom it was specified by the mediating organization. That would mean non-fulfillment of an economic contract with all its consequences, including penalization.

To Adjust Time Limits

On the contrary, some mediating organizations consider the 1-year term to arrange for sale of idle inventories to be too short, as is apparent from the article "Administration Without Significant Effect" in HOSPODARSKE NOVINY No 40/1983. Eng Vaclav Masek states in this article that Mototechna presents binding orders to their suppliers always by 1 April of the following year. Since not even the updated Economic Code makes it possible to change a closed economic contract because of idle inventories, Mototechna may adjust its purchases in such a way that it creates a possibility for the sale of idle inventories which were offered to it, say, after 1 April 1983, as late as 1 April 1985, i.e., in a 2-year cycle.

This adjustment is clearly applied to Mototechna's assortment, especially in the case of spare parts with regard to specifications of the automobile industry. It would be necessary for the general management of the Czechoslovak Automobile plants, respectively the Federal Ministry of General Engineering, to examine these terms, especially with regard to the sale of idle inventories of spare parts. The terms should be properly adjusted for a more accurate redefining of orders within economic production units, or desirable adjustment of orders made possible through internal regulations, especially in cases of verifiable occurrence of such idle inventories which could have an influence on total purchases by Mototechna.

With Mototechna's turnover, only a small part of total purchases will be involved. One has to admit, however, that in some items the offers of idle inventories could reach a height which would explain the difficulties pointed out in the mentioned article.

Nevertheless, the so-called non-binding examination of received offer sheets should not be allowed. The mediating organization has the duty to secure either a mediation or a buy-out of the offered idle inventories. Nobody forces it, nor can he do so, to buy out products or goods which are clearly unsalable, as Eng V. Masek states in his article. It is, however, necessary responsibly to verify usability and to offer these inventories to those buyers who, based on the experiences and knowledge of Mototechna, could sell them. If really unsalable products and materials are involved, for instance, spare parts for vehicles no longer in use, the mediating organization has the right to recommend that the offering organization scrap and write off the inventories. This recommendation then has the validity of an expert finding.

The mediating organization is, no doubt, an important factor in the return of idle inventories to the reproduction process. The owner of the idle inventory remains the principal factor. It was he who produced it and must bear responsibility for it, including the costs connected with it. The mediating organization has the duty actively and with maximum effectiveness to aid, within the framework of its possibilities, in the activation of idle inventories. For that it deserves to be rewarded.

The possibility of an international exchange of idle inventories is being used very little. CEMA has been organizing an exchange of idle inventories for several years for the purpose of cooperation in material-technical supplying. This is a no-foreign-currency exchange, and supplies are exchanged between partners on the basis of agreed-upon prices according to business customs among the member countries. Idle inventories which cannot be sold domestically can be offered by mediating organizations to the Transacta Foreign Trade Organization. Offers of idle inventories are not reaching it, however, in the expected volume and, also, domestic mediating organizations do not accept offers from foreign partners.

The past behavior and approach of the mediating and offering organizations clearly will require a thorough investigation of forms and methods which will be needed to ensure compliance with the decree in SBIRKA No 49/1981. A decisive role will have to be played here also by leading workers of the enterprises and the middle management links. It will be necessary to solve, for instance, the guaranty terms of paint and varnishing materials, and re-examine and solve the possibilities of reducing production in production enterprises. In selling and supplying organizations the possibility of reducing purchases of those items which offer themselves as idle inventories will be involved. Also, the activity of the organs of the People's Control Commission will, no doubt, intensify and it will be necessary to count also on penalties in cases of blatant non-compliance with the decree on managing idle inventories.

12392
CSO: 2400/205

CHARTA 77, ACADEMY OF SCIENCES SEE CATASTROPHE

Damage to Environment, People

Amsterdam DE WAARHEID in Dutch 28 Jan 84 p 5

[Article by Jana Danielova: "Imminent Danger of a Catastrophe in Czechoslovakia; Everybody's Health and Life Are at Stake"]

> [Text] It was by reading a serialized story by the writer Ludvik Vaculik in a samizdat newspaper that I first became aware of the catastrophic impairment of the environment in Czechoslovakia. Years later, after I had had an opportunity to see some of it for myself, I understood what he meant when he described the fear that overtook him during his nature walks in what in my mind, as I read it, I still saw as the familiar charming, gently sloping, wooded Bohemian landscape. A fear which he compares to the feeling cattle must have when the farmer neglects his land. Dead forests are indeed very frightening.

Recently 30,000 hectares of poisoned forests had to be cut down in Bohemia; hundreds of thousands of hectares have been affected. A dead forest in a "protected" National Park in Northern Bohemia, a field white from spraying and fish belly up in a forest brook, near which as a child I gathered bilberries and mushrooms. Northwest of Prague, where I used to swim and row on a romantic lake, the small towns and villages and even the hill have disappeared now because of the stripmining for lignite, and the lake has become inaccessible to the public; it looks like a lunar landscape.

And there was nobody who could tell me exactly what had happened, no newspaper which writes about it. People do talk about it, but they must depend on their own direct observations and on the rumor machine, without any knowledge of ecology, which the average newspaper reader in the Netherlands does have.

In the Slovakian capital of Bratislava, next to which a sizable petrochemical industry is firmly established, people told me that, just as in Prague, children often get extra vacation in order to get to breathe somewhat more healthy air.

The Slovakian television news showed how thoroughly the mosquito plague which afflicted the inhabitants was fought: a man, carrying a small tank on his

back and a sprayer in his hand, was spraying meadows and undergrowth while the commentator's voice told the viewers that, after lengthy failed attempts, this was the effective means -- the latest victory of science -- which would free them of the plague and that it was so effective that it destroyed the mosquito eggs before they hatched. He did not tell them also what else was being destroyed.

Tap Water

At the time I was told in Prague that they had just had epidemics of jaundice and meningitis, as a result of virus pollution of much frequented swimming waters. More disturbing yet was the authorities' advice to parents not to use any tap water for the preparation of children's food. This ban is still in effect now, 4 years later. Too many nitrates, I read recently. The public however was not told what necessitated the use of mineral water instead of tap water. To make matters worse, there was barely any mineral water to be had.

No newspaper wrote about it. I did read a small piece in the Communist Party newspaper, RUDE PRAVO, in which the author countered the obviously widespread alarm about the disappearance of animal species by pointing to all kinds of animals which can be found in the city today. The newspaper did not wonder what was wrong if foxes were scavenging in the garbage cans on the streets instead of hunting in the woods.

Publicity

For lack of other organizations to make the problem public, the Czechoslovakian human rights movement, Charta 77, has repeatedly drawn attention during its 7 year existence to the rapid decline of the environment and insisted on action, for example in its May 1981 document on nuclear power stations.

Thus, in its statement No 26/1983, Charta 77 wrote about the "literally and figuratively suffocating climate in Northern Bohemia" to the presidium of the Czechoslovakian government: "The predominant general feeling is that an ecological disaster is unavoidably approaching... The already noted social problems are worsened among other things by the growing chemical, uranium and mining industries. Northern Bohemia is being cynically and deliberately exploited under the motto 'after us the Flood.' Statements have come out of the mouths of the highest responsible officials," added Charta 77, "as if nothing could be done about the destruction of the forests in the Krusne Hory (Sad Mountain Range), in northwestern Bohemia, that the ecological disaster is a necessary toll of 'the industrial revolution.'"

In spite of the fact that exact figures about the state of pollution of the environment are kept strictly secret, even from research scientists in the area of protection of the environment (each one of them is allowed to know only a narrow limited part of his work), health workers are aware that the health threat resulting from industrial emissions in Northern Bohemia has taken on alarming proportions. According to estimates based on experience, half of the pregnancies are in danger. The percentage of miscarriages is going up, as well as the percentage of births of children with birth defects."

The secrecy surrounding such facts leads to panic and to the most fantastic conjectures among the people, not to mention the indignity of such secrecy in a civilized society(...) The state organizations do not know what to do about the situation and limit themselves to repressive measures and prosecution," noted the Charta in its document 26/1983.

Probably nowhere in the world would ever even a minimum have been done about environmental pollution if it were not for independent individuals, groups and organizations which obstinately, continuously and at length gathered data, made information public, and carried out campaigns and actions.

In its latest document -- a document which was sent to Prime Minister Strougal together with a report from the Czechoslovakian Academy of Sciences about the "very serious" ecological situation in the country --, Charta 77 put its finger on a sore spot: "It is only when people are given the facts (...), when they are able to discuss them from the outside without limitations, that they will be able to take measures on which the preservation of the environment, of health and of life depend. Often a fraction of the armament expenditures, spent for the maintenance of the balance of fear, would be sufficient to avert ecological catastrophes. We hope that as many Czech citizens as possible will learn about this analysis of the ecological situation and that recognition of its seriousness will force our highest bodies to take rapid and effective measures, about which every citizen will be able to express his opinion. They have a right to do so; everybody's health and life are at stake," concluded Charta.

Academy of Sciences Analysis

Amsterdam DE WAARHEID in Dutch 28 Jan 84 p 5

[Report on environmental pollution analysis from the Czechoslovakian Academy of Sciences]

[Text] "The current condition of the environment in Czechoslovakia can be called very serious. Only a small number of the ecological indicators are at an acceptable level. However, most of them point to the impairment of several environmental components. It must be noted that compared to the international level the situation in our country is very unfavorable," stated the Czechoslovakian Academy of Sciences in its report.

In its accompanying document, Charta pointed out that the discussion, which has been going on for years (since the early sixties), about the necessity to replace the extensive investment policy directed toward the production of ever more means of production with an intensive investment policy directed toward quality and the necessary commodities, should be translated into action. And in order to be able to cope with the environmental problems. This is closely related to the necessity to limit and reduce current production which requires an especially large amount of energy and raw materials.

However, the fact that 40 percent of the planned investments for the coming years are earmarked for the expansion of the fuel and energy sector, does not make Charta very hopeful. And the authors of the Academy report, even though

they are opponents of the "zero growth" model, are also pressing for reductions in order to avert the catastrophe.

According to them, the flow of materials released from nature by man is 10 times greater in Czechoslovakia than the world average. (All data mentioned here came from the report - editor). Through the exploitation of raw materials alone, 5 to 7 kilograms of materials are being released in our country from every square meter of soil. The partly toxic waste thus produced amounts to approximately 35 tons of particles of matter per inhabitant per year.

Ecological stability has been heavily eroded by the above mentioned industrial development and by substantially exhausted natural resources. In spite of the fact that the limited resources, the high level of industrial consumption of energy and materials, and the climatological and geological conditions require greater expenditures for environmental protection than in the surrounding countries, Czechoslovakia spends much less for this goal than other countries and the expenditures are declining.

Even though the figures are not completely comparable, it is alarming that over the last 5 years these expenditures only amounted to 0.3 percent of the national income, whereas the figure for the Soviet Union was 2.7 percent, for Sweden 0.8 percent, for the United States 1.5 percent and in the FRG 2 percent. Of all investments, only 0.85 percent were allocated to environmental protection, whereas the figure for the previous 5 years had still been 1.2 percent.

Acid Rain

The academicians expressed the fear that, as a result of international treaties, Czechoslovakia will be faced in the future with damage claims from other countries for the pollution it causes, with very negative consequences for the balance of payments. They noted the rapid increase in the amount of pollution due to higher sulphur concentrations, the declining energy value of lignite and the rise in energy consumption.

A quarter of the population, that is 3 to 4 million people, one-third of the forests and one-tenth of the agricultural land, are directly affected by the emissions.

Fauna and Flora

The consequences are disastrous. The academicians pointed to the disappearance, not only of separate biological species and populations, but of whole ecological groups and types of vegetation. Thirty percent of the fish, 60 percent of the amphibians, 30 percent of the snakes, 30 percent of the birds and 35 percent of the mammals are endangered. The invertebrates are even worse off: 80 percent of the butterflies have disappeared, as much as 95 percent in agricultural areas.

There is a massive death rate among the small animal species. The populations of quail, partridges, pheasants, and hares have declined substantially and even large game populations have been severely affected.

Half of the tall plants (for example, firs and spruces) are endangered as well as lichens, numerous mushrooms and molds, which are often vital to the balance of nature. The academicians noted the catastrophically explosive growth of monocultures, including "aggressive" kinds without natural enemies, which then leads to the increased use of control substances with all their ecological and economic consequences -- a vicious circle. In this manner, whole forests have died in Northeastern Bohemia, but forests are disappearing in other areas as well.

Seventy-five percent of the "protected" national landscapes have been affected by emissions and 25 percent of them have been heavily damaged. Within 16 years, 45 to 60 percent of the forests will be directly affected by acid rain.

Water

The consequences of pollution, specifically of acid rain, are no less serious for soil and water. The greater acidity of the soil, together with the loss of indispensable organic materials and the emission of toxic metals, is so serious that 5 to 20 tons of calcium per hectare will be needed for "recovery."

The chapter on the quantity and quality of the water is also alarming. The report quoted two opinions among the water economists. The majority of them feel that there is already a shortage of water. The other group occupies itself with conditions which, by the year 2000, would keep the quantity of water from becoming an "impeding factor for the development of society." By the year 2000, 1 million hectares of forests will be damaged to such an extent that it will be impossible for them to hold water due to the enormous erosion. Sixty percent of the water sources and areas where water is gathered are located in the affected forests.

Table 1. Emission of Sulphuric Acid (in thousands of tons per year) (1980)

Country	Total Emission of SO_2 in thousands of tons	Tons per square kilometer	Tons per capita
United States	27,000	2.88	0.12
Soviet Union	24,000	1.09	0.094
Canada	5,300	0.55	0.23
Great Britain	5,250	21.53	0.093
GDR	4,000	36.9	0.234
FRG	3,800	15.26	0.062
France	3,270	5.85	0.061
Czechoslovakia	3,200	25.0	0.21
Netherlands	0,480	11.7	0.03

Source: Report from the Academy of Sciences, Czechoslovakia.

Water pollution is enormous due to irresponsible agricultural methods, industrial and household waste. One third of the population does not have access to a sewer. Between 1970 and 1980 the amount of this waste rose by 70 percent. The capitals of Prague and Bratislava and a number of other big cites and most

new buildings have no or only minimal purification facilities and discharge freely because of the 2000 exemptions granted by the government in 1977. The construction of purification plants has dropped from 408 in 1971-1975 to 69 in 1976-1980.

Table 2. Infant Mortality per thousand in North-Bohemian Lignite Basin

jaar (1)	steden: (2)	Chomutov (3)	Most (4)	Teplice (5)	Ustí n/L. (6)	streek gem. (7)	ČSR (8)
1970		18,7	17,2	17,3	17,1	17,6	15,8
1980		20,7	17,7	19,2	22,6	20,1	16,8
Ter vergelijking: (9)							
Nederland (10)							
1970		12,7					
1980		8,7					

Source: Report from the Academy of Sciences, Czechoslovakia and CBS [Central Bureau for Statistics], Netherlands.

Key:
1. Year
2. Cities
3. Chomutov
4. Most
5. Teplice
6. Usti nad Labem
7. Region average
8. Czechoslovakia
9. In comparison
10. Netherlands

A separate problem is the pollution of ground and surface water, including drinking water, by the petrochemical industry with lead, mercury and cadmium, nitrates and radionuclides, with serious danger to health. In some regions, including Prague and Brno, the quality of drinking water is such that "in many cases it represents a direct threat to health." The academicians wrote that it is not even suitable for the photo-chemical industry or for irrigation.

8463
CSO: 3614/38

LABOR MINISTER RELATES R&D, PAY BY MERIT

Prague RUDE PRAVO in Czech 19 Jan 84 p 3

/Interview with Miloslav Boda, federal minister of labor and social affairs, by Vaclav Marek, of RUDE PRAVO and Fratisek Zdobina of PRAVDA: "Earnings Only According to Merit"; date and place of interview not given/

> /Text/ Research and development cannot be reduced just to purely technical and production problems. Its consequences are directly reflected in the social development of society and are affected by it in return. The documents of the Eighth Plenum of the CPCZ Central Committee, which dealt with accelerated application of the results of scientific research and of technological development in practice, also emphasize tasks relating to the sphere of labor and wages. We discussed how the adopted intents are implemented with the federal minister of labor and social affairs, Miloslav Boda.

/Question/ In what areas can your ministry contribute to expedient implementation of R&D results?

/Answer/ Scientific and technological progress exerts multilateral effects on the development of social structure, relations between classes and strata in our society. Their essence is constituted by changes in the character and conditions of labor that is called for specifically by applications of science and technology. In this context I have in mind primarily the gradual elimination of differences between manual labor and mental work, their rapprochement and intertwinement. As a part of these changes there subsequently occur basic changes in the branch, sectoral and regional structure of manpower.

There can be no doubt that scientific and technological progress necessarily calls for all-round improvements in qualification both in blue-collar operations and in specialized activities. In the case of managerial personnel, in addition to professional knowledge, managerial talents and social involvement, what is particularly coming into the foreground at the present time is the need for a high moral character

and personal courage. All of this increases not only the demands on the overall level of qualification, but also on its professional structure.

After all, meeting with ultimate success in the implementation of R&D depends to a decisive degree on the initiative of the working people, on their active participation in the flow of scientific and technological progress. People's initiative itself depends on putting into use a wide spectrum of material and moral incentives that can significantly reinforce the creative activity of individuals and of work teams. Not only within their own sphere of activity, but also through the use of improvement suggestions, inventions, activities of expeditor teams and other multifaceted forms of socialist initiative and competition. All of these sociopolitical and economic aspects of the R&D process directly concern the activities of our ministry.

/Question/ What are then the changes your ministry is promoting?

/Answer/ To provide for the implementation of tasks derived from the Eighth Plenum of the CPCZ Central Committee, we adopted specific actual and organizational measures. They are oriented toward providing effective support to changes in distribution and the structure of qualifications of manpower called for by R&D. In this respect we are devoting extraordinary attention to sectors engaged in preproduction stages --planning, design and technological components.

Additional tasks relate to creating conditions conducive to the effective utilization of R&D results aimed at continued increases in national labor productivity. This involves, among other things, promoting more efficient utilization of production capacities, including effective improvements in the use of shift work, savings of direct labor input and labor content of products of all types. Also significant are tasks attendant to improving the normative base, particularly standards of labor consumption and, in particular, improving the effectiveness of individual wage incentives toward accelerated generation of R&D results.

Thus, in close cooperation with trade unions, we adopted without delay a number of motivationally effective measures that have been becoming gradually effective as of 1 September of last year. Similarly, we are preparing jointly with trade unions proposals for promoting initiative and informal competition in support of R&D.

In sum, we regard the tasks for implementing the resolutions of the Eighth Plenum of the CPCZ Central Committee as an important and permanent orientation of our efforts. Our objective is to create, jointly with other organs of central management and trade unions, conditions maximally conducive to the accelerated and effective utilization of R&D results in practice.

/Question/ We nowadays talk very often about efficiency and economy drives. However, sometimes it seems that the center of attention in

ministries and enterprises is occupied only by energy, raw and processed materials, but much less consideration is given to economizing with manpower.

/Answer/ It cannot be quite unequivocally alleged that efficiency in the development of consumption of fuels, raw materials, electric energy, and ferrous and nonferrous metals is on the rise and, on the other hand, that direct labor input is neglected. Not only demands of production on materials, but also consumption of direct labor input per unit of production is showing a long-term decrease.

The efforts of society as a whole have justifiably been concentrated on lowering the consumption of processed and raw materials and energy as the key items of production costs that are increasingly harder and costlier to procure. This accounts for unjustified differences in the intensity and measure of achieved savings of materials. They are a reflection of a poor level of management, but also of the unsatisfactory quality of norms and indicators of the consumption of materials.

This makes it urgent to make the lowering of consumption and improved utilization of materials, energy and raw materials the subject of wide and lasting interest on the part of our production and R&D base. For example, designs of new products should make maximum use of the properties of structural materials that lead to reductions in their overall weight, should concentrate on machinery and systems with low consumption of electric energy, etc. This involves a whole set of very complex problems that terminate in the enterprise sphere with specific implementation of the tasks of preproduction stages--in R&D, in design and planning, preparation of technology, management of production and quality control. Of course, effective support must be provided in this respect by ministries with jurisdiction over sectors and by economic production units.

Nevertheless, we are also concerned about more efficient management of labor. We still have not fully come to terms with the constant struggle for additional personnel. That is a very myopic approach, because that is not a way decisively to influence the development of production and, particularly, of national labor productivity. On the contrary, an important and successful, but not always fully appreciated and utilized, approach to increased labor productivity is the effective management of manpower, tapping of hidden resources in the organization of labor, generation of conditions conducive to rhythmical and harmonious progress of work operations, elimination of unnecessary losses in the use of allocated time, but also of the total available working time and of operating machinery, making improvements in working conditions and in the work environment. I point out once again that just a single wasted minute in industry represents today a loss in value of production exceeding Kcs 5 million.

In this way we have come to promote the efficiency of labor which forms the basic prerequisites for the effective utilization of manpower and of other factors in the production process. The same applies to favorable prerequisites for planning operations, channeling the level of employment, operational control and remuneration. This contributes to improved organization in workplaces, and to the elimination of unnecessary idle time, improves conditions for humanization of labor, causes changes in people's attitude to work. Thus, socialist promotion of efficiency is an important source for increasing labor productivity which, as a rule, does not require new investments. Improvements in social effectiveness can be achieved precisely in this way by goal-oriented efforts in a relatively short time.

/Question/ Then, why are these efforts not developing the way we imagine they would?

/Answer/ There are several reasons. One of them is the fact that planned increments in production and productivity can often be achieved by approaches that are easier, even though less effective from the viewpoint of the society as a whole. The promotion of efficiency in general, not just of labor, depends for the most part on the readiness, initiative and cooperation of managerial personnel and trade union officials in enterprises and plants.

It all depends on a systemic increase in the demands on performance of party organizations, on dealing with these problems competently and effectively at individual places of work, on creating the political prerequisites for the application of objectivized standards and systematic implementation of the merit principle in remuneration.

For the time being there are still many shortcomings in and obstacles to creating the requisite conditions forwider participation of the working people in the all-round promotion of efficiency. Little attention is paid in many places to putting into use experiences from enterprises which constantly achieve good results in making production and labor more efficient. Inadequate use is also made of the experiences from other socialist countries, primarily the USSR and GDR.

Protracted application of labor efficiency measures is also marked by a shortage of experienced specialists, frequent misunderstandings and less than popular acceptance of these efforts. It also suffers from limited application of scientific findings. All of this directly influences the level of standards and norms, their quality and practical application.

Briefly put, the promotion of labor efficiency still has not become lodged in the minds of many managerial personnel, be they of the older generation, when development of production could usually be achieved by less demanding approaches, or young personnel who often lack the requisite knowledge and experience. This discipline must also receive a much greater amount of attention at our vocational schools and institutions of higher learning.

/Question/ You mentioned the low level of standards among the causes of shortcomings. What measures are you adopting to bring about a change?

/Answer/ To improve the quality and expand the base of standards for labor consumption the federal government adopted in 1980 measures which call on sectoral organs to check in 1981-1983 all standards for labor consumption and to bring them into harmony with realistic technical and organizational work conditions, and to keep checking every subsequent year at least 20 percent of the standards.

Another task is the expansion of the base of standards for labor consumption in such a way as to reduce the number of personnel whose work is not standardized by at least 15 percent during 1981-1983 and by 10 percent annually in the subsequent years of the Seventh 5-Year Plan.

Analyses show that for the time being the objectivization of standards is continuing on the whole in consonance with the approved program. However, there is a lag in putting new standards into practical use. So, for example, 60.5 percent of standards were objectivized by the end of last year in federally controlled sectors, but they were applied only to 32.6 percent of personnel. The results are more favorable in production sectors controlled by national governments. Thus, for example, in Czech industry the share of workers to whom objectivized standards had already been applied reached 76.5 percent and in Slovakia 59.5 percent.

The main reason for the slow application of new standards is the fact that enterprises have not sufficiently availed themselves of the opportunity to use various forms of wage conciliation with reduced time consumption on the one hand and, on the other hand, have postponed their application until modification of wage tariffs.

Lately there has also occurred an increase in the activity of the intersectoral commission for efficiency promotion and standardization of labor. The main focus of attention is now on processing the outlines of valid compendia of uniform standards and norms, on coordinated generation of uniform standards and norms with general applicability, on compiling standards regulating the numbers of administrative personnel in cadre and personnel activiites, information systems and accounting as well as on devising standards for operational planning which, as the result of joint efforts by CSSR and GDR specialists, are already undergoing experimental verification in selected enterprises.

I am far from having exhausted all the tasks attendant to the development of our normative base. They pertain not only to labor consumption standards, but to all administrative standards.

/Question/ You also emphasized the importance of individual wage incentives for the accelerated implementation of scientific and technological progress. What changes are being implemented in this area?

/Answer/ Measures designed to increase the material incentives of personnel in preproduction stages are summarized in our ministry's directive calling for promotion of individual wage incentives for acceleration of R&D. It was approved in July of last year and is being gradually implemented. These pertain to organizations which comprehensively apply the government-approved rules for experimental verification of measures designed to accelerate scientific and technological progress.

Their priority orientation is on increasing the effectiveness of incentive forms of wages. Thus, in the future creative teams and individuals will be offered remuneration for the successful solution and implementation of selected R&D tasks to replace the existing regular quarterly bonuses. Their amount will be tied to the ultimate results of their efforts--attainment of the prescribed technoeconomical standards specified for the solution and implementation of individual tasks and, consequently, not tied to meeting the production plan.

Prominent appreciation is given to top-level and expedient solutions of important planned R&D tasks in the form of special bonuses.

For a particularly practical application and a documentably high economic contribution sectoral ministers can grant special bonuses in the amount of Kcs 5,000 to Kcs 50,000 per task and per worker.

In the interest of doing away with detrimental leveling to remuneration, bonuses will be determined ahead of time so that with expedient and high-quality meeting of tasks and attainment of the prescribed level of economic contribution the level of earnings among individuals in preproduction stages will be higher than that of personnel in the same class in other enterprises units.

In the case of basic wages there is a possibility for setting the wages of personnel in preproduction stages at 10 percent above the upper limit of the wage brackets range. Outstanding top specialists who have made an extraordinary contribution to improving the technological level of individual production sectors and products can be granted extra pay or be awarded extra bonuses up to Kcs 7,500 a month.

These measures provide some leeway for more active use of the system of incentives, particularly for creative personnel, for the solution and expedient implementation of the tasks of the plan for science and new technology.

Nevertheless, yet additional concepts are currently under consideration. In preparing the new catalogue of qualifications we shall verify the classification of personnel in preproduction stages with the objective of providing better recognition to creative and effective technical efforts in this area, as well.

/Question/ The problem that will be faced by many enterprises will be where the wage funds for application of the adopted measures are to come from.

/Answer/ It stands to reason that all wage payments can draw only on the extent of actually generated resources. No additional resources can be counted on. This applies also to wages of personnel in preproduction stages. At the present time there is a need for expanding wage funds with maximum economy and effectiveness so that their total volume is actually commensurage with the contribution made to the development of society. There can be no doubt that the implementation of measures pertaining to the reumeration of personnel in preproduction stages is no easy task.

Therefore, the measures pertaining to remuneration will be implemented gradually and their integral part is the form of their payment from generated resources. Systematic and competent application of R&D results in practice, more efficient and higher-quality labor and its ultimate results that are reflected particularly in increased national labor productivity create the requisite room for wage fund increases. In accordance with the demanding nature--but particularly the economic contribution--of the planned tasks for technological development, these resources can be justifiably applied with higher priority in this area.

A second source is the utilization of resources that are often expended at the present time in a dissipated manner and without **clear purpose** on various extra premiums and bonuses; the point is to bring them under stricter control and use them for providing recognition to tasks in the area of science, new techniques and technology.

It must be stated openly that material incentives will not be provided where the anticipated contribution fails to be achieved. Higher wages must simply be earned. Such a course of action is not easy and can undoubtedly lead to conflicts with some people who have become accustomed to living at the expense of productive workers.

/Question/ One of the most important, but also one of the most difficult to achieve, is the requirement to tie remuneration more strongly to the final results, something that has not been resolved even in theory as yet.

/Answer/ The basic problem of tying remuneration closer to the final contribution leaves for the time being unresolved and unreconciled the

notion of what should form its basis--be it production, adjusted value added, profit, technoeconomical characteristics or some other, more descriptive indicator--and also to which organizational units the contribution should be tied--be it the enterprise or intraplant components. A subject of contention and of extensive experimentation in our and other socialist countries is also the intensity and forms of tying remuneration to the final results of expanded labor.

As a matter of fact, in remuneration for work there crops up another problem, namely the chronological disparity between the solution of planned R&D tasks, their implementation and the final results produced by the solution. This time difference tends to be considerable. Tying premiums and bonuses to results determined after a great lapse of time tends to create many problems.

The measures adopted for improving the incentive components of wages in the area of R&D, as I have characterized them, represent the first step toward closer linkage of premiums and bonuses to attained results. In dealing with the tasks of the R&D plan remuneration will be tied to both the achieved technoeconomical indicators for individual tasks and to the individual stages as well as the final results.

One of the criteria for granting annual bonuses to key personnel of organizations will be the overall technoeconomical contribution of the implementation of R&D tasks. It will be possible to reward high contributions to the effective results obtained by an enterprise, sector or branch through extraordinary remuneration provided from the centralized resources of an enterprise, a production sector or ministry.

The linkage of remuneration to achieved results forms the center of attention for economic theory and practice. It represents one of the key problems in the continued improvement of the system of planned management of the national economy in the Eighth 5-Year Plan.

/Question/ The impact of R&D is becoming reflected in all sectors and will call for accelerated implementation of structural changes and for giving preference to viable branches with a promising future. What support will your ministry provide to the process of redistribution of manpower and its partial relocation?

/Answer/ One of the tasks accruing from the Eighth Plenum of the CPCZ Central Committee is devising measures for a purposeful redistribution of manpower for the benefit of branches that show promising development and cutting back on branches with low productivity and low demands on qualifications and skills.

We are aware of the fact that this will be a gradual process which will have to be prepared and implemented in mutual cooperation by

planning and sectoral organs. In addition to analytical documentation, provided in part by our ministry, there is a need to define more accurately the basic criteria of the effectiveness of individual productions in the national economy, to specify objective techno-economical criteria that could serve as a basis for decionmaking in dealing with such important problems.

Nevertheless, much of what we talked about can be carried out without needless delays and waiting. For example, many enterprises still turn out products that have no market. Such production, in addition to adverse effects on the generation of national income, ties up manpower resources, weakens work discipline and puts limits on the efficienent utilization of manpower where its contribution to the national economy would be unequivocal. So, why settle for any delays?

National committees must also be well familiar with the described situation and influence in this respect the process of the viable relocation of manpower. Sectors must take into consideration the retraining of large numbers of personnel, the expansion of the range of skills and qualifications and their interchangeable availability at the appropriate work places.

It must be admitted that the structural changes implemented up to now have not called for any extraordinary measures and could be implemented on the basis of valid regulations. However, since it is obvious that this process must be accelerated, we are preparing measures in the system for uniform control of the level of employment and distribution of manpower, planning the need for qualified personnel, in the area of material incentives for enterprises and individuals, in the area of recruitment and throughout the system of collective, personal and social development of work teams.

8204
CSO: 2400/210

SUPPLYING WATER TO CUSTOMERS IN BOHEMIA STILL PRESENTS PROBLEMS

Prague ZEMEDELSKE NOVINY in Czech 4 Feb 84 p 1

[Text] The map says it clearly: the Elbe, Oder, Morava, Vah, Bodrog--all these great rivers and also others carry water away from us. There are no large ones that flow towards us, the Danube really only touches our territory and cannot be counted. So when it comes to water sources we are, in essence, dependent only on the rain that falls here.

Last year this was really very little. For all of 1983 we in the CSR registered only 77 percent of sustained normal precipitation and in southern Moravia even less.

We have been feeling the shortage of rainfall in our territory for over a year now. Of necessity this was apparent in sources of water for drinking and for other purposes. In some cities consumption was regulated by limited supplies, in others, local sources were completely exhausted and water had to be brought in by tank trucks.

Around the end of the year this was the way about 500 communities in the CSR were supplied, mostly around Pribram, Ostrava, in the area of Hlinsko-Havlichuv Brod and also elsewhere. In many places, even after the recent rains, this situation still persists. It is the same in industry and agriculture where stables especially still have to have water supplied by tanks.

In spite of these problems, the delivery of 818 million cubic meters of drinking water and 850 million cubic meters of general purpose water was achieved last year. This meant that the plan was met at 103.3 percent. Greater supplies of water, however, were obtained only where there were adequate sources even with light rainfall. In the affected areas figures on fulfillment of deliveries are of no use to anyone. They either put up with their shortages or sought out some other means. There were two different methods. The simplest was to make use of new sources or renovate old ones which had been destroyed as soon as connection was made to the public mains. In this way many agricultural and industrial enterprises in Moravia obtained costly water or even whole villages in the Pribram district. The more difficult way was probably the one whereby sources of water were sought in

their own technological processes, the way of savings. It was the more difficult because up to this time very few enterprises thought about saving where there had always been plenty. And so we should appreciate the example of the Pribram meat combine, where in 2 years they managed to reduce consumption of water from 390,000 cubic meters per year to 235,000, naturally at the same time observing all the strict rules of sanitation. In Ostrava, on the other hand, they made savings a little differently--the showers had pedal arrangements which prevented superfluous running of water when no one was bathing. Every such measure added up to the fact that the water in the reservoirs fell just a little more slowly. This was very important because by the end of the year the reservoirs of Ostrava had only 44 percent of their normal supplies of drinking water and in Pribram actually only 30 percent.

The consumption of water here will increase further. By the end of the 5-year plan, 78 percent of the population should be supplied from public water mains, or 1 percent more than today. That means constructing more reservoirs, seeking new springs. Obtaining a new source of drinking water with a capacity of 1 liter per second costs our society about 1 million korunas. This refers to cases where we are looking for new sources.

But in order to hook up other communities to public water mains for new production capacities we do not always need new sources. It suffices to make economical use of the water that is already being used. The Pribram meat combine saved the equivalent of a source with an output of about 2.5 liters of drinking water per second, which would have meant an investment of 2.5 million korunas. There are, however, far more enterprises that do not save water than those that do. Consequently, water there escapes and we have to obtain new capacities by costly construction. Renovation of wells, for example at cow barns, and discontinuing procurement of water from public systems also saves the costs connected with constructing new sources.

Water by the cubic meter, until recently not considered very precious, is also escaping in other ways, starting with poorly installed water pipes and ending with dripping faucets. Also, there are many enterprises which still do not understand the difference between water for drinking purposes and water for other purposes.

The old proverb says that every cloud has a silver lining. This applies here, too, because many people now realize the value of water and have learned to save it. We often talk about the need to instill an economic outlook into our thinking. We have succeeded in many ways because we are using less oil and energy than before. But we have generally lacked this kind of attitude regarding water, until now, when the long drought has reminded us of the value of water. This reminder ought to stay with us even after the time when our half-empty reservoirs are full again.

6491
CSO: 2400/224

DISCUSSION OF PROBLEMS IN GROWING SUGAR BEET

Bratislava PRACA in Slovak 8 Feb 84 p 5

[Article by Milan Blaha of NOVE SLOVO and Milan Valasek of PRACA: "The Bitter Taste of Sugar"]

[Text] Sugar beet cultivation and sugar production in our country is lagging behind the overall performance of the food and agricultural sector. At the same time, sugar is a sought after export item and sugar beets are an energy rich source of fodder. Sugar constitutes 20 percent of the exports of this sector to nonsocialist countries. We rank fifteenth among the 24 sugar beet growers in Europe and our per hectare yields of about 32 tons per hectare are about two-thirds of the yields of the most effective producers. For years now the harvests have been declining, as has the per hectare production of sugar, at a time that we need to produce more beets for the production of refined sugar. Between 1971 and 1982 we lost about Kcs 6 billion from declining sugar production--a shortfall of 1.5 million tons.

The areas under cultivation are now larger, improved equipment has been acquired, agricultural chemicals and the seed stock are of higher quality, manual work has been reduced, and the result? What, then, is the diagnosis and where can we find a treatment to cure our sugar beet and sugar refining industries?

Have We Forgotten?

Have we forgotten how to raise sugar beets? After all, in the 1930's and 1940's we were among the leading growers in Europe, with per hectare yields and beet sugar content higher than they are today. More than one sugar refiner has said that when a beet had a 15 percent sugar content it was classified as fodder... But we are planning an average sugar content of 15 percent for the Seventh 5-Year Plan. To say nothing of the fact that Slovakia lags behind CSR growers... In 1972 the nationwide average sugar content was 17.96 percent, while it was 16.93 percent in Slovakia. Ten years later we have declined to a nationwide average of 13.60 percent, with the average sugar content in Slovakia at 13.11 percent.

"The problem lies in the fact that beets must be grown in beet growing areas, in heavier soils with lower than average temperatures and higher than average precipitation. In terms of the sugar content of our beets, we lag 0.8 percent behind growers in the CSR. But they raise 80 percent of their beets in beet growing areas while in Slovakia only 20 percent of the land being planted in beets is in this type of area... I admit that this is not the only reason for stagnation. There have been many more reasons for the shortcomings in the raising of this crop in past years. We have developed a cultivation system for the needs of agriculture that we are systematically adding to with the newest findings. Growers must understand and convince themselves that spring does not correct the mistakes of the fall..." (Eng Josef Mudroch, chief agronimist, SSR Ministry of Food and Agriculture).

For Sugar or Fodder?

On more than one occasion we have noted with bitterness that it is not clear whether we are raising sugar beets for the production of sugar or as fodder. For a long time we procured sugar beets as a raw material without regard for its sugar content. Farmers therefore cultivated and developed strains that are highly productive. Worldwide, some 60-120 kg of pure nutrients are added per hectare, while we add up to 200 kg... Fortunately, this quantitative outlook has given way to quality. But suddenly there is a problem.

"We have not been able to develop a sweeter beet either with agricultural equipment or with newer types of seeds. We often hear about and see for ourselves on the land the unbalanced stands, the beets of differing sizes... The error is in the inadequate concentration of operations in the fall. We do not plough deeply enough, we do not know how to retain soil moisture, fertilizing the stand requires more than experience... To remember in February that we are going to grow sugar is really too late... Preparations must begin in June of the preceeding year." (Eng Bartolomaj Sedlak, director, Bucany Research and Improvement Station).

The bulb begins to develop slowly. Systems were rushed to the aid of the growers which had been developed by experts and covered all the production areas where we grow beets. Practice balks. It objects that there is neither the seed nor the equipment for precise sowing, herbicides, and application equipment. All of this forms a complex acting upon and significantly influencing the amount and quality of the harvest, and therefore also the economics of sugar beet cultivation. Is it not also, however, fear of the demands for higher quality work, of the demands for greater organizational ability not only of people but also machines?

The farmers of the united agricultural cooperation [JZD] in Kalna and Hronom in the Levic okres are among the best sugar beet growers of this okres. They grow the Dobrovic "A" beet and have achieved yields of more than 43 tons per hectare and of more than 6 tons of sugar.

"Now, when we need to achieve better quality harvests, we are using less nitrogen. In an agronomic sense we have mastered the cultivation of this crop. We are communicating with the management of sugar refining plants and the situation is improving. We need sweeter varieties that have been developed for mechanized picking equipment. We are trying some Slovak varieties." (Eng Juraj Varsanyl, chairman, Kalna JZD).

"Through purposeful fertilization of stands and a high quality, wasteless harvest we are able, without large capital outlays, to harvest about 40 tons of beets per hectare with a 17.5 percent sugar content. We do not need 80-90,000 plants per hectare, 70-75,000 is sufficient, but the field must be clear and weed-free." (Eng Ladislav Sarvari, candidate for Doctor of Science, general director, Cukorcukrovinky VHJ).

Practice calls for higher quality seed stock, genetically monocotyledenous (the tiring process of thinning is disappearing), packaged and calibrated. Without these preconditions it is impossible to establish a balanced and complete stand. For instance, tending a plot of beets from genetically monocotyledenous and well-prepared seed requires 20 hours per hectare of manual work, while other types of seeds require as much as 200 hours. So where do the economies lie? At the same time we did not even fulfill the planned targets for 1982--sowing 50 percent of our plots with genetically monocotyledenous seed!

Imona and Palina

In Czechoslovakia there is one plant in the entire republic (in the CSR) for the preparation and packaging of sugar beet seeds. To put it simply, the facilities are not adequate to meet the orders. Do we, in fact have enough genetic material of the requisite quality? In Bucany, local upgraders have developed the Arimona and Imona strains, capable of producing bulbs with 19-20 percent sugar content. In addition they have upgraded the Remona and Palina strains for the conditions of the CSR. These are also monocotyledenous.

"In foreign experiments and testing stations our strains have come in first place." (Eng B. Sedlak) Strains developed by Slovak seed experts are being incorporated into the sowing plans of well informed and above all intelligent agronimists. "We bet on Arimona, Imona and Palina and we were not disappointed, as they are suitable for mechanized picking. We have a labor shortage..." (Eng Miroslav Grestovansky, former chief agronomist, Tekovske Luzany JZD, now director, Sahy state farm). Why then does not more high quality monocotyledenous seed make its way into farming practice?

Something will come of this this year. In Slovakia we are slated to sow this kind of strain on 20-30,000 hectares which is about half of the planned area to be cultivated (in the CSR not only a sweet sugar beet but a heavily leafed variety is also grown. These are for the fodder that was mentioned above--as a source of peelings and cuttings...).

"In our okres, sugar beets provide farmers with 35-40 percent of all their bulk fodders. The Dobrovic 'A' provides not only sugar beets but fodder as well, because its leaf mass is up to 20 percent greater than other strains" (Eng Michal Varga, chief agronomist, Levice okres agricultural station).

Seed scientists are developing, and have even actually recorded new strains which should fulfill practical requirements for quality and productivity. Have agronomists been criticized for not knowing the field germination rate of seed? That is probably an alibi, an excuse behind which incompetent agronomists are glad to hide... Bear in mind that we have sown even the highest quality foreign seeds and the beets that came up were not much sweeter than our own, even though "at home" their percentage of sugar was substantially higher. Could this not be a problem with the soil? With fertilization? With processing?

What To Sow in Future?

More than one grower fears the harvest. On a regular basis, after all, biological harvests (when in the field) are substantially higher than those after picking. Problems in the application of chemical protection agents against weeds, pests, or diseases can damage a stand due to incompetence on the part of the agronomist, the absence of or late application of a necessary pesticide, or improper application techniques. One person wants only foreign pesticides, others assert that domestic ones are the best... "There are reservations about Burex Special; even the experts are divided. We combine it however, with other herbicides, and have positive results" (Eng Josef Klemens, chief agronomist, Trencin okres agricultural station).

When one adds to these problems the "sophistication" of our harvesting equipment it becomes clear why high harvest losses are spoken of as a Czechoslovak speciality. We really do have high losses: 20-30 percent of the crop stays on the field. This means that by reducing harvesting losses by 1 percent an additional 8-10,000 tons of sugar can be produced nation wide!

(Harvesting losses begin with imprecise sowing, continue with shortcomings in copying equipment and end with an inappropriate system for removing the beets from the ground, although a skilled and responsible tractor driver can reduce these latter losses by 10-12 percent...)

"A picking technique must be chosen for each plot. It is not necessary to rush to harvest more hectares or to mess around with secondary or tertiary pickings. The best idea is to provide incentives to the combine operators so that they have an interest in checking the correct setting of the cutting and the digging mechanisms and to replace dull knives with sharp ones, etc." (Eng B. Sedlak). The manual picking of sugar beets is already definitely behind us, but did the times of a clean raw material have to go with them? The bulbs are, you see, two or three times as dirty when picked mechanically than they were when they were picked by hand.

"Every campaign brings into our sugar processing plant as much as 16,000 tons of dirt along with the sugar beets..." (Eng Rudolf Stransky, production-technical deputy director, Trencianska Tepla Sugar Processing Plant)

"The machinery and equipment lines for the picking of sugar beets are, in their current condition, well suited for zootechnologists. They gather not only the green portion of the beet, but also one third and sometimes more of the root..." (Eng J. Varsany)

Not Only the Engineers

The fact that harvest losses are high is not the fault only of the engineers. The foregoing enumeration of the problems attests only to the complexity of the reasons for the current stagnation of domestic sugar beet production: agricultural equipment, seed, planting equipment and harvesting equipment... From the difficulties on the field, however, one can move smoothly to shortcomings in the sugar processing industry, i.e., in the related processing industry. The farmers are not the only ones with input into the decision of when the harvest itself will take place.

Obstacle No 1: Schedules. The beets must be dug up according to when they were sown, i.e. taking into account the essential vegetational time of 180 days, as well as considering the requirements of the farmers who themselves are not united in their view of when to start the harvest. Autumn work is peaking, tying up tractors, trailers, people, and handling equipment. Corn is being ensilaged, and beet cuttings are added... the weather plays a role as does the lack of sugar processing capacity. How then to decide? Last year a later start made it possible to get good results in terms of the quality of the raw material, better than for some time. (To be sure, one cannot ignore the approximately 400,000 tons shortfall in the beet harvest last year in Slovakia...)

The engineers are really very much indebted to the farmers. How can we see to it that unnecessary losses are not subtracted from the harvest every year? We are testing several foreign picking machines. "I am confident that our experts, our engineers, will choose the best machine for production under license. We are assuming that this way we will reduce harvest losses by 50 percent. The only problem is that there are currently about 1,300 6-row picking machines, which are not cheap, at our agricultural enterprises that cannot be written off from one day to the next..." (Eng Miroslav Toman, CSSR, minister of food and agriculture).

Obstacle 2: The sorting of the beets. Procurement prices are based on quality and on the sugar content of the bulb. Indeed, this is the only possible solution. But if there is clay, weeds, green portions of the beets or mechanically damaged or broken bulbs when beets arrive at the warehouse... reductions are made, and bonus payments for early and later crops. Many possibilities, and possibilities for fraud as well. On both sides.

"It is necessary to shorten the length of the picking season, as well as the time necessary for harvesting the beets. Who has the time to sit around in a sugar processing plant and monitor the objectivity of the selection of beet samples, their evaluation, and the payment for them? Dissatisfaction then disrupts the quality of the mutual relationship" (Eng M. Varga).

Farmers are not satisfied with the Rupro system. They do not trust it and feel that it hurts them. The samples for evaluation, you see, are taken from that side of the sorting tray where the conveyor deposits the dug up beets. This is where the amount of earth and therefore the price reductions will be the greatest... "Neither we nor anyone else in the world has a better system currently than Rupro." (Eng Ladislav Sarvari, candidate for Doctor of Science).

Shades of the Last Century

The beets are finally in the storage facilities. Here they are threatened by the weather (rain, frost, snow), and by lack of care or vigilance. The difference in the sugar content of procured beets and processed is a minimum of 0.45 percent, at the Trancianska Tepla sugar processing plant, which is the best in Slovakia. The norm, however, is about 1.42 percent.

In the CSSR we have 65 sugar processing plants (there are 10 in Slovakia), 57 of which are from the last century, although all of them have been remodelled on various occasions. The processing capacity of our sugar processing plants for a 24 hour period is something over 89,000 tons of beets which, when converted to a per facility figure indicates that we have the lowest capacity of all the neighboring European states. We should not be surprised therefore when our harvest season lasts 70-120 days when the optimum is 70-80 days. If we are storing the beets for 20-40 days, and the season lasts a long time, is it possible at all to reduce losses in sugar production?

"Further savings are possible, but the problem is that almost all measures are energy intensive. We must consider the economy..." (Fr. Kovac, manager, Trencianska Tepla Processing Plant). We need at least one new sugar processing plant. Those at Sladkovicova and Pohronsky Ruskovy are almost museum pieces.

"We are building a new sugar processing plant in the Nitriansky okres with a daily processing capacity of 6,000 tons of beets. Nor is this the extent of it. In the next 12 years we will be modernizing this sector at a cost of Kcs 11 billion." (Eng M. Toman)

All of this seems very simple: a diagnosis on a platter. Except that most of the elements of this sweet chain begin and end with money. Machinery (licenses), chemicals to protect the stands (a complete chemical curtain costs about Kcs 3,000 per hectare and is more expensive than manual cultivation) and liquid mordants, increased economic incentives for combine

operators during the harvest, and modernization of processing facilities. Nor are the economics of the growing of this crop inconsequential because on this depends the incentives for the farmers and their stake in it which is also reflected in the quality of agricultural machinery, in a comprehensive system for working the soil, in fertilization, the management of moisture, sowing, etc. Sugar is truly our white gold. We cannot, however, rid ourselves of the feeling that we are not treating it as a treasure...

9276
CSO: 2400/214

COMMENTATOR CRITICAL OF AGRICULTURAL LOSSES

Prague RUDE PRAVO in Slovak 19 Jan 84 p 1

[Editorial: "Losses Have Addressees"]

[Text] According to predictions on the future development of the national economy up to the year 2000, in Slovakia population growth alone will bring about a drop in the average per capita acreage of arable land from the present 3,000 to 2,600 square meters. Like it or not, even assuming a high intensity of utilization of our land resources, we must accept this fact as an upper bound in satisfying the demands of the market by programmed food production--in providing for rational nourishment. This places all the more importance on problems not only of increasing soil fertility and utilizing the soil rationally through implementation of scientifically justified planting structures; in addition, through the intelligent management of production and through progressive forms of labor organization and remuneration, we must ensure that all plant and animal products are properly utilized. This means that we must develop and multiply agricultural production in such a way that all contributions of labor and funds will pay high interest--that the results of labor in the agriculture and food products complex will not be diminished by unnecessary losses, which are at present literally of alarming proportions.

At the November 1983 plenum of the Central Committee of the Communist Party of Slovakia [CPSL] emphasis was placed on the need for an immediate solution to this problem. "It is particularly important, as concerns increasing the end results of agricultural and animal products production, to minimize losses occurring in the field and in the stable as well as in our food products industry," states the report of the Presidium of the CPSL Central Committee, which notes in conjunction with this that "the government of the Slovak Socialist Republic has reviewed a program for decreasing losses. Looking only at those [losses] which do not place demands on capital and other investments, the figures are about Kcs 1.2 billion for plant products and Kcs 0.2 billion for animal products, which means that our society is losing about 4 percent of its annual production. These are, namely, losses in the quantity and quality of grains, bulk feed, sugar beets, potatoes, vegetables and fruits, as well as natural and synthetic fertilizers, losses caused by weed-overgrown fields and excessive deaths of farm animals. The Presidium of the CPSL Central Committee is requesting explicitly that such programs for

decreasing losses be worked out at every level of management and in every agricultural and food-products enterprise."

This direction of improvement or, better expressed, nonimpairment of the end results of production, and of effective waste-prevention, is indisputably of particular importance to our entire society, since it is as clear as the sky is blue that, as concerns materials, funds, and labor, it is less demanding to decrease losses in yields than to increase yields further. This is the proper time, when financial plans for the whole year are being developed and approved, for workers in agricultural enterprises, the food products industry, and enterprises subsidiary to agriculture, in a word, in all areas of the agriculture and food products complex, to make a really careful analysis of the causes for and the extent of losses and to develop their own programs to decrease these as well as to increase product quality. In minimizing losses we should give priority to concentrating material resources and to considering labor initiative.

Members' meetings of the basic organizations of the CPSL, taking place now at the beginning of the year, have a particular mission in this process. Deliberating on this year's tasks, the communists should take an uncompromising stance on negligence in every form, including losses, and should themselves serve as an example of how to prevent losses and how to constantly raise the level of food production.

In determining losses it will certainly not, on the whole, be difficult to deal with the numbers which the economists use to demonstrate their extent. It will, however, be more difficult to locate the specific culprits who are responsible for these losses and who have thus harmed both the enterprise and their fellow workers, as well as their own pockets. Naturally no one will want to be cast in the role of the villain, but this role should be assigned with all due ceremony to whomever deserves it. People ought to know who shares in what way in the results of collective labor--who has worked hard for them and who has only made use of them. Still, we can no longer tolerate the practice, up to now so well-beloved in agriculture, of claiming, when results are excellent, that specific workers are responsible for them, but in the case of failure, that this has been caused by objective factors, most frequently poor weather.

To tell the truth, such claims are not very appealing, and it is high time to eradicate such habits from agricultural practice as a whole, for they are highly destructive to the interests of the enterprise and of our whole society--they are completely at odds with progress, which at the present stage of history simply cannot be evaded. On the contrary, we must open wide our doors to it, which we try to do both by putting into practice the latest scientific knowledge and the experience gained by progressive agricultural enterprises, and by adopting progressive principles of production management and of organization of labor and remuneration. Precisely such proper implementation of these socioeconomic principles will make it possible to increase discipline and order in every workplace--to properly identify those responsible for producing outstanding results as well as to pillory those responsible for

errors and defects, which result in losses and decrease the overall level of economic efficiency.

Losses are not limited to kilograms or tons of crops or animal products which the tractor operator has left behind in the field or the animal products worker has damaged through the irresponsible handling of finished products. Much worse and frequently more relevant are the hidden losses.

For example, during the period of the Seventh 5-Year Plan we have annually been investing approximately Kcs 0.9 billion in the interest of land reserves through the construction of irrigation and drainage systems, and approximately this amount for non-capital-investment soil fertilization. These are no small sums. Therefore, mildly stated, it is literally amazing that last year, even during the period of the most severe drought, these irrigation systems were not fully utilized, to say nothing of the fact that even during planting little attention was paid to the principle that wet soils should be planted primarily in crops which require water. When we take into account that Slovakia has over 231,000 hectares of land which can be irrigated, underutilization of this potential has resulted in really significant losses to the national economy. For, according to scientific and technical estimates, irrigation raises the basic production potential of agricultural land by approximately 25 to 30 percent. Unfortunately, in recent years, including last year, only about 50 to 60 percent [of this potential] has been utilized. Then again, the amount of the bulk feed harvest lost through poor storage is equalled by the amount of feed destroyed by poor labor organization in the animal products industry, where the differences between advanced and backwards enterprises constantly show up in the use of grain feeds per kilogram of growth; for the example of stockyard sows there is a difference of over half a kilogram of feed, while the difference in utility of the fattened hogs can be over 100 grams per kilogram of body weight.

In such cases and in other similar ones, it is really essential to name the culprits by their proper names, and, of course, to take appropriate action against them.

The Soviet sociologist Professor Staroverov, in analyzing Soviet agriculture, states that a conscientious approach to work, without any capital investment of any sort, makes it possible to achieve up to a 30 percent increase in production. The experience of our own agricultural system completely confirms his statement. However, it also confirms that to achieve an active conscientious approach to work on a large scale--to completely eliminate the subjective factor--is often more complicated, difficult, and time-consuming then to implement industrial technology.

An essential part is played in the solution of these tasks by increasing the level of intraenterprise management through the consistent use of intraenterprise khozraschot and through the more rapid adoption of brigade forms of organization of labor and remuneration.

Data from the testing of brigade khozraschot in the JRD's [unified agricultural cooperatives] and SM's [state farms] unambiguously confirms that collective

discussion of tasks and collective remuneration according to the value of the end results increase workers' participation in planning, in direct management of production, and in organization of labor and remuneration, and strengthens the socialist principle of collectivism and workers' cooperation.

It can be stated that increasing the extent and degree of individual responsibility for fulfillment of tasks which the brigade khozraschot sets forth is the key to an uninterrupted increase in the quality and effectiveness of agricultural production--a reliable weapon for the offensive in strengthening order and discipline in the workplace, which is one of the basic prerequisites for ensuring food production, both through the better use of investments in agricultural production and through the uncompromising punishment of those who, by their activity or lack of activity, are responsible for losses.

The above should serve as a guideline for decisionmaking at the January and February members' meetings of the basic organizations of the CPSL in the agricultural and food-products enterprises. We must give the communists specific roles in fulfilling this year's plans and demand, by consistent control, that these plans be fulfilled on time and without waste.

9832
CSO: 2400/188

AVAILABILITY OF SEED FOR SPRING SOWING DISCUSSED

Prague RUDE PRAVO in Czech 31 Jan 84 p 5

[Article by Eng Josef Veselsky, general manage of Oseva VHJ (economic production unit) Prague: "Sufficient Supply of Seed for Spring Period"]

[Text] In securing seed for sowing, our Oseva VHJ takes into account the needs of the optimum development of crop production in the future. We successfully fulfill the principal tasks set for us by the research-development plan. Likewise, the number of new varieties developed by our plant breeders is rising. Depending upon the length of development of a new variety, our breeders are working now already on the varieties not only for the next 5-year plan, but also on the tasks up to the year 2000.

Directly linked to plant breeding and production of new varieties is the seed sector which secures production of seed for sowing. As to the newly licensed varieties, they are already in the stage of promising new breeding and, according to the results achieved in the variety experiments carried out by the state, are being produced in the required quantitites ahead of schedule. In this context I want to point out that new varieties are being introduced in all krajs with proper conditions for growing them.

Progressive Variety Structure

The seed of individual species is produced in the quantity agreed upon every year by the CSR Ministry of Agriculture and Food with the participation of leading workers of kraj agricultural administrations [KZS], kraj seed-producing enterprises and the Oseva general directorate. In the determination of varieties of individual crops we are guided by the recommendations of the central meeting of activists which is convened by the CSR Ministry of Agriculture and Food every year and which is attended by the representatives of KZS, chairmen of kraj variety commissions and others.

I do not think it is necessary to explain in detail that a change in the variety structure is not a simple process which can be carried out from year to year. I dare say that the development of our variety structure is of a progressive nature. We try to supply agricultural enterprises with the seed in necessary quantities and in the most efficient varieties.

Modernization of Seed Treatment

Before I deal with the situation in seed for this spring sowing I would like briefly to mention some of the problems on whose solution we focus our effort. In the first place I have in mind the definite selection of seed-growing agricultural enterprises operating in the optimal conditions, especially for demanding species such as grasses, clover for fooder and seed root crops. Product specialization is to be made possible by the modification of other tasks of crop production. In addition, selected enterprises must be provided with specialized equipment, including equipment for postharvest treatment, and necessary quantitites of pesticides.

Last year we also continued in our effort to improve further seeds produced and supplied by us, to modernize technological equipment for their treatment. We put into operation additional new capacities for grain crops, such as the seed cleaning station at Velteze and the modern grass cleaning plant at Roznov. We regard the revision of economic conditions as a very important measure of our sector for the increased production of grass seeds. The price revision has substantially improved profitability and thus provided breeders of species now in short supply with an economic incentive.

What Is Prepared for This Year?

The concrete situation in the preparation of seed for this year is as follows.

The resowing of areas with winter grain crops reduced the areas planned for spring grain crops, particularly spring wheat and spring barley. The seed supply for sowing spring grain crops covers the needs, including fodder compounds, by 100 percent. Due to the weather conditions last fall and general situation in winter crops, we try to increase the supply of seed for sowing spring grain crops in order to offset the loss from the anticipated plowing under of winter crops.

Independently of the measures which we are taking in regard to seeds, the CSR Ministry of Agriculture authorized Central Agricultural Control and Testing Institute [UKZUZ] to check the condition of winter grain crops. The UKZUZ report stated that winter grain crops were bad and did not take root on 195,102 hectares. In addition to the basic sowing rate of 2.2 quintals per hectare, the present supply of seed for sowing spring grain crops should be sufficient for the recultivation of approximately 215,000 acres.

Now a few words about securing seed corn. This sector was very adversely affected by last year's harvest. The plan target calling for production of 19,450 tons was met by only 58.2 percent, that is, only 11,310 tons were purchased. The production deficit had to be compensated for by imports, and with the approval of appropriate agencies it was decided to prepare the corn seed from the areas now planted as F2 seed to be used in fresh state and for fodder compounds. In legumes it is anticipated that the targets set for production and purchase of seed will be met by 109.3 percent. The supply of seed is sufficient for sowing planned areas and fodder compounds. The available quantity of pea seed is sufficient for planting peas in all krajs.

Fodder Situation

On the basis of last year's results it may be expected that the seed production target may be met by 137.3 percent for clover, 37.8 percent for alfalfa, and 90 percent for other clover plants. The nonfulfillment of the target for alfalfa was caused by the production loss on 6,395 hectares, which is 35.3 percent, primarily in the North Bohemia and Central Bohemia krajs. For this reason, the delivery target set for clover will be fully met and after many years a very solid basic reserve in the quantity of 4,500 tons will be created. The alfalfa seed will be used primarily for covering seed production areas and the remainder will be made available for current cultivation and equally distributed among individual krajs.

The plan of grass seed production was likewise surpassed, as was also the original estimate of grass seed needs backed by the signed contracts. The favorable production results in our country and extra imports make it possible to satisfy fully and on time even the increased needs of agricultural enterprises for special-purpose fodder compounds.

10501
CSO: 2400/215

FODDER-PROCESSING WASTE HEAT UTILIZATION DISCUSSED

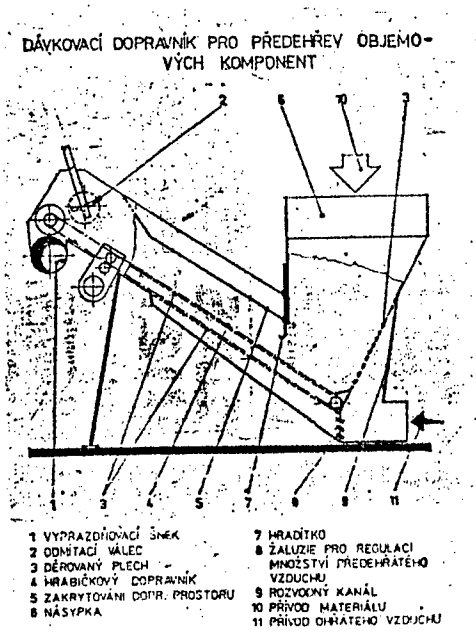
Prague ZEMEDELEC supplement to ZEMEDELSKE NOVINY in Czech 8 Feb 84 p 4

[Article: "Use of Waste Heat in Fodder Forming"]

[Text] Reducing the energy intensiveness of the forming process depends on achieving a favorable setup of the forming equipment and a modification of the material being processed prior to forming. In conjunction with a design for an experimental drying and forming line, employees of the Agricultural Technology Research Institute in Prague-Repi have fabricated and tested several prototype models of machines arranged in a forming line.

For the preheating of the bulk components by waste heat from a hot air drying facility, a dosing conveyor was designed and tested. The basis for this equipment was the exit conveyor of a BS-6 M mobile drying unit. By appropriately modifying the receiving hopper, adding dampers, modifying the bottom, and covering the entire piece of equipment, a unit was created which met the specifications both in terms of volume (cut straw throughput of up to 1000 kg per hour) and in terms of preheating the material. In tests the conveyor demonstrated the ability evenly to deliver bulk fodder at a rate of 200-1000 kg/hr. Delivery of warm air at 2,500 cubic meters per hour at a temperature of 65 degrees Centigrade (which corresponds to the temperature of the air obtained from the waste heat of the dryer) was arranged so that it could be directed either to the receiving hopper or under the exit conveyor. The temperature of the cut straw fluctuated from 52-62 degrees Centigrade depending on its volume. Test results indicated that the best exchange of heat resulted when two-thirds of the volume of air was directed to the receiving hopper and one-third was sent under the exit conveyor. When introduced into the forming line, significant energy savings were recorded. Without preheating, energy consumption was 18 kilowatts per ton of formed fodder, and with preheating 13 kilowatts per ton, which represents a 28 percent savings.

Dosing Conveyor for Preheating Bulk Components



Key:

1. emptying auger
2. rejection roller
3. perforated sheet metal
4. raking conveyor
5. covering of conveying space
6. receiving hopper
7. damper
8. louvers regulating amount of preheated air
9. distribution canal
10. material loading
11. hot air entry

9276
CSO: 2400/189

ECONOMIC, INDUSTRIAL COOPERATION AGREEMENT WITH SPAIN

East Berlin AUSSENWIRTSCHAFT in German No 8, 22 Feb 84 pp 1-3

/Unsigned: "Agreement Between the Government of the GDR and the Government of the Kingdom of Spain on Economic and Industrial Cooperation"/

/Text of Agreement/ The Government of the GDR and the Government of the Kingdom of Spain

-- Guided by the wish to develop economic and industrial cooperation between the two countries,

-- Intending to use their economic potentials within the framework of broad and long-term cooperation for the development of the two countries,

-- Acknowledging that long-term treaties and agreements are useful for securing stable and mutually beneficial cooperation,

-- Resolved to carry on economic and industrial cooperation while observing the principles of the final communique of the Conference on Security and Cooperation in Europe,

have agreed the following:

Article 1

The treaty partners encourage the development of economic and industrial cooperation with the objective of expanding and diversifying their economic relations. With reference to this cooperation, the treaty partners grant each other most favored nation treatment.

The treaty partners also encourage and facilitate cooperation between the respective natural and legal entities of both countries within the scope of their respective domestic legal regulations.

Article 2

Economic and industrial cooperation between the GDR and the Kingdom of Spain includes in particular:

-- Cooperation in the exploration, development, research, technology, processing and marketing of raw materials and energy sources important for both countries,

-- The construction, modernization and expansion of industrial plants by the delivery and assembly of complete industrial plants, equipment and machines.

-- The drafting of planning studies for investment projects and plant deliveries, making available documentation and granting the necessary technical assistance,

-- The purchase and issue of licenses, provision of know-how and exchange of information in fields of interest to both parties,

-- Presence in third countries with the objective of the joint realization of projects in those countries,

-- Other types and methods agreed by the treaty partners.

Article 3

The specific terms of economic and industrial cooperation will be set out in contracts and agreements between the competent GDR economic organizations and enterprises and the respective Spanish economic organizations and enterprises, in conformity with the respective domestic legal regulations.

Article 4

The treaty partners will inform one another in a suitable manner about possible cooperation projects and their realization. They will also contribute to the improvement of the exchange of data important for cooperation within the scope of this agreement, especially with regard to legal regulations concerning economic plans and programs, priorities established in these programs and market conditions.

Article 5

On the basis of the interests of both and within the scope of the legal regulations in effect in the two countries, the treaty partners encourage and back projects and activities involved in the cooperation between GDR and Spanish enterprises and economic organizations in third countries.

Article 6

The treaty partners appreciate the special importance of events oriented to the encouragement and development of cooperation, such as fairs, technical exhibitions, symposia and other meetings at enterprise level. Consequently they facilitate the organization of such events and encourage the involvement in these events of enterprises and organs of both countries.

Article 7

Acknowledging the importance of financing projects involving economic and industrial cooperation, the treaty partners endeavor to grant loans on the best possible terms in every specific case of cooperation, within the scope of their respective laws and regulations.

Article 8

To encourage economic and industrial cooperation, the treaty partners devote particular attention to the special problems of cooperation in the sector of small and medium enterprises.

Article 9

Cooperation within the scope of this agreement proceeds in conformity with the international obligations of the treaty partners; at the same time they will endeavor to ensure that their international obligations do not render impossible or injure the relations of cooperation between the two countries.

If difficulties with regard to treaty performance should arise for one of the two treaty partners from the above mentioned international obligations, discussions will proceed within the framework of mixed commissions, so as to seek the most favorable possible solutions in the spirit of cooperation within the scope of this agreement.

Article 10

For the purpose of checking treaty fulfillment, the treaty partners set up a mixed commission for economic and industrial cooperation, made up of representatives of both governments. The mixed commission may include in an advisory capacity representatives of enterprises and institutions of both countries.

The mixed commission may establish study groups for the discussion of specific assignments and suggest negotiations between the competent organs with regard to treaties and agreements relating to special fields.

The mixed commission examines the development of economic and industrial cooperative relations between the GDR and the Kingdom of Spain and circumscribes the fields in which an expansion of this cooperation is considered desirable. In this meaning the fields of cooperation listed in appendix 1 to the agreement to hand are declared fields currently enjoying priority; future annual protocols of the mixed commissions may stipulate other possible fields of cooperation.

The mixed commission also examines projects submitted by one of the treaty partners and proposals serving the development of economic and industrial cooperation. The mixed commission submits to both governments the recommendations and proposals it considers necessary.

The mixed commission meets annually or at the request of one of the two treaty partners, alternately in the GDR and the Kingdom of Spain.

Article 11

Any amendment to this agreement must be in writing.

Article 12

This agreement takes effect on the day the treaty partners inform one another of the confirmation of the treaty in conformity with their respective legislations, and it

has a term of 8 years from the day it takes effect. Its provisions, however, will apply from the day of signature. At the end of the term, it is automatically extended by another 1- year term unless one of the treaty partners gives written notice of termination 6 months before the end of the term.

Article 13

Termination of the agreement to hand does not injuriously affect the performance of contracts and agreements concluded during the term of this agreement but not yet performed.

Executed and signed in Madrid on 20 October 1983 in two original versions, each in German and Spanish, both texts having equal validity.

Signed Dr. Beil
On behalf of the Government of the GDR

Signed Velasco
On behalf of the Government of the Kingdom of Spain

Appendix 1--Fields of Cooperation

Consonant with the provisions of Article 10 of this agreement, the following are considered fields of potential and special cooperation:

1. Cooperation in the field of energy

-- Exploration and mining of brown coal deposits
-- Construction of strip mining equipment
-- Equipment of coal storages at mines and power plants
-- Technology of brown coal gasification and coking
-- Electric power plants on the basis of brown coal
-- Coal handling and transportation

2. Investment goods

-- Equipment for coal ports
-- Railroad rolling stock and signaling equipment
-- Construction of railroad and mobile cranes
-- Ship construction
-- Machine tools
-- Farm machines

3. Complete industrial plants

-- Plant for the production of woodpulp
-- Chemical plant
-- Rolling mills

This list is not limiting and may be amended during the term of the agreement.

11698
CSO: 2300/323

ECONOMIC PROBLEMS OF HUNGARIAN ELECTRONICS ANALYZED

Budapest VALOSAG in Hungarian No 2, Feb 84 pp 38-47

[Article by Zoltan Tompe, engineer-economist of National Market Research Institute: "A Case Study of the Troubles of Hungarian Electronics"]

[Text] The most treacherous and serious of diseases are those which have a long latency period. For a long time the patient feels well, does not believe in his own sickness, and the superficial outside observer sees nothing exceptional in him either. The patient, as long as the sickness has not broken out, doubts the wisdom, intentions and good motive of the physician giving the diagnosis. My research involves the causes of our world market backwardness in the area of electronics, but according to some what is involved in this article is not, in the final analysis, electronics.

1. Antecedents and Symptoms of the Disease

In the past 30-40 years we have gradually dropped below the world level in electronics; today it can be said that the performance of our electronics industry is lower than would be expected on the basis of the general economic level of the country, it lags behind the relative average developmental level of our economy. In 1981 the per capita electronic consumption was $490 in the United States and averaged $264 in Western Europe. The world average in this year was $90, while in Hungary the per capita electronic consumption was 1,500-2,000 forints, $40-50, half the world average.[1] The branches which are dynamic at present determine the future capacity of an economy. Electronics is one of the most dynamic branches in the world, it is gradually entering into every economic branch, and its level influences the technical level, developmental possibilities, infrastructure and export capacity of the countries. Many speak of a new industrial revolution in connection with the microelectronics revolution. In this sense electronics is not merely one of the branches of industry, rather it is the carrier of the industrial revolution.

From the viewpoint of the future the status of the "revolutionary branch of industry" is much more a determining factor than the general economic development.

In the first half of the century the Hungarian electronic industry was at the world level. Thanks not only to her outstanding scientists--Puskas, Dery, Blathy, Zipernowsky, Kando, Brody and others--but thanks also to her enterprises.[2] Tungsram, Orion, Standard, the Ganz Electric Company and other

enterprises were internationally famous. Even at the end of the 1940's Tungsram was a leader in research.[3] As for the communications industry within the electric industry, Standard (the legal predecessor of the BHG [Beloiannisz Telecommunications Factory]) was the first in Central Europe to begin manufacture of what were then the most modern rotary telephone exchanges, in 1928. Standard had close contact with two of the leading world market firms at that time, the American ITT and the Swedish LM Ericsson, and had access to the most modern products and technologies. After Trianon, Hungary had little raw material or energy, it had skilled workers with relatively low wages and it had a staff of engineers and higher technical education at the world level. This represented a comparative advantage in telecommunications and electric industry production.

Nationalization and the cold war broke the earlier world market contacts of the Hungarian electric industry. In the 1950's and 1960's Hungarian electronics adapted to the swiftly growing CEMA markets which accepted large quantities. Hungarian electronics suffered prestige losses at this time--countries without an electronics past moved forward in CEMA specialization and parallel electronic capacity was built in virtually every socialist country--still it can be said that this period was characterized by assured market possibilities for large volume products. The quantitative value increased 35 times in 15 years, export increased 73.5 times. The export ratio exceeded 50 percent of production so that by the 1970's electronics had become an export branch.[4]

But this gigantic development meant, in practice, "standing on one leg." Eighty to 90 percent of the export of the electronics enterprises was going to the Soviet Union. The quota trade, the assured market, the fixed high price and the lack of competition led to becoming pampered, to organizatinal rigidity and to a slowing of technical development.

By the beginning of the 1970's, when we began to look to the world market, we found that the average level of our electronics was 10 years behind the world market frontline, 20 years behind in some areas. At that time we tried to make up the several decades lag with flustered, unrealistic central plans.[5]

In connection with the World Year last year we must recall that our backwardness is greatest precisely in the area of communications. The following table compares telephone density for several countries.[6]

Telephone Density

Country	Telephone Sets per 100 People
United States	83.7
Denmark	63.7
Great Britain	49.6
France	47.8
FRG	46.4
Austria	39.8
Czechoslovakia	20.6
Bulgaria	14.1
Hungary	12.9

The 72 billion forints prescribed for 20 years would be enough to increase telephone density to 30.7 by the year 2000[7]. According to our plans we will reach the 1970 level of the developed Western European countries by the end of the century; that is, we will have reduced our backwardness to 30 years.

Telephone density should not be regarded simply as a popular luxury, a standard of living factor increasing comfort. The supply of telephones is essential from the viewpoint of raising the standard of living, but its significance goes far beyond that. In our age information is a new production factor, the quality and speed of its flow has an effect on the capacity of the entire economy. According to estimates the economic damage resulting from bad information, delays and lost profit comes to several billion forints annually. According to a pessimistic estimate the total lost in the period extending from the present to the end of the century will be 83 billion forints.[8] The undeveloped and obsolete nature of the telephone network appears not only in the low number of telephone sets; it also hinders the development of national computer terminal nets and of computer culture itself.

2. Diagnosis

In the case of products involving a high degree of processing, thus in the case of electronic products also, the Hungarian exporter faces the gigantic problem that our production prices are virtually hopelessly noncompetitive. Our other disadvantages--technical, external appearance, linked services, anonymity, etc.00are dwarfed by the price problem. Looking for the cause of our price difficulties we find ourselved faced with an entire series of the problems of our economic environment.

Let us compare the price calculations for an imaginary Hungarian electronic device and for the electronic device of an imaginary successful large enterprise in Western Europe. Let us start from a few very daring simplifying assumptions. Let us disregard technical quality and reliability differences and the differences in external appearances, handiness, the service network, parts supply, etc. For the sake of the study let us take two electronic devices which are completely alike inside and out, the only difference being that one was made in Hungary and the other somewhere in Western Europe.

The following comparison does not pertain to a concrete product, thus the numbers are not monetary units. I might have given the figures as forints or dollars or any monetary unit; what is essential is that they be comparable. The cost factors for the imaginary Hungarian product are compiled from calculations for different types of products of several Hungarian electronic enterprises. So that the figures can be easily reviewed I had the material cost of the capitalist product equal 100. In the calculation for the capitalist firm I have also used the average for a number of products of a number of firms. So let us play the price generaton game with our imaginary products.

Type	Capitalist Firm	Hungarian Firm
Material costs	100	180
Wages costs	7	10

Manufacturing costs	10	17
Technical development	14	30
General costs	13	40
Marketing costs	32	23
Profit	24	30
Producers Price	200	330

Material Costs

According to even modest calculations the Hungarian electronics enterprises get access to parts more expensively than their capitalist competitors--by 60-80 percent. In many cases the difference is 100 percent or more. The material cost for the Hungarian product is almost as much as the producers' price for the capitalist product.

If we want to import parts from a socialist country we can do so for an average of 1.8 or 2.3 times the world market price; but sometimes the price is 5 or 10 times higher. In socialist price discussions the foreign trade enterprises ties parts import to a parts export interest, saying: "It is true that I am buying part X from a socialist partner at three times the price, but I am selling part Y there at four times the price."

Socialist parts manufacturers live in a planned economy environment. This means that the parts needs of the manufacturers of finished products must be known 1-1.5 years in advance, for the sake of planning. They will guarantee delivery only of shipments ordered well in advance. They charge extra for changes, for time limits of 1-2 months, which can be 3-4 times the original price. Even a layman hardly needs to be shown what a disadvantage it is to plan parts needs 1-1.5 years in advance in a dynamic branch like electronics where a 3 month delay can mean a fatal lag and the loss of a customer.

The most serious problem with socialist parts is quality. The parts industry of the socialist countries is capable of designing and producing a few outstanding parts but unfortunately, for the time being, it is not capable of industrial manufacture of large series parts of constant quality.

If the manufacturer wants to buy a part from a capitalist enterprise he finds himself faced with a number of difficulties. In the first place a capitalist part can be chosen only if there is no similar domestic or CEMA part. The foreign trade enterprise will accept only technical justifications. The fact that "the domestic part is too expensive, so I would like a capitalist part" is no excuse. The well prepared, routine experts of the foreign trade enterprise must be convinced of the technical justification for every single capitalist part. The other problem is the high duty in connection with capitalist import.

We want competitive electronics, but at the same time we make the import of competitive parts expensive.[9] The manufacturer of the end product finds that a parts dollar costs him 80-100 forints, while they are demanding that he produce a dollar for 40-50 forints. It was the goal of the import tracking price system used since 1980 to have the domestic price level and price ratios approximate the world market price level. But the horizontal market relationships cannot be replaced by vertical, supreme authority/enterprise, relationships.[10] The world market for parts is such that virtually any price can be justified with documents. If the price is not developed in the horizontal relationship, but rather by the vertical informative factor, then the importer can prove with documents as he likes that the world market price level is what he says it is.

In many cases the price for domestic parts is even higher than the price for socialist parts. Out of industry protection considerations the Hungarian manufacturer of electronic and products is often obliged to buy domestic parts, even if they are more expensive. In the case of electronic parts it pays to manufacture a large series of a small assortment; but the assembly industry requires a relatively small number of a large assortment of parts. The Hungarian manufacturers of electronic devices use 2,000 to 3,000 types of integrated circuits. The only Hungarian semiconductor manufacturer, the MEV [Microelectronics Enterprise], is capable of manufacturing 150 to 200 types of integrated circuits, for the time being a good bit more expensively than the world market average. Since the beginning of the 1970's they have prepared 25 plans for the reconstruction of the electronic parts manufacturing industry.[11] By the time all the affected organs had given an opinion on the several plans they were already obsolete, and they could begin working out the next plan concept. The pace of technical development had no consideration for the circumstantial order of business in Hungary and so the world market backwardness increased. Finally, the Council of Ministers accepted the 25th plan in December 1981. This Government Program for Microelectronics was conceived amidst world market, financial and economic conditions which were a good bit less favorable than in the case of earlier drafts. So its goals were more modest also.

One of the most important problems for the manufacturers of electronic devices is to ensure parts. In the interest of continual supply great input reserves are amassed but still there are often serious problems with material and parts supply. Material supply is in the sphere of authority of the supreme leadership; the number one material acquisition authority for an electronics enterprise is the director.

Wage Costs

Many entertain the false belief that Hungarian labor is relatively cheap. It is a fact that Hungarian wages are a good bit lower than in the developed capitalist countries. The hourly wage of a good electrical engineer is about $8 in Western Europe. It is about $.50 here, and if a Hungarian engineer makes $2 an hour then he is a chief designer with a state prize. But, unfortunately, the cheapness of Hungarian labor does not follow from the substantially lower pay. Because of the poorer efficiency the wage cost in the Hungarian calculation for the product figuring in the comparison is 10 units as compared to 7 units in the capitalist calculation.

Let me give a personal experience to justify this. A Hungarian electronic enterprise undertook to assemble and test printed circuit cards for a famous Western European firm as jobwork. The capitalist firm provided the cards and the parts to be installed. The Hungarian enterprise assembled and tested them with cheap manual labor. On one occasion a representative of the capitalist firm was shown through the test benches, and he found the following. The testing was being done by engineers.[12] If the engineer found a fault in the course of the testing he would immediately stop and try to find the cause of the fault. If he was lucky he found the faulty integrated circuit within an hour. Seeing this the foreign guest was stunned. There, if the test card is faulty, it is immediately rejected. It is possible that they are throwing away 20 perfect parts along with the faulty one, but in the hour it would take to repair it the Western semi-skilled worker could test another 100 cards. Thus, even though his pay is a good bit more than that of a Hungarian engineer, the wage cost for testing one card is a good bit lower.

I once made a study of the magnitude of the annual production value per capita for several electronics enterprises. For the most outstanding Japanese enterprises it is $100,000 to $120,000 per capita. In the electronics industry of the United States, on an average one man produces a value of $60,000 in a year.[13] In Western Europe the average is $40,000 to $45,000, but it is $22,000 to $26,000 even for enterprises struggling with serious problems. There are no public statistics of this type in Hungary. An issue of HVG last year publishes the product value and personnel for the outstanding Hungarian industrial enterprises.[14] We can establish from this, in regard to the electronics enterprises and taking into consideration the official Hungarian National Bank rates of exchange, that the annual production value of the best in Hungarian electronics is $12,000 to $16,000 per capita. I myself know of a well functioning Hungarian firm with a value of $8,000 per capita. The Western pay which is X times higher is irrelevant if the efficiency of the labor force is X + Z times higher; the average labor cost is lower than ours. (It is also true that there are labor intensive electronic products for which the capitalist wage cost exceeds the Hungarian by a good bit, reaching 30-35 percent of the production price.)

Manufacturing Costs

I mean by this the costs of operating, and the depreciation, of the necessary tools, machines and buildings, the price of scrapped devices and prototypes and the costs of on-site assembly after sale. In Hungarian accounting these costs figure under the headings of manufacturing costs, scrap costs and general operating costs.

In capitalist firms the manufacturing costs depend in large measure on series size and the technology used. Even many economists think that cheap manpower stands in the background of the economic successes of the so-called NIC countries [Newly Industrialized Countries].[15] It is true that when capital export into these countries began 10-15 years ago the cheap and good labor force was one of the most important attractions. But by the 1980's the situation had changed. Today the most important factor is technology. Today wages account for only 2-5 percent in the price of the most modern electronic products.

Automation has reached such a level that manpower no longer has crucial significance. What lies behind the success of the NIC countries is capital import and the ability to adapt modern technology quickly. Even in these countries wages are not so fantastically low. It is the lower technological level and level of operational and labor organization which stands behind the higher manufacturing costs for the Hungarian product.

Technical Development

There is a shockingly great difference between the technical development costs proportion of Hungarian and competing enterprises. We spend more than twice as much on technical development--per product--as our average capitalist competitor. (It is true that nearly one-third, nine units, of the 30 units for technical development must be paid in as tax, but the enterprise can get back a part of this as central developmental support.) Various sorts of contradictions lie behind the gigantic technical development costs production.

a. The enterprises have a tendency to use the sums intended for technical development for communal purposes, to keep or lure workers, as wage supplements in kind. If it is not possible to increase wages, because of central restrictions, then they try to at least keep their workers with nurseries, day care, resorts, training centers or housing construction support financed from the technical development fund. In general the sum spent on modernization of production equipment is a small part of the technical development money.

b. The enterprises maintain an extensive developmental apparatus for it can be counted as a cost and does not reduce profit; indeed, the developmental and planning costs connected with certain new products can be shifted to the technical development fund only if it is sharply distinguished organizationally, if they have a developmental apparatus at the main department level at least.

c. It follows from the foregoing that the producing electronics enterprises have an economic interest in maintaining their own significant developmental staff, and so rarely make use of the developmental achievements of research institutes, universities or other enterprises. There are research contracts between producing enterprises and scientific institutes and sometimes the producers hand out ad hoc commissions, but these lag far behind what is possible. The producing enterprise takes care to maintain its own developmental staff.

d. So there is very much parallel development and the rediscovery of things which already exist. There is simultaneous development of many types of products, the developmental capacity is dissipated and the average time for developmental work increases. It takes 3-6 years to develop each new product, three times as much as for the average competitor.

e. The system for maintaining records, statistics and accounts on developments, products and parts is pompous and excessively complicated. A separate apparatus deals with administration and keeping records on developments and a significant part of the work of developmental engineers is of an administrative character too.

f. Technical development costs are suitable for hiding other costs. Materials, wage and assets costs can be calculated in them, thus prettying up the material, wage or assets content of some product. Commissions given to other organs can be accounted for out of technical development too, providing a significant opportunity for manipulation. The wage increase possibilities of the enterprise are limited today. If the enterprises does not want its best workers to leave and if it wants to give them good pay for this reason then it says: "Form a GMK [economic work group], then the money paid to you will not burden the wage framework but can be accounted as a cost." One might say that the following case is slowly becoming typical. The enterprise could not provide its outstanding young developmental engineers a monthly incomre greater tahn 4,000-5,000 forints. The engineers formed a GMK; they are doing the same work at the same level for the same enterprise, but their monthly income is 8,000-15,000 forints.

g. The efficiency of developmental work is held back to a great extent by the fact that development is "inward." The developers--disregarding noteworthy exceptions--know little about the world market and even less about the domestic economic environment for production. There is very little money for foreign travel or attendance at scientific congresses by the developers. The developer strives for the technically best solution, according to the "soul of the engineer." But in the meantime he generally is not clear about the needs of the market. Frequently the product can do more than the customer can pay for. (I have frequently heard abroad, in regard to Hungarian electronic products: "The product should do half as much, twice as reliably, at one-third the price.") In general the developer is not clear about the costs of manufacture or the problems of material acquisition. He designs for part A but acquisition can provide only part B and then, during series manufacture, they must shift to part C because of acquisition difficulties. Thus the quality and reliability of the product deteriorate greatly.

h. In general, when setting developmental goals, they take as a basis products well established on the world market which are modern and popular. In general they buy licenses and know-how for these also. But by the time the developmental goals have become a concrete product it is already obsolete on the world market.

i. Technical development is a tool in the competition struggle. Our competitors are offering ever more complex services with ever more modern equipment at ever lower prices. The chief goal of development is a proportional reduction of the price/performance ratio. The idea about new developments is turned around for us. We say, "Let the customer pay for more services and greater performance." For us the test for a new development is an increase in price; but most frequently we should reduce costs for new, more modern, lighter, energy saving equipment. Naturally, as an average for a longer period, one could demonstrate a price decrease in Hungarian electronics too. But the slow price decrease appearing in a vista of decades has developed not in a fierce struggle to win the "respected domestic consumer" but rather as a result of external price control. A new concept is trying to take the place of price competition, introducing into economics the concept of "dishonest profit." The enterprises are trying to maintain the price/performance ratio of a

permanent level, or to increase it, within the limits of the toleration of the price authorities and the populace.

General Costs

I mean here the costs of central administration, the business costs, the costs of material management, storage and quality control, organizational costs, cars, resorts, guest houses, soccer teams, etc. In all these things we spend three times more than our capitalist market partners. Quality control deserves special mention. According to cynics there is an inverse interdependence between the amount of money spent on quality control and the quality of the product. It is a fact that in Japan, for example, there is no separate quality control; in its place is a wel functioning mechanism of self-control and control of one another, and at the same time the quality of Japanese electronic products is outstanding. In Hungary a large separate apparatus deals with quality control, and yet there is much to be desired. Is it possible that an improvement in quality should not be achieved from the side of control?

The excessive size of general costs derives primarily from deficiencies in operations organization and work organization within the enterprise.

Marketing Costs

At last, something on which we spend less! This cost factor contains the costs connected with packaging, shipping, insurance, advertising, agent fees, representation, foreign representatives and other costs connected with factory marketing.[16]

The deviation from the world market ratios contains a substantial attitudinal difference. Even today most people here regard sales as the most important function of trade. The producer produces and the trader trades. If it succeeds in getting rid of the goods then trade has fulfilled its task--many think. The firms which are successful on the world market regard fore-sales and after sales, that is the service activity aiding trade and connected with the sale, to be the chief functions of trade. In most areas of the electronics world market a sharp price competition is not the most important tool of the competitive struggle. They try to win the market not by undercuting each other's prices but rather with better quality, special services and by providing the service and parts supply functions. It is not certain that it is an advantage that we spend less on marketing.

Profit

At first glance we might say that there is no significant difference behind the profit generation of capitalist firms and of the Hungarian enterprise. But there is a big difference in regard to the possibilities of using it. The capitalist firm has much greater freedom in the distribution of profit. In a concrete example the capitalist firm can use 10-14 of the 24 units of profit for shares or wage increases, in principle. (In practice they rarely use more than 3-5 units for this purpose.) Together with the credits assumed on the 24 units of profit they might spend 50-70 units on development or new investment.

The Hungarian firm pays a 45 percent linear profits tax, a 15 percent community development contribution and 20 percent for obligatory reserve fund generation, leaving 11.20 units out of the 30 units of profit. This is divided between the shares fund and the development fund. A strong progressive tax burdens the part of profit for shares. In the end the average Hungarian electronics enterprise spends 7-7.50 units of its 30 units of profit on development and 1-1.50 on personal income. Even if the enterprise wanted to use the entire 11.20 to increase personal income then only a maximum of 2.40 could be paid to its workers, because the remaining 8.80 is the total of the shares tax.

So in comparison with the world market competitors it cannot be said that the Hungarian electronics enterprises has a strong profit interest. Its primary interest is in maintaining the domestic and socialist shortage markets guarantted by the import stop and without real competitors.

There is also a big difference in the concept of profit as compared to the world market concept. For the capitalist firm profit is the only possibility for survival in the strong competition struggle, a possibility which can be achieved by continual modernization of products and a continual reduction in costs. For us also, naturally, profit is important, but primarily due to an external judgment, a good name and preferences, and not due to its economic essence. Covering costs is most important and this can be achieved most easily on the guaranteed shortage market. Many enterprises make efforts to see how they might hide their real profit among the various cost factors.

Taxation

Here we are talking only about the forms of withdrawal outside of the profit tax. Our capitalist market competitors are burdened with a value added tax obligation.[17] This means that every producer is taxed only on the value added, thus only that part of the value is taxable which he added to the product.

Here, in the absence of a value added tax, the tax base is the whole production value, thus every producer is taxed for all the producers before him in the manufacturing process. For example, a shoe factory is taxed for the fodder seed, the fodder, raising the animals, the slaugherhouse, the processing of the raw skin and his own work in making the shoes. (Presuming that the shoes are made of leather.) The final assembler of an electronic device is taxed for the activity of mining, metallurgy, raw and primary material processing, parts and subassembly manufacture and then for his own activity. The higher the producer is in the vertical structure of manufacturing, or the higher the degree of processing of his product, the more he is burdened by this tax system. We emphasize the necessity of exporting complex products at a high level of processing--from one side. And we punish the same thing with an accumulated tax--from the other side.[18]

The wage tax, the 40 percent of the amortization which is centralized, the technical development tax, banking costs and the other taxes, together with the profit taxes and the wage development tax, take 60-70 units out of the producers price of 330 units, possibly even more.

Let us return to the example. The producers'price for an electronics product of a Hungarian factory is 330; the producers' price for the capitalist competition is 200. So the capitalist producer hands the device over to trade for 200. The commercial profit margin in electronics is generally around 100 percent, but never less than 85 percent. So the device of the capitalist firm goes on display for about 399. (They love to end prices with a 9 in capitalist retail trade.)

If the price of the product of the capitalist firm is 399 then the same thing in the Hungarian version cannot cost more than 320, due to the weaker spare parts and service supply, the anonymity and prejudice, presuming the same technical level and external appearance. Trade, naturally, will stick to its accustomed profit margin; that is, it will not accept the Hungarian goods at a price over 160. And one must subtract the import duties.[19] So 150 remain. The Hungarian electronics enterprise must sell for 150 a device which cost 330, if there are to be any customers at all.

It is completely clear that under such circumstances an electronics enterprise has no interest in capitalist export. But the chief authority forces the director to capitalist export, primarily with pressure outside the economy. (There will be no enterprise preference, decorations, banners, leaders' premium, money for capitalist travel, etc.) So in our example this is what happens. The producing enterprise sells the device on a capitalist market for 150, but in order not to suffer a loss it is forced to sell five of them for 360 on domestic or CEMA markets. Thus he gets an average price of 330 for the six of them, which covers the costs. This is why Hungarian electronics enterprises have a double price level--the capitalist market export price is 150, the export price to other markets and the domestic price is 360.

Naturally we are talking here only of a fictional example. It really could not be that the self-same product could have two prices. How would it look if we sold the same product to our friends for more than twice the price we sold it to our capitalist partners for. This problem does not arise for a routine Hungarian electronics enterprise either. They have separate capitalist and socialist commodity bases. The two are never the same. If in nothing else they have different model numbers, the colors are different and the shape of the buttons is different.[20]

Naturally it must be demonstrated, concerning the 150 price and the 360 price, that they contain a profit of about 10 percent as distinguished above the costs. This is no small task, but it is not impossible. Today there is a legal possibility that the price of the one product should not contain and the price of the other product should bear the general costs twice over. (This is the cover calculation.) In addition there are many manipulation possibilities for the other calculations too. All the enterprise is interested in is that its receipts exceed its expenditures somewhat. How this happens depends in large part on the cleverness of the accounting apparatus.

It is very essential for the double price level that the ratio of capitalist export not be too high, because then it would be very difficult to compensate for the price deficit by increasing the domestic and socialist export prices.

A capitalist export of about 15 percent can be borne, but 8-10 percent represents the optimum between satisfying the chief authority and the toleration of the socialist markets.

Naturally, the domestic commercial profit margin is not 100 percent but rather 15, or at most 30 percent. So the Hungarian product which the producer hands over to trade for 360 goes on display in Hungary for 410 or 460. This price is only a little bit more than the 399 price for the Western product on display in the West. The domestic electronics shortage market accepts this price level; indeed, on the basis of the display prices it says: "It is almost the same, recalculating the price of the better Western devices." This applies primarily to products which can be obtained in retail trade, primarily to recreational electronics. The lack of price competitiveness of Hungarian electronics appears only from the viewpoint of foreign trade and from the viewpoint of electronic devices of a productive tool character which do not figure in retail trade.

3. Regulator Modification as Cure-All

Every time the regulators are modified we can read dozens of studies and analyses concerning the goals of the new regulators and the mechanism of their operation and can see long lists of the dazzling results to be expected as a result of the regulators. Let us look at how the 1980 change in the producer price system affected an electronics producing enterprise. What is most important is the forint/dollar index. We get this by dividing all production costs for a product for capitalist export by the capitalist sales price. If the enterprise figuring in the example can produce one dollar for 46 forints then it can generate a suitable profit in its domestic and CEMA export prices.[21] If the index is 88 forints to the dollar then the enterprise cannot generate a profit in the domestic and socialist prices. Thus the regulation tries to keep the enterprise from paying for inefficient work with the guaranteed shortage markets.

In principle this regulatory mechanism is beautiful, refined and logical. The ability of the enterprise to generate profit is made a function of efficient capitalist export; this is intended to orient the enterprise toward the manufacture of every more competitive products, bringing in more and more convertible income. The idea is that Hungarian enterprises which are competitive on the world market will get extra income while those which are not competitive must change quickly or fail. But in the economic environment outlined earlier this mechanism functions differently from the previous ideas. After the introduction of the new regulators and following a year of transitional confusion the incomes were restored and every enterprise earned more or less as much as it was used to earlier.[22] How did this happen?

In the preceding example the export index for the product of the electronics enterprise is 88 forints to the dollar.[23] So, apparently, the enterprise can choose between two manners of death. Either it can give up capitalist export entirely, which the chief authority will not tolerate, or it can continue to export 88 forints for one dollar and run aground on zero profit. There is a third solution too, dreamed up in the rooms of Snow White, namely that the

enterprise begin to manufacture modern products, at the touch of a magic wand, increase its efficiency many times and begin profitable capitalist export activity on its own despite the cost factors detailed above.

An electronics enterprise has products for which the index is 80-100 or even more forints to the dollar; but there are also products (stands, cabinets, metal boxes, etc.) for which the index is 20-25 forints to the dollar. The enterprise simply abandons the high index export. This does decrease the volume of capitalist export, which elicits the disapproval of the chief authority, but the more favorable export index ensures the accustomed profit level. The reaction of the enterprise, abandoning the least economical capitalist export, can be regarded, in the final analysis, as a positive achievement, although it is accompanied by a previously uncalculated reduction in the volume of export.

The second reaction of the enterprises is bargaining. It uses good personal contacts, an appeal to earlier merits, political demagogy, complaining, etc., to win enterprise preference and loopholes. This method proved less useful than they were used to earlier.

The third and most useful method is costs manipulation, an accounting conjuring trick which shows a nearly identical profit level from the 150 and from the 360. The 70-80 forints to the dollar export indexes become 40-50 forints to the dollar indexes within one year, without there being any substantial change in the external or internal production conditions. This "achievement" makes possible the generation of suitable profit in the domestic prices and in the CEMA export prices.

The ever new regulators do not affect the essential interdependencies; they try to treat the symptoms. Lacking substantial change in the environmental conditions the enterprises are forced to adapt superficially to the regulators. One thins of the peasant who went to the Old Wise One. "Old Wise One," he said, "My geese are being destroyed!" "Where do you keep them?" "In the garden." "No good, Take them out to the pasture." A week passes. "Old Wise One! My geese are being destroyed although I regularly take them to the pasture, as you said." "No good. Take them to the brook." Another week passes. "Old Wise One! My geese are still being destroyed?" "Take them to the forest." Another week. "Old Wise One! All my geese have been destroyed!" "Too bad. I still had a couple of good ideas."

4. Final Report

In the case of our imaginary electronics enterprise the economic environment outlined thus far greatly overestimates the cautious passivity, tacking and hauling, many years of routine, conservatism and excessive centralism of the leadership and underestimates expertise, creativity and the marketing view. In our imaginary enterprise the most important leadership virtues are broad personal contacts and sort of pragmatism which adapts flexibly but only superficially to the frequent regulator modifications. If the director can bring the enterprise more profit in one sleepless night across a white table than his entire engineering staff can in one year and if he can avoid the traps of

the new regulators lightly with his decades of routine then it does not matter if he cannot tell a computer from a washing machine.

In another sense this is an overvaluation of accounting and financial work, of statistics and indexes and writing reports. While the technical intelligentsia is devalued!

Electronics is gradually penetrating every area of life. It will gradually become obvious that serious consequences there are that the present generation of young engineers, because of the problems of making a living, are driving taxis and burning up their creative energies in second and third shifts, being wasted, losing their self-confidence.[24] The mistakes being made in the human factors will make their effect felt for a long time.

The mistakes made in the course of influencing the social value system and developing prestige priorities will be accompanied by negative consequences affecting several generations. With the economic and social devaluation of the technical intelligentsia we are losing just those for whom we have the greatest need if we are to keep up economically.

From a certain distance Hungarian electronics does not seem sick. In itself it can point to very beautiful results and a striking development, it is fulfilling its plans. The alarming signs appear only to those who look more closely.

FOOTNOTES

1. Mackintosh Yearbook, 1982.

2. In the beginning the study of electricity was a part of mechanics, and was not divided into strong and weak current studies.

3. The Moon reflection radar research of two Tungsram engineers, Simonyi and Bay, was of world-wide significance.

4. The production value of the Hungarian electronics industry grew between 1950 and 1975 from 95 5o 3,322 million forints and export grew from 24 to 1,764 million forints.

5. In 1977 it was planned to increase electronics capitalist export by 22 percent per year until 1980. According to the plan the share of capitalist export within all electronics export would increase to 32-36 percent by 1980. A year later, in 1978, the expectations were cut in half and the desired ratio of capitalist export was set between 15 and 20 percent. For the time being, as an average, Hungarian electronics has not been able to produce this result either. "Enterprise Behavior, Enterprise Environment," KJK, 1980, p 159.

6 and 7. "Quoth the Raven...", HETI VILAGGAZDSAG, 16 Jun 83, p 42.

8. "Communications World Year--Hungarian Problems," FIGYELO, 23 Jun 83.

9. The duty on integrated circuits and semiconductors is 25 percent; the duty on TV picture tubes is 40 percent.

10. For details on an evaluation of the 1980 price system changes and vertical-horizontal relationships, see Janos Kornai, "Concerning the Present Status Of and Prospects For Hungarian Economic Reform," GAZDASAG, 1982, No 3.

11. Interview with Mihaly Sandory, HETI VILAGGAZDASAG, 1982, I, 23.

12. An interprise is even proud of how high the ratio of engineers is for it and that engineers are doing simple measurement tasks which could be easily taught.

13. On page 118, No 31, V 1982, of FORTUNE we find a summary of the U.S. electronics industry. In 1980 the total production value was 125,387 million dollars; the number of employees was 2,189,351. In 1981 the production value was 135,770 million dollars and the number of employees was 2,185,781. From this we can calculate a per capita production value of $57,271 in 1980 and $62.115 in 1981.

14. HETI VILAGGAZDASAG, 14 May 73, p 65.

15. NIC means Newly Industrialized Countries. These include South Korea, Hong Kong, Singapore, Taiwan, Brazil and Mexico.

16. Naturally we are concerned here only with the costs connected with marketing appearing at the producing enterprise. We will talk later about the costs and profit margins of traders.

17. The English word is VAT, Value Added Tax.

18. It is not only for Hungarian electronics but for the entire economy that the products which are most profitable and most capable of capitalist export are those which have a low degree of processing. The products of Hungarian electronics enterprises which are a success on the capitalist market are stands, rods and various castings which contain little work.

19. The Common Market imposes an average duty of 7 percent on our electronics products. The duty on computers is 6.2 percent, 8.6 on TV sets, 14 on radio sets, 7.9 on tape recorders and 5.3 percent on other devices.

20. In defense of the fictional Hungarian electronics enterprise figuring in the example it must be emphasized that the internal economic environment forces it into developing a dual price level. The electronics enterprises of other CEMA countries also have a dual price level, but there the compensation takes place with significant state support. Thus they can easily undercut our prices.

    If a Hungarian electronics enterprise sweats out, with great difficulty, a price of 150 on the capitalist market then it may happen that its CEMA

competitor can easily offer similar goods for 140 or 120, since, because of the gigantic state support, they are not interested in the price but only in getting the business.

21. For the sake of easy calculation let us presume that the rate of exchange of the Hungarian National Bank is 40 forints to the dollar. It would be ideal if the export index for every processing industry product were of this size. For the time being this is a vain hope. In general the capitalist exporter enterprises get a 10-25 percent concession as compared to the official rate of exchange. In the case of electronics enterprises this takes place in the form of a 10 percent differential producers turnover tax rebate (40 + 10 percent = 44 forints/dollar) and a production modernization support of about 6 percent (44 + 6 percent = 46.64 forints/dollar). Thus, in the given case, the electronics enterprise must produce one dollar for 46.64 forints. If it sticks to this export index then it can generate a profit in its domestic and socialist export prices of 6 percent on assets and 6 percent on wages. If its export index is better than this when it can generate more profit (a maximum of 15 percent), if it is worse then its profit decreases, perhaps to Zero.

22. For details see the earlier cited article of Kornai in GAZDASAG, No 3, 1983.

23. Let us look at the figures as dollars. The selling price is $150, the total production cost is $330; that is, 13,200 forints. The export index equals the total production cost divided by the selling price; 13,200/150 = 88 forints/dollars.

24. One can get into a technical university with an admissions score 25-35 percent lower than for other universities. They have to post an additional admissions test for some specialities.

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MARKET RESEARCH INSTITUTE ISSUES COMPUTERIZED DATA BASE

Budapest OTLET in Hungarian 9 Feb 84 pp 10 - 11

[Article compiled by Ferenc Pichler: "Those Who Provide It: The Foreign Trade Information Center: 'The Freshest News Material Is Transcribed Once a Month out of the Computer'"]

[Text] At the Economic Trends and Market Research Institute (KOPINT), the Foreign Trade Information Center (KKIK) has provided foreign market information to foreign trade and production companies since 1982. The center regularly prepares background material which analyzes the development of international economic and market tendencies and macro level descriptions of selected product group market conditions. Besides the summarized information, they put together for any company, monthly, weekly or even daily information on demand, about the market conditions of particular products, according to their interrelationships, about developments of prices and technical development tendencies. Besides information about products, they also provide facts about competitive bidding, market possibilities, the situation of competing and partner companies and about short range currency rate expectations. To prepare the information, they process more than one hundred daily, weekly and quarterly papers, specialized journals and news agency reports. If the users inquire about special subjects, then they involve trade representatives in foreign countries in the prepartation of the informational material. In case of a commission, they provide this type of service for three months without charge, in order to give their clients a chance to decide if they can use the information at all.

Recently, the KKIK besides providing traditional information, has begun developing a computerized foreign trade data bank and service connected with its use. They have introduced three computer systems into experimental service, setting them up with the cooperation of a number of foreign trade companies. Of the three functioning systems, the foreign trade professional literature data bank is the best developed. It provides information on topics such as machine tools, leather and fur products, shoe manufacturing robots, field and food industry machinery, public transportation vehicles, and other branches are yet to be included in the system. The data bank keeps a record of those newspaper and journal articles and news agency reports which have been received recently by the information center and some professional foreign trade companies, such as TECHNOIMPEX, TANIMPEX, KOMPLEX and MOGURT. Once a month, the most recent news material is retrieved from the computer and sent, grouped according to

products, to the interested companies and cooperatives. If the information proves to be interesting, they can request photocopies of the complete original news material or even its Hungarian translation. The users can hook directly up to the data bank with their own terminals. In the case of regular access, the monthly charge is 900 forints. When the computer is used only occasionally, then the rate depends on the length of use. The center charges the nationally set rates for translation, and it makes xerox copies of the original news material for 7 forints per page.

The other experimental computer system was established with the Mogurt Foreign Trade Company and the data bank for buses is being developed so that other companies with other products can be connected into the system. The third data bank is essentially a foreign company information system, whose goal is to enable interested businessmen to gain access quickly to all data pertaining to foreign companies about whom they have to know something in their work.

Subscribers

Taurus Rubber Manufacturing Company, Laszlo Horvath, section chief:

Our company, taking advantage of its independent rights, has conducted its own foreign trade since 1981. We have worked together with the specialists at KOPINT earlier, acquiring many studies from large marketing companies with their help, so that we may lay the foundations for our developmental ideas. Presently, twice a week we receive the newest publications containing the most recent foreign market information that interests us. Besides this, they send us material about the articles appearing in the specialized journals and send us photocopies of the more interesting pieces, when we request these. This is important since we are only able to order journals in limited numbers, so it happens that the one or two available copies end up sitting on someone's desk and never get to those involved with developmental tasks (for example). There are specialized publications which we do not get at all, because we are not able to do so. Thus we could not manage without KOPINT today.

[Question] And the computer information systems?

[Answer] In January we will look at what the computerized data base can provide us and how we can use the information. At the moment, we have a lot of hard work to do to get the necessary banking and company information about foreign companies in order to lay the foundation for new cooperative agreements and business relations. If KKIK provides information quicker and cheaper and if its data is reliable, then we will use them in any case. For us this would be quite advantageous.

MOGURT, Mihaly Balla, assistant head of a department:

For many years, we have edited, together [with KOPINT], the publication concerned with public transportation vehicles for the interested automotive manufacturing specialists. We regularly investigate how they use the information. In the latest survey, the opinions have varied appreciably. Many answered that

they do not read the publication regularly, while others have requested more accurate, more detailed information. We take these opinions into consideration in our editorial work. Inspite of the above, the cooperation is advantageous. Earlier, MOGURT itself prepared information material of a similar nature. In cooperation with KOPINT, however, it has been less expensive, even though they have appreciably raised their prices in the meantime. At MOGURT, for many years now computers have also played an important role in organizing and carrying out foreign trade activities. In the system worked out by our specialists for example, we compiled the most important basic financial-economic data of the countries interested in autobus manufacture and sales. Besides this, the data bank also informs us about the operational circumstances of the buyers and about the technical parameters of the products and prices of the most important competing autobus factories. This system and another sample one, which provides information about a number of companies, was given to the KKIK, so that, starting with the data base supplied by MOGURT, they could continuously expand their data bank and make it accessible to other foreign trade and production companies.

[Question] What profit does the company make from this?

[Answer] We can continue to use the computer systems, if we pay the rental fees, and this means a certain measure of cost and labor savings. But the greater profit is primarily achievable at the level of the people's economy, if we succeed in expanding the data base of the systems and including ever more companies in their use.

ALUKER, Mrs Jozsef Fulop, assistant marketing section chief:

We receive the information about the commodity market quarterly, for example, about chemical materials or raw materials for the metal industry. Besides this, we receive a semiannual analysis about expected developments in international prices and we regularly use the informational material about the rate of exchange prognoses and about international price developments. We ourselves have also periodically prepared marketing studies. Primarily it is the prognoses which we can use the best, since the compilation of these would exceed our capacities.

Borsod Chemical Combinate (BVK), Istvan Dobo, technical-economic consultant:

We regularly receive the publication entitled, EVENTS IN THE INTERNATIONAL CHEMICAL MARKET, which is published by KOPINT and CHEMOLIMPEX. We have ordered many studies with the help of the Center from foreign marketing research companies, for example ones having to do with the development of plastic production and consumption. Our company has been assigned to the so-called competitive sphere of the economy with the introduction of the new pricing system in 1980. For this reason, we have ordered the catalogue of the places where foreign price data could be found. This information has been of great help in the development of our own price data collection. We are also interested in the computerized information of KKIK, since BVK is an exceptionally export oriented company. We not only sell an appreciable portion of our products in other countries, but we also take part in foreign enterprises. For many years, we have undertaken the running of a chemical industry establishment in Libya. We have 230 specialists working in this North African country, and we make 5 million dollars

a year on this arrangement. We are planning similar undertakings in other countries as well. So we could use the data of the computerized information system. If this service will become realistic and will not be exorbitantly expensive, we will certainly take advantage of it.

[Question] According to the information provided by the Center, the regular cost of using the data bank will be a monthly subscription price of 900 forint.

[Answer] This price is not too high, but naturally one must also take into consideration the fact that for regular access, a terminal which is connected to the computer must be installed at our company offices. The construction of this connection will also cost money. Thus, these expenses must also be compared to the expected profit when we are making decisions about the system.

AGKER, Miklos Bercsenyi, department head:

Presently, we are paying 750 thousand forints for the monthly publication, called AGINFORM, which provides us foreign information about the production, use and sale of garden products. The publication is edited together with the specialists of KOPINT. We ourselves would not be capable of collecting, reading and translating foreign publications so that we could select the most interest materials. At the same time it is very important that we inform our partners, the state farms, the domestic and foreign trade companies and the employees of the scientific institutes about the material mentioned above. Once a year, we commission a marketing study from KOPINT about the market situation of a particular product, for example eggs or fowl. We use these primarily in working out our ideas about development. For example, on the basis of the marketing study prepared about wine, the farms began the domestication of the French, i.e. the more productive, type of grapes. They began the use of new types of bottles and labels and they modernized our wine technology.

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DEVELOPMENT OF FOOD INDUSTRY IN 1980'S VIEWED

Warsaw GOSPODARKA PLANOWA in Polish No 9, Sep 83 pp 383-389

[Article by Wlodzimierz Kaminski: "Selected Land-Use Problems of the Food Economy in the 1980's"]

[Text] Economic experiences and difficulties, including food, in recent years have conjured up for society and decisionmaking centers the tremendous economic, social and political implications of the hitherto undervalued food economy. The level of organization and productivity in food production plays a fundamental strategic role whose sphere of influence exceeds the production and consumption of foodstuffs.

As a consequence of many years of neglect, resulting from excessive, permanent partiality to the sources of production industry, our food economy was not and is in no position to satisfy public needs, which became, among other things, one of the reasons for introducing state control of food products.

The difficulties which the food economy has to overcome become fully apparent when they are analyzed in developed and differentiated land-use systems. This article is an attempt at such an analysis; its purpose is to present and assess the land-use problems of Poland's food economy in the 1980's.

In the article the following are discussed:

--mutual ties and dependencies of the food economy and the national economy;

--selected land-use problems of fundamental sectors of the food economy (that is, farming, technological infrastructure, procurement, food industry as well as market supplies of food).

Attempts have also been made to identify Poland's principal land-use problems of the food economy in the 1980's.

The limited confines of this article permit only an abridged and synthetic presentation of this problem, which requires further intensive detailed reasearch, analysis and assessment.

1. The Food Economy and the National Economy

If the national economy is to be regarded as a system, then the food economy should be regarded as one of its most important subsystems. One of the fundamental developmental assumptions should be a desire for harmonious progress in the entire system as well as in all subsystems in their mutual determining factors, relationships and dependencies. This principle implies that in a compact national economic system there can be neither privileged nor handicapped subsystems; the emergence of such disproportions does even lie in the interests of the presently privileged sectors because barriers and restrictions arising from unsatisfactory development of other neglected sectors will increasingly continue to hinder their further development.

Those dependencies which have their implications on a general national scale loom evem more poignantly in the land-use systems because it could happen that externally on a general scale the proportions of subsystems might appear to be in conformity with the rules, while in reality their organization in actual scope and in terms of land management indicates fundamental disproportions and a lack of mutual adaptation.

Let us examine--out of necessity in a synthetic manner--the principal land-use procedures and dependencies of the national economy and its principal sectors (including industry in particular) and the food economy in the 1970's and the effects of these dependencies on responsibilities and conditions for the functioning of the food economy.

1. From 1970 to 1980 the population of our country increased by approximately 3,000,000 persons (9.4 percent). A plan for all-inclusive management of the country justifiably anticipated the development of many centers in accordance with the principle of so-called policentrist moderate concentration. In practice, implementation strayed from this sound principle, and as a result of the erratic birth rate, primarily due to vigorous migration procedures, the population in individual provinces changed at a very erratic rate. Large cities and large agglomerations have increased in population at the fastest rate, surpassing program ratios. For example, the population in the province of Legnica increased by 25.1 percent, in Gdansk by 17.2 percent, in metropolitan Warsaw by 16.1 percent and in Katowice by 15.1 percent.

If one considers that during 1970-1980 there simultaneously occurred a further strong and accelerated concentration of population in the largest urban-industrial agglomerations, and either stagnation or decrease in population in general (including a decrease in the number of people employed in agriculture) in agricultural provinces, then the changes for land management in the demographic structure in this period--from a food economy point of view--should be regarded as very unfavorable. In particular they occasioned a rapid increase in the demand for food for industrial areas, with simultaneous serious impairment to the productive abilities of the food economy and the supply of man-power in agricultural areas. I believe that in many areas of the country, and particularly in industrialized areas, permissible limitations on borrowing a supply of manpower from agriculture have been exceeded, which led to a decline in agriculture in those areas accompanied by a huge increase in the demand for food.

Furthermore, the above-mentioned trends in demographic land-use changes considerably intensified the vast differences in population density already in existence before that, and the situation which arose in that sphere during the final years of the 1970's should be regarded as a real disproportion.

2. The demographic land-use disproportions discussed above are even more evident if one analyzes urban and rural population as well as changes in the urbanization index.

During the years 1970-1980 the urban population increased by 3,700,000 persons, that is, by 21.5 percent, while the rural population decreased by 700,000 persons, that is by 4.1 percent.

The migration of people from villages to cities was mainly responsible for this development, occasioned mainly by tremendous demands for manpower by industry. During the 1970's the urban population increased in all provinces without exception, while a decrease in rural population was felt by 41 provinces (with the exception of the less important provinces from an agricultural point of view). The prevailing temperament can be, therefore, held accountable for these trends.

Next to the vigorous growth of large already-developed agglomerations, the most rapid rate of growth in urban population during 1970-1980 pertained to industrialized areas and in the highest degree to the province of Legnica (52.4 percent) and Tarnobrzeg (47.9 percent).

In the 1970's it was thus possible to observe the rise and rapid growth of new urban-industrial agglomerations, which created new additional responsibilities for the food economy.

3. The perspective plan for overall management of the country assumed--in the sphere of territorial allocation of industry--a considerably faster rate of growth especially in the northern macroregion, with a simultaneous slower growth rate in the development of industry in the southern macroregion.

At the basis of this strategy stood mainly a concern for the environmental preservation and the quality of life of residents.

These assumptions were not implemented to a considerable degree (although certain relative changes in the broad structure of industry were attained), and deviations from adopted plans were so substantial that it is rather possible to mention--especially with regard to the province of Katowice--the petrification and considerable deterioration of environmental conditions, if not the danger of ecological catastrophe.

This unprofitable state of affairs in industry represents a series of real threats to the food economy, associated among other things with the emission of dust, water pollution, deterioration in the state of preservation and wholesomeness of the environment.

In sum, it can and should be stressed that in the 1970's demographic land-use changes as well as directions and the rate of urbanization and industrialization exerted a highly negative influence on the food economy, significantly

increasing its responsibilities, and simultaneously aggravating objective conditions and possibiliities for implementing those responsibilities. Under these circumstances one should not wonder at the food hardships which our country is currently experiencing.

Indeed, it must not be forgotten that particularly in the 5-year period from 1971-1975 some sectors in our food ecoonomy (for example, favored selected trades of the food industry) benefited from certain investment and importing priorities; this was, however, a temporary and transitory situation and did not affect the entire comprehensively understood food economy.

Presently our food economy is not modern in comparison with other countries. A traditional, poorly producing agriculture dominates its structure, whereas the marketing sectors, storage and processing are not adequately developed. This likewise applies on a national scale as well as to the vast systems of organization and functioning of the food economy, which are non-comprehensive, antiquated and, as a result of this, little effective.

Shortly, we shall become acquainted with the main land-use problems of the basic sectors of our food economy, that is, agriculture, technological infrastructure, procurement, the food industry as well as the flow of consumer goods to the marketplace.

2. Selected Land-use Problems of Basic Sectors in Poland's Food Economy

2.1. Agriculture. Polish agriculture is noted for its immense variation in land management, in terms of natural soil as well as in social, demographic, production and economic terms. These enormous land-use margins, and even proportions, require their proper treatment in socioeconomic policy, because this policy cannot be detached from actual conditions and situations in individual areas.

Let us present in abridged form the characteristics of Poland's agricultural land-use diversity:

1. The food potential of our agriculture, estimated in terms of acres of crop land per person, approached a national average of .53 hectares in 1980. However, it fluctuated from .09 hectares per person in large urban-industrial agglomerations (the provinces of Katowice, Warsaw, Lodz) to more than 1 hectare per person in many agricultural provinces; furthermore, the highest level in this index, approaching 1.39 hectares per person, was registered by the province of Lomza. These margins exert a substantial influence on the status of farming in individual regions of the country, on the course of specialization in farm production, on interprovincial cooperation, etc.

2. The quality of the agricultural system as determined by the point method of the Institute of Cultivation, Fertilization and Soil Sciences is very diverse according to macroregions, and even more so according to provinces. The southern, southwestern and central-eastern macroregions represent the highest quality in the agricultural system, whereas the lowest is represented by the northeastern and central macroregions. The extreme margin between

the provinces of Krakow (85.9 points) and Nowy Sacz (46.7 points) is almost twofold.

3. From the point of view of characteristics and responsibilities of the food economy, the agrarian structure provides important significance, and in particular the degree of land collectivization. In this respect huge land-use margins appear. If the national rate of land collectivization amounted to 25.5 percent in 1980, it simultaneously appeared to be very low in the central-eastern (7.9 percent), central (8.6 percent) and southeastern (9.4 percent) macroregions; on the other hand, it was very high in the northern (56.9 percent) and the southwestern (49.7 percent) macroregions. Interprovincial margins are even greater and range between 2.9 percent (Siedlce Province) and 69 percent (Szczecin Province). This raises completely different--with respect to organization and technology--responsibilities as to forms of cooperation for agriculture and the food industry, farmer's contracts for the supply of agricultural products, procurement and collection, etc.

4. Utilization of the means of production in agriculture is likewise very erratic from both a regional and sector standpoint. For example, on the basis of research by the Institute of Agricultural Economy--in state-controlled as well as private farms--immense land-use diversity was revealed in the level as well as the effectiveness of mineral fertilization (NPK) [nitrogen-phosphorous-potassium]. The high level and high effectiveness of this fertilization occur mainly in the western part of the country; on the other hand, in the eastern part, with the worst soil as a rule (with the exception of Lublin and Zamosc), the level of mineral fertilization is the lowest. There is, therefore, a failure to offset the weak quality of the soil with superior fertilization; on the other hand, there is an apparent correlation between the level of fertilization and its effectiveness on the level of agricultural culture.

5. Manpower resources in agriculture are not distributed throughout the country in a reasonable or uniform manner. They are the function of many factors (for example, the vastly erratic agrarian structure, etc.); however, they reveal a series of actual irregularities. They reflect, among other things, an undesirable age structure of people employed in agriculture (the so-called aging of the village), feminization of the farmer's profession, particularly in the southern and southeastern parts of Poland.

In the 1970's the progress and accomplishments of Polish agriculture were being accompanied by numerous negative developments. In concentrating attention on those problems that had an actual influence on the general economy, one can mention:

--a disregard for a sensible rate of production on state farms [PGR], which, independently of production-economic consequences, led to deterioration of the ecological status of the environment, mainly on industrial farms;

--excessive allocation of private farming, leading to poor productivity of labor and poor farm-produced commodities;

--unprofitable changes in the balance of manpower in agriculture, especially in areas of intensive industrialization;

--depopulation of villages, especially in eastern regions, which led to debilitation of the productive potential of agriculture and a simultaneous growth in demand for consumer food products, etc.

Socioeconomic policy in relation to villages and farming in the 1980's should keep in mind a desire to eliminate or alleviate the disproportions mentioned, taking into consideration their diverse land-use structure and determining land-use factors.

2.2 Technological infrastructure and procurement. There is a lack of general and comprehensive study of the technological infrastructure and its influence on the level and degree of development of the food economy in broad terms. This realization presents itself relatively somewhat better with respect to agriculture, even though here there have been few attempts to determine the influence on the status of production of the farm infrastructure in its general context. Based on studies conducted in the Laboratory of Technological Infrastructure of Agriculture of the Institute of Agricultural Economics, it can be stated that the technological infrastructure of agriculture reveals tremendous diversity in a territorial cross section of Poland. It is distinctly less pronounced in the eastern portion of the country. In synthetic studies of the infrastructure, the following were afforded consideration concurrently:

a. basic installation of waterworks (mainly reservoirs),

b. installation of waterworks and sewer systems in villages,

c. hard-surfaced road length (in km/100 km^2),

d. use of electrical energy in KwH/1 hectare of cropland,

e. communication network in the village (the number of telephone subscribers per 1000 village residents).

In further consideration of these indices, at the end of the 1970's a very high level of agricultural technological structure was represented by eight provinces, principally in the western part of the country (Szczecin, Jelenia Gora, Legnica, Walbrzych, Leszno, Poznan, Tarnow and Katowice), whereas a very low level was represented by four notheastern provinces (Bialystok, Lomza, Ostroleka and Biala Podlaska), the margin between these two groups being considerable.

The rate of the procurement growth of farm products during the 1970-1980 period was quite erratic in the broad aspect. During this period the greatest rate of general procurement growth (expressed in units of grain) applied to the southern, northern and central macroregions, that is, those parts of the country in which large urban-industrial agglomerations are situated. On the other hand, the general rate of procurement growth, among other things, was low

in the northeastern and middle-eastern macroregions. These trends must be regarded as unprofitable and demanding of further analysis and endeavor, because they constitute regions with potential surpluses of agricultural raw materials, regions in which during the 1970's in striving for the creation of so-called food basins numerous food industry plants were built.

There can be no shortage of raw materials for them from their local sources.

In 1980, the procurement of agricultural products in volume of grain per 100 hectares amounted to a national average of 212 tons of grain per 100 hectares, with the following provinces reflecting the highest and lowest index levels:

--provinces with the highest level of grain procurement/100 hectares: Legnica--327, Poznan--322, Opole--321, Leszno--319, Wroclaw--301;

--provinces with the lowest level of grain procurement/100 hectares: Ostroleka--144, Tarnobrzeg--142, Krosno--122, Radom--121, Nowy Sacz--121.

From the point of view of assumptions of land-use development in the food economy, an analysis of the land-use reserves of farm commodities should be regarded as a significant future aspect; in other words, an estimate of the sort of potential volume of procurement on which the food economy and the food industry can depend in individual provinces. Initially, it can be concluded that these reserves, even if combined with a portion of the difference between the provinces with the highest and lowest procurement of farm products per 100 hectares, are essential and should in the future, especially in the 1980's, constitute one of the more important premises of land-use policy in the food economy.

2.3 The food industry. During the 1970's, the food industry accomplished--on a macroscale--on the whole profitable changes in the overall distribution of production facilities and production, achieving--in many brances--its essential improvement, even though in certain instances it did not absolve itself of mistakes, due chiefly to particular regional pressures and the scope and size of facilities. As a principal and leading course of overall policy, it was agreed upon to strive for the assurance of rapid development of the food industry in raw material and agricultural regions, principally the eastern and northeastern parts of the country, for the purpose of closer ties of food industry plants with the raw materials base, and minimizing noneconomical deliveries of raw materials from distant places. During this period of time this approach, even though it implied priority for new constructuion rather than modernization, was, however, in general a satisfactory one from the standpoint of endeavoring to eliminate existing extensive disproportions.

This policy is, however, likewise characterized by the following negative phenomena:

--a lack of improvement in broad allocation of branches processing vegetational raw materials (for example, in the sugar, potato and milling industries);

--considerable weakness in the rate of investing subsequent to 1975;

--particular pressures of regional officials, urging construction of new food industry plants (mainly meat) in their areas;

--the decline of small-scale food industry, mainly baking and milling, in cooperative sectors regional as well which, in spite of attempts undertaken, has not been overcome, which frequently has led to a deficiency of local small plants, the collapse of infrastructural ties, a deterioration in the utilization of local raw materials, an increase in transportation costs, etc.

In spite of the difficulties described above, a profitably diversified rate of development was reached by the food industry in individual parts of the country in the 1970's. Consistent with assumptions, the most rapid rate of production growth was achieved in the northeastern macroregion.

On the provincial scale, the rate of growth of the food industry in the 1970's was very erratic. At the most, a very high rate of growth in production was achieved in those raw materials provinces in which there had been constructed new large food industry processing facilities (for example, the provinces of Ostroleka, Konin, Siedlce, Skierniewice and Suwalki). This rate, however, did not apply to all raw materials provinces: for example, in the provinces of Krosno and Sieradz, in which there was no construction of new large plants, the increase in the production of the food industry during the 1970's amounted to approximately 60 percent, that is, less than the national average. Against this background numerous, frequently individual attempts to "obtain" new food industry investments for one's own region are understandable, because area officials saw in this solution the chief and possibly also the only opportunity for comprehensive development of the food industry in their province.

If during the 1970's the greatest rate of development in food industry production was displayed by numerous agricultural provinces, the lowest rate was registered primarily by the great urban-industrial agglomerations (among others, the provinces of Katowice, Walbrzych, metropolitan Warsaw, the city of Lodz). The fact that the agricultural province of Zamosc was likewise found in this group, with considerable surpluses of raw materials at its disposal (among others, sugar beets), should be interpreted as a distinct error of the agricultural policy of the 1970's.

In 1980 the province with the highest and lowest production values in the food industry consisted of the following:

a) provinces with the highest production in the food industry: Katowice--5.5 in percentage points as compared with the national average, Poznan--5.0, Gdansk--4.6, Szczecin--4.3, metropolitan Warsaw--3.8.

b) provinces with the lowest production in the food industry: Tarnobrzeg--0.9 in percentage points as compared with the national average, Krosno--0.8, Nowy Sacz--0.7, Jelenia Gora--0.7, Biala Podlaska--0.6.

Currently the broad distribution of the food industry, although it has undergone considerable improvement, is still not entirely satisfactory. The liquidation of numerous small food industry plants led to the loss or weakening of local infrastructural ties and brought about numerous negative socioeconomic results.

Therefore, during the 1980's, a continuation of an active sweeping policy is vital in the food industry, with an appreciative regard for, among other things, diversification of the situation according to individual trades, reconstruction of small local plants, location of raw material bases closer to existing food industry factories, etc.

2.4 Consumer food supply. The following have an influence on the present vast distribution of the retail sale of food as well: trends in the growth rate of supplies according to provinces in past years, as well as the results of introducing a system of state-controlled sale of staple foodstuffs in the 1970's.

It must be remembered that each of the two factors mentioned provoked different and even opposite effects and land-use trends.

From 1975-1980 the rate of growth in the retail sale of food was generally negligibly erratic and confined itself to the following ranges:

--according to the macroregions--from +61.8 percent in the northern macroregion to +69.9 percent in the midwest macroregion,

--according to provinces--from +54.8 percent in the province of Ciechanow to +78.9 percent in the province of Pila.

In conjunction with the trend referred to, the general structure of retail food sales from 1975-1980 underwent basic changes, although certain land-use shifts in sales are worth noting. In particular there was increased participation by, among others, the province of Katowice (by +0.4 percent) and metropolitan Warsaw (+0.3 percent), but a decrease in, among others, the provinces of Gdansk, Szczecin and Czestochowa; the remaining changes in the general structure of sales were insignificant.

A significant degree of stabilization in the overall structure of retail food sales from 1975-1980 is confirmed by, among others, the fact that 26 provinces maintained their comparative share in national sales without any changes, whereas in an additional 18 provinces these changes did not exceed 1 percent more or less.

This trend indicates that the fundamental differences in the sale of food per person which occurred in 1975 were not alleviated until 1980. Thus, for example in 1980, the highest retail sales per person were observed in the provinces of metropolitan Warsaw (22,800 zlotys) and Katowice (21,500 zlotys); on the other hand, the lowest occurred in the province of Lomza (9,800 zlotys) and the province of Siedlce (10,200 zlotys); the supply margin was, therefore, more than twofold.

The degree of overall concentration of the retail sale of food (in areas of great urban-industrial agglomerations) was higher than the degree of overall concentration of food industry production, and also the concentration of population.

The system of state control of the sale of staple food products introduced at the beginning of the 1980's brought with itself fundamental changes in the broad structure of supplies and consumption. The so-called democratization of supplies, expressing itself in the far-reaching unification of ration cards, caused a radical decrease in supplies in previously favored large urban-industrial agglomerations, as well as stabilization and even a certain increase in supplies in previously neglected agricultural regions. Thus for example, market supplies of meat per person (1981 as compared with 1980) declined from 57.6 kg to 47.5 kg, that is, by approximately 10 kg. These changes in selected representative provinces amounted to:

Place	1980	1981	Difference
Metropolitan Warsaw	105.7	55.4	- 50.3
Katowice	96.1	64.3	- 31.8
Leszno	39.1	40.7	+ 1.6
Zamosc	24.6	28.7	+ 4.1

The margin of meat supplies per person between the provinces of metropolitan Warsaw and Zamosc during the course of merely 1 year declined from 81.1 kg in 1980 to 26.7 kg in 1981.

One cannot help but notice that further retention of the system of state control of food will be conducive to maintaining the present overall structure of foodstuff supplies, whereas a departure from state control will have the effect of returning to the course of the overall supply structure of the 1970's. Consequently we are confronted with the alternative of:

--continuation and petrification of the currently state-imported and controlled but very uniform overall allocation of food,

--(in case of departure from state control) the return to an overall supply structure approaching the situation marking the close of the 1970's, when large urban agglomerations and largely industrial centers were distinctly favored.

In declaring myself in favor of this second alternative, I wish to express the view that it not, however, be a unilateral preference which would disregard the needs and determining factors occurring in agricultural regions. Not only do the genuine needs of these regions call for such a view, but so does the conviction that the retention on a vital level of market supplies

of food in agricultural regions will promote the development of agricultural goods production and the rapid reconstruction of presently strained village and city commodity ties.

3. Identification of the Main Land-use Problems of Poland's Food Economy in the 1970's

The basic principle of overall policy in the national economy, and particularly in the food economy on the whole, preserve their theoretical value and practical usefulness independently of any specific situation, place and time. In this sense, the value of generality and universality can be attributed to such principles.

However, in individual economic spheres, the particular determining factors in which emerges the implementation of economic policy are changing, and that is why the hierarchy of needs and executive possibilities can change. In conjunction with this, the overall fundamental problems of Poland's food economy of the 1980's differ --in a meaningful manner--from problems predominantly in the previous decade (1971-1980), and will even frequently represent a contradiction to previous problems.

Let us complete below the identification of the principal land-use problems of Poland's food economy in the 1980's as well as its determining factors.

1. The current general national economic situation is responsible for the fact that a basic factor in the overall policy, such as investments (and especially the construction of new plants), will be a minimum factor in the 1980's. This situation is contrary to the trend prevailing during the 1971-1980 period when development was (excessively) advocated through investment outlay. Consequently one cannot depend on the classical method of overall structural changes through investment construction of new facilities in the food economy. The impossibility of achieving an overall investment maneuver requires the concentration of attention and efforts on a considerably more difficult task, such as improving the functioning of overall structures already in operation without investments. Perhaps here, for example, it is important to bring agricultural raw material bases closer to food industry plants already in existence, etc.

2. The internal structure of the food economy in Poland is still old-fashioned; relatively the greatest share is exhibited by traditional and backward farming, there is a lack of adequate development of those sectors which are the bearers of progress in the food economy, that is, among others, the food industry, storage, and infrastructure. It is incumbent upon us to accept as urgent and indispensable the proposal to modernize the internal structure of our food economy by restructuring it in the direction of more dynamic growth of the extra-agricultural sectors of this economy than before. Without this structural change, it will not be possible to guarantee high socioeconomic efficiency in the food economy, understood as a system.

3. Presently the Polish food economy is not only characterized by an unmodern internal structure, but--in addition--individual sectors of this economy are

not integrally and substantially linked to one another, but maintain rather loose relationships in which the interests and endeavors of individual sectors are often disjointed and even contradictory. The rapid strengthening of the substantive and not the formal integration of the entire food economy system is urgent. A reminder of this basic postulate is all the more indispensable--in my opinion at least--for the results and experience of integrative attempts of agriculture and the food industry undertaken during the last 2 years reveal a considerable superiority of formal-organizational and conflicting factors over the substantive and systems-type.

4. Diversified determining land-use factors of the food economy require the working out of individual regional models (types) that could and should be employed in individual parts of the country. For example, one might suggest a distinction between the following types of overall models in the food economy:

a) a region with multicommodity and socialized agriculture and a region with dilapidated private peasant farming,

b) supporting zones for large urban-industrial agglomerations and so-called food basins, that is, regions with intensive agriculture, equipped likewise with adequate processing and storage facilities, etc.

In the meantime, we have neither in theory nor in practice sufficient return in the sphere of private overall models of the food economy. This gap must be filled as soon as possible.

5. Individual sectors of the food economy reveal a different degree of relationship with the system; most broadly organized is agriculture, and also the food industry (for example, the dairy and baking industries). However, the means of production industry (for example, the production of fertilizer, tractors, insecticide), likewise included in the food economy by some theoreticians, is not as broadly modified as agriculture, but falls under the principles of industrial concentration. This leads to the observation that broad food economy models discussed above in point 4 can have a closed character in some regions; this means that all sectors of the food economy will be found in these regions, while in other regions they can have an open character, that is, they are deprived of some of the sectors of that economy.

This observation should be accordingly utilized in creating and initiating into practice general models of the food economy with a closed or open character.

6. Desirable land-use food economy models will not come into being automatically; they likewise cannot come into being under reform conditions through the use of administrative-directive type compulsory methods. It is, therefore, necessary to create an effective system of economic instruments to reinforce and steer the development of the food economy with allowances for overall aspects. I feel that the following, among others, should play an essential role in this system: credit, tax rate, price options, etc.

7. In working out the system under discussion, the question always arises of whether to grant priority to criteria of efficiency, which leads to increasing regional margins and disproportions, or to conduct a "socially fairer" overall policy, favoring to a certain degree hitherto backward regions and prohibiting intensification of already existing irregularities. This dilemma possesses a universal character; it concerns, for example, the broad distribution of fertilizer, allocation of farm machinery, construction of road networks, infrastructure, localization of attractive cultivation under contract.

To be sure, one accepts, and justifiably so, the view that the overall distribution of limited resources should be--over the short term--conducted in accordance with the criterion of greatest efficiency, whereas over the long term the most favorable model approach should be determined; however, this matter is not completely clear and lucid. Because we do not have an elaborate practical method of shifting from a broad policy over the short term to the long term, there is likewise a lack of theoretical and applied work indicating what the socially permissible margin of sweeping irregularities and disproportions is.

8. In the 1980's, many fundamental detailed land-use problems of the food economy must be received completely, differently than in the past. By way of example one can mention here:

--the extreme necessity for the reclamation of land for nonfarming purposes and the limitation of this reclamation to the poorest soil,

--a guarantee of improvement in the conservation of natural environment through a general economic policy that will exert additional influence on the wholesomeness of our food,

--paying considerably more attention than heretofore to the role of medium and small facilities (food industry plants, warehouses, procurement points, etc.) which should contribute to better utilization of local raw material reserves and manpower, and also decrease the transportation intensiveness of the food economy.

--departure from the instrumental treatment of the agricultural system as an exclusively productive system, and full consideration of this system in a sociological sense, that is, with a perception of and a solution to the basic social needs of the farming population, etc.

9. The vital needs and interests of the food economy cannot continue to be underestimated by the general economic policy. In particular, one cannot in a unilateral manner advocate the vigorous development of great agglomerations and industry at the expense of and detriment to agriculture and the entire food industry. Such an approach, destroying and degrading the agricultural-food economy, was and is particularly glaring in regions of rapid industrialization (Legnica-Glogow Copper District, Belchatow Industrial District, etc.). Here occurs a distinct conflict of interest between industry and city on one side, and village agricultre and the food economy on the

other. Until now this conflict was always resolved to the disadvantage of agriculture and the food economy. It is sufficient to name at least the confiscation of valuable cultivatable sites, downgrading of the environment, pollution of the atmosphere, destruction of the water system, disruption of ecological balance as well as the degradation of farm production by the removal from agriculture to industry of a number of laborers that considerably surpass outstanding surpluses, which in effect ruins the current level and structure of farm production.

One should hope that as a result of limiting the investment activity of industry induced by the general situation, the rate of industrialization and expansion of great agglomerations will weaken, which will create very normal conditions for the development of the food industry. As one of the natural means of developing backward regions, it is necessary in this respect to regard the shift of existing manpower surplus from agriculture to other sectors of the food economy, for example, to the food industry, and not as in the past to the heavy machinery industry. This will strengthen, not weaken, the food economy in the region. At the same time it will be a model in regional development through its comprehensive specialization in food production and processing.

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CSO: 2600/473

EFFORTS TO IMPROVE QUALITY IN CHEMICAL INDUSTRY

Bucharest ROMANIA LIBERA in Romanian 19, 21 Jan 84

[Interview with Gheorghe Caranfil, minister of Chemical Industry]

[19 Jan 84 pp 1, 2]

[Text] [Question] As we know, a new priority goal set by the 12th Party Congress, is to achieve a new working and living quality in all areas of activity. You, Mr Minister, are the representative of an extremely important economic branch, which during this five-year plan is oriented primarily toward a superior utilization of raw materials and energy. Could you then, at the beginning of this year, refer to some of the results obtained in this respect during 1983?

[Answer] We are starting the new year with the firm conviction that through the work of all collectives in the chemical industry, and through the achievements which we will obtain, we will contribute to the unswerving fulfillment of the decisions of the 12th Party Congress and of the National Conference of the Party. During this period, the Ministry of the Chemical Industry (MIC) has sought to meet the growing demand for chemical products in the national economy, and to export a broader range of higher quality competitive technologies. Similarly, determined efforts have been made to bring our branch in line with the high demands placed by the party leadership on all economic factors, to promote the most efficient means and methods for assuring the present stage of development of the national economy with corresponding technical-economic indicators.

The detailed analyses conducted by Nicolae Ceausescu, secretary general of the party, with each minister, to find the best solutions for qualitative and quantitative production growth, to orient all activities toward higher efficiency at a more rapid rate, and to supply as many as possible of the raw and other materials needed by the national economy from domestic resources, while developing international exchanges, have led to solutions which effectively give priority to the exploitation of current possibilities and conditions.

[Question] For the chemical industry, the transition to a new quality represents a high responsibility, a task stressed at the National Party Conference, where it was established that by 1985 this industry will have to fully supply the national economy with domestic chemical products or with products that have been manufactured through cooperation. Research will play a predominant role in this respect. What solutions have been offered, and what major problems have been solved or are being considered this year by researchers and specialists in the chemical industry?

[Answer] As in preceding years, the 1983 scientific and technical research activity in the chemical branch was primarily oriented toward the superior utilization of domestic raw materials, the development of fine chemistry, higher quality, and a reduction in materials and energy consumption.

I might add that the organization of chemical research is based on the modern scientific concepts broadly promoted by Dr Elena Ceausescu, a scientist of world renown, and that it has been carried out under her direct guidance. Her great competence and scientific authority have lifted chemical research to a higher level of a profoundly innovative, modern nature, which has assured the formulation of highly efficient, internationally competitive technical processes. The entire activity of scientific research, technical planning, and education, as well as the integration of chemical research into industrial activities have been conducted under the leadership of Dr Elena Ceausescu. As a result, most of the chemical industry production is obtained in installations built according to domestic research and designs, particularly in the fields of synthetic rubber, plastics, fertilizers, pesticides, pharmaceuticals, detergents, and dyes--fields that are determinant in assuring material and technical progress in industrial and agricultural production.

During the elapsed period of the five-year plan, and especially during 1983, scientific research, technical development, and the introduction of technologic progress have made more extensive contributions. Based on ICECHIM (Central Institute for Chemical Research) technologies and with its technical assistance, we thus started butadiene rubber installations at the Brazi Petrochemical Combine and catalyst fabrication at the Vega Refinery; implemented in existing industrial installations, ahead of schedule, such research projects as carboxylated butadiene styrene latex at the Borzesti Petrochemical Combine; improved the technology for obtaining stearine at the Stela enterprise in Bucharest, and for producing degreasing and metal cutting materials for the ball bearing and automobile industry at the Dero enterprise in Ploesti. We conducted pilot plant experiments to obtain polyethers for flexible foams using domestic raw materials; and we carried out industrial experiments to fabricate automobile parts with domestic polyethers.

This year's ICECHIM scientific research and technical development plan includes a comprehensive range of projects which will assure a greater contribution from research in completing the development program of the chemical industry. For 1984, it stipulates various implementations of 213 research projects, and the adoption of 230 products. Our research will result primarily in technologies for the objectives stipulateed in the investment

plan, technologies for products that will be manufactured in existing installations, new sources and technologies for synthetic fuels, optimizations of technical processes that consume large amounts of raw materials and energy, and technologies for exploiting technical byproducts as well as recoverable and reusable materials.

[Question] Since you mentioned some of the basic concerns of research for this year, could you describe for our readers the major directions of development for the chemical industry in 1984?

[Answer] The 1984 plan includes some significant growths with respect to 1983, assuring the intensive development of the national economy. The tasks of the chemical industry, assigned by the law governing the Unified National Plan for Socioeconomic Development for this year, are correlated with the growing demand for chemical products, which is in turn determined by the development of the economy and by the diversification and expansion of exportations. The actual plan figures and the programs for the continued growth of economic activity efficiency in the chemical industry, provide that compared with 1983, the production of goods will increase by 9.0 percent, exportation by 58.1 percent to socialist countries and by 43.2 percent for convertible currencies, labor productivity by 9.0 percent, and that costs per 1000 lei of goods produced will be reduced by 78.3 lei; correspondingly, the profits of the chemical industry during 1984 will be twice those of 1983.

I might add that the chemical industry presently has the facilities and technical-organizational capability to achieve these indicators.

Starting with the importance justifiably assigned to the fulfillment of physical production for a group of products, significant growth is forecast with respect to 1983. The figures will thus be 146.2 percent for ethylene, 143.7 percent for polyethylene, 118.6 percent for caustic soda, 112.5 percent for zinc, 131.8 percent for processed plastic products, 122.7 percent for pesticides, 123 percent for synthetic rubber, 119.2 percent for artiificial fibers and filaments, 111.2 percent for synthetic fibers and filaments, 112.8 percent for ATA tires, 111.6 percent for pharmaceuticals as a whole, and 105.9 percent for fertilizers.

For this year, significant increases are planned in the production of non-ferrous metals, thus supplying much more of the requirements of other branches of the economy and expanding the exportation of such products. With respect to 1983, we will thus produce 10 percent more lead, 32.2 percent more zinc, 12.5 percent more converter and electrolytic copper, and 4 percent more aluminum.

This year will see improvements in the production structure, based on highly processed products, and on greater value derived from the country's raw materials and natural resources. Oil and petrochemical products will be more fully exploited by placing in operation new capabilities for crude oil processing, and by completing all the superior utilization installations which will manufacture more valuable materials, such as new types of plastics,

higher quality synthetic fibers and filaments, new dyes, pesticides, new types of synthetic rubbers and latex, and so on. At the same time, by developing the production of fertilizers, pesticides, and veterinary pharmaceuticals, we will provide agriculture and livestock production with larger quantities of a broader range of products. We will intensify the adoption of pesticides products which we believe we owe our country's agriculture, particularly in advanced products of this type.

The objectives established for the two programs approved by the party leadership for improving the technical quality of products and increasing labor productivity, as well as the measures that are implemented in the chemical industry for reducing energy consumption during this year, will be discussed in a future issue of our paper.

[21 Jan 84 p 3]

[Text] In our issue of Thursday, 19 January, we published the first part of an interview with Gheorghe Caranfil, minister of the chemical industry. Today, we publish the second part of that interview.

[Question] All the products of the chemical industry are obtained with a large consumption of energy and fuels. But there exist many ways for saving and managing these resources. Could you mention some of the measures taken in this respect for 1984?

[Answer] For better management of fuels and energy, this year we will continue to reduce specific consumptions of fuels and energy of the basis of concrete programs of measures formulated for each separate product. A few of the priority efforts with which chemical industry workers have already obtained the first results for 1984, are the recovery of an additional 474,000 tons of conventional fuel compared to 1983, with projects being scheduled to begin for continued recovery of inventoried resources, as well as a continued reduction of specific consumptions of fuels and energy for each product. Concrete programs of measures have been established for each separate product to achieve standard consumptions, and to modernize low efficiency ovens and steam generators. Programs exist to modernize and even replace technical ovens and steam generators, which for this year stipulate the modernization of 21 units and the replacement of 35 oil-fired steam generators, most of the latter group to be converted to coal. In addition, we have taken measures to formulate and update energy balances on the basis of programs, to approve and replace burners, to reduce the consumption of thermal energy, and so on.

All the proposed measures, including the modernization of technologies or process phases, are designed so that the units of the chemical industry will comply with the levels stipulateed in the plan.

[Question] Through its units, the chemical industry in past years has achieved significant currency savings by recovering, reusing, and exploiting materials, actions which have been reported in our paper.

[Answer] If I were to mention some of last year's results--350,000 recapped tires, 30,200 tons of regenerated mineral oils, 7500 tons of regenerated rubber, 1800 tons of low density polyethylene, 1740 tons of high density polyethylene, 975 tons of polyvinyl chloride, 130,000 tons of recovered sulfuric acid, and so on--it would appear that the results were quite good. But I should add that some shortcomings did arise in increasing the production of recoverable materials, especially in completing 1983 investment projects for recapped tires, plastics, and so on.

To eliminate these difficulties, we have decided to place the respective objectives into partial operation as the installation of technical equipment is being finalized. To increase the variety of recoverable and reusable materials, we have taken measures to hasten the research in progress, concurrent with identifying the possibilities for implementing this research at existing installations, particularly in the non-ferrous metallurgy sector.

In keeping with the indications and tasks outlined by Dr Elena Ceausescu, we have formed joint collectives composed of researchers, designers, and users, to hasten the application of completed research, thus increasing economic efficiency and resource potential, in accordance with the decisions of the 12th Party Congress and the National Party Conference.

In order to fulfill the utilization tasks for 1984, we intend to place in operation new recovery installations stipulated in the investment plan (platinum recovery from expended catalysts at the Vega Refinery, recovery of tires at Zalau, Orsova, and Botosani, conveyor belt rebuilding at IATC in Tg.-Jiu, and lead recovery from worn parts at IMN in Baia Mare). We will also increase the delivery volume of recoverable materials and expand their range of utilization by interesting new users (phosphorus gypsum and calcium carbonate as soil conditioners, regenerated rubber, lime powder for constructions, and so on).

[Question] Two extremely important programs were approved at the end of last year: the program to improve the technical and quality level of products, reduce the consumption of raw materials, fuels, and energy, and derive greater value from raw and other materials; and the program to more strongly increase labor productivity and establish work standards for the 1983-1985 period and up to 1990. Could you, Mr Minister, indicate some of the objectives that will be completed this year in the chemical industry, as a result of the adoption of these programs by the party leadership?

[Answer] For 1984, the programs to improve the technical and quality level of products and to increase labor productivity stipulate extraordinary tasks for all enterprises in MIC. The state plan indicators for improved product quality during this year have been re-examined in workers' general assemblies, establishing new measures which will create conditions for fulfilling the tasks on schedule. Compared to the 1983 state plan, the 1984 task is to increase the value of higher quality products from 79 percent to 80.2 percent.

As a result of intensified action to further reduce materials costs and derive greater value from raw materials, we will continue during this year to take all technical measures that will reduce consumptions for all the products we manufacture. We will especially seek to reduce the use of raw materials derived from hydrocarbons or those that are imported.

The plan for raw and other material consumption quotas for 1984 is aimed, as decided by the party high leadership during a visit to the 9 February Exposition, at the consumption quotas of the products shown with the improvements that lead to large savings of raw and other materials. In this way, the average reductions of consumption quotas stipulated for next year are between 1 and 50 percent of the 1982 values.

[Question] What about labor productivity?

[Answer] The 1984 plan stipulates a 12.6 increase with respect to 1983. In order to fulfill this task in all chemical units, we have performed analyses and established the measures necessary to achieve this increase. We have established more than 4000 measures at work sites and activities, and particularly stressed technical progress standards which contribute to a 52 percent increase in labor productivity as a whole. The technical progress measures concern the placement in operation of new objectives, mechanization and automation of production processes, including the introduction of industrial robots in various sectors of the chemical industry. Measures to improve the organization of management, production, and labor, as well as other measures for personnel qualification and diversification of the production structure, will also contribute to increase labor productivity during 1984.

In closing, allow me to express through your paper, the pledge of all workers in the chemical industry to make every effort to fulfill their tasks for 1984 in an exemplary manner, a year stamped by two important political events in the country's existence--the 40th anniversary of the national, social, antifascist, and anti-imperialist liberation revolution, as well as the 13th Party Congress.

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INVESTMENT EXPENDITURES FOR 1979-1983 REVIEWED

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 16 Feb 84 p 5

[Article by Petrasin Petrasinovic]

[Text] Controversial indicators in the sector of investment have become increasingly noticeable during the last few months. High inflation rate has created the illusion that investments are still increasing. However, real indicators of the investment movement show that the 4-year-old trend of falling investments is becoming steeper.

Payments for investment, which are most often used as indicators of current expenditures for investment, increased by 15 percent in relation to the preceding year. However, if we take into account the simultaneous rise of investment goods prices, it turns out that there was a real decrease of investment of about 15 percent. Payments for investment have been stagnating for several months (with the growth rate of 15 percent), which under the conditions of an escalating inflation (which surpassed 50 percent toward the end of the year) means an ever more pronounced decrease of the real volume of investment. According to some estimates, the real decrease of investments was about 10 percent at the beginning of 1983, 15 percent in the middle of the year, and more than 20 percent toward the end of the year and the beginning of 1984.

Data on business and production activity of the sector dealing with investment "needs" also indicate that the drop in the rate of investments is continuing. Construction industry certainly ended the year 1983 with an about 15 percent smaller volume of production; production of equipment dropped about 1.5 percent, and real import of equipment was reduced by about 25 percent.

Current reduction of investment demand and supply is to a large part a result of economic policy measures whose goal is to reduce consumption to realistic dimensions (restrictive credit policy, ban on some aspects of investment), of the worsened condition of the economy, and a more acute liquidity problem. However, the high inflation rate certainly is one of the key factors, as the funds allocated for investment are steadily losing their value. Under the conditions of high inflation, the gap between the investors' desires and real capacity is becoming increasingly pronounced, i.e. investors are ever less capable to adapt to changes in the estimated cost of programs that are being

realized. Judging by the ZIT findings, new investment plans are being postponed for a future time, and the problem of keeping up the construction of priority objects is becoming ever more pronounced. Problems in the investment sector are related not only with the reduction of volume but more pronouncedly also with the low quality of finished objects and the low level of their utilization. The many open questions and the growing problems in the sector of investments are certainly not a result of the current economic condition, but have their roots in the preceding period.

Movements in the investment sector are, as a rule, of a cyclical character. Investment cycles last several years, and in our economy they are more closely connected with the realization of medium-term development plans. Their multiplicative and accelerative effects primarily influence levels of economic activity, structural changes in the economy, employment and absorption of technico-technological progress, etc.

In the preceding medium-term planning period (1976-1980), a high level of investment expenditures was achieved; to a significant part it depended on additional accumulation from abroad. The excessive volume of total expenditure was mainly based on the high investment level. Intense investment expenditures offered strong impulses to the economic growth, so that average growth of real social product in the 1976-1980 period had a 6.5 percent rate. However, the strong investment momentum contained many weaknesses whose consequences are of a long-term nature. These weaknesses consisted, first of all, in supporting investments with a financial deficit (especially by borrowing abroad), a broad investment front without objective efficiency criteria, autarchic development which insufficiently respected the inclusion into the international labor division, etc.

The breach in the investment cycle began in 1980. A yearly 5 percent decline of the real volume of investments was recorded already that year. The trend of decline of real volume of investments continued for the next 3 years. According to the ZIT estimates, the yearly decline of real volume of investments in 1983 was about 15 percent. Real level of investment expenditure in 1983 was one-third smaller than the maximum volume of investments achieved in 1979. Among all the aspects of the final use of social product, investments have declined most in the last 4 years. Their participation in the final utilization of the social product (participation of gross investments in fixed assets) was reduced from 38.4 percent in 1979 to 24.9 percent in 1983. Such a reduction of investments was conditioned by reduced possibilities of borrowing abroad and by the need to preserve external liquidity and especially to reduce internal consumption to realistic material and financial dimensions. Some success has been achieved in this in the investment sector. The reduction of investments had a significant influence on terminating excessive consumption and gradual improvement of the balance of payments. On the other hand, negative effects of the reduced investment volume have manifested themselves, intensified by the weaknesses from the period of an excessive investment expansion.

Negative effects are manifested first of all in reduced production incentives, i.e., slow-down in economic growth and employment and reduced materialization

of contemporary technico-technological progress (which has led to a wider technological gap between our country and developed countries). Unfavorable effects of reduced investments would probably be considerably milder if a selection of investment programs and measures to raise the efficiency of investment had been made in time.

In addition to this, the following long-term characteristics should be kept in mind when judging the present situation in the investment sector. After 1979, the financing of investments has relied more and more on one's own resources (on the basis of amortization and accumulation). While, for example, in 1979 OUR's business participation was 33.5 percent in bank credits and 51.3 percent in investments financing, in 1983 OUR participated with 45.5 percent and banks with 38.5 percent. However, the relying of investments financing on the resources of OUR still does not mean a qualitative turn in investing. With regard to the high burdening of the economy by annuities based on finished and current investments and by constant changes of preliminary estimates, according to the ZIT findings, it frequently happens that resources for securing investments are sought in the price increase. The pooling of investment resources has still not assumed wider proportions. Their participation in total expenditures in 1983 amounted to 10.4 percent. But in the preceding years, nonbusiness investments grew considerably faster than business investments (the turn took place only in 1983). The dominant place in nonbusiness investments is occupied by the housing construction which constitutes about three-fourths and four-fifths of such investments. The problem consists in the fact that 23 percent of total investment is allocated for the housing construction, but the number of newly constructed apartments has been declining from year to year (see Table 4).

Construction objects had the dominant place in the technical structure of investments (it is known that these investments have the lowest efficiency and longest repayment terms). Decreased participation of construction objects in investments began only in 1982. The participation of domestic equipment in total investments is gradually increasing, while the participation of imported equipment is decreasing.

Longtime absence of real valorization of fixed assets, viz, of their permanent depreciation, is a special problem in the area of expanded reproduction and investment, especially under the conditions of high inflation. Under the conditions of expanding technical progress and strong inflation, the absence of real valorization of fixed assets is a factor which must be included in the estimates of real movements in the sector of investments. The absence of real valorization of fixed assets makes it possible to declare and use non-generated income and material substance, as well as to reschedule business sectors in the primary and secondary distributions.

The burden of 4 years of reduction of investments into fixed assets has been borne primarily by construction industry and reduced import of equipment. The level of construction in 1983 had a real decrease in relation to 1979 of about 30 percent, while the number of people employed has not essentially changed. The real volume of equipment import in 1983 was halved in relation to 1979. It is estimated that the real drop of construction production only

in 1983 is larger than 15 percent, and the decrease of real import of equipment larger than 20 percent. Domestic production of equipment was growing until 1983. Reduced investment possibilities and worsening of the supply problem made that growth slower from year to year, until in 1983 the manufacture of equipment recorded a yearly drop of 2 percent.

Long-term problems in the area of expanded reproduction and investment have been transferred to 1984. The complexity of problems in this area has been especially intensified by further reduction of the volume of investment expenditures and by the fact that investments in the preceding period considerably deformed long-term movement in this sector. According to the ZIT surveys, the declining trend of investment demand will continue in 1984. It is estimated that further devaluation of funds allocated for investments will take place and that the participation of investments in the final utilization of the social production will drop to 20 percent.

Further weakening of investment demand is expected primarily in construction activity (in this activity, beside the nonutilization of capacities, there are the acute problems of collecting outstanding debts and the growth of losses). Reduced demand for construction will be equally manifested in capital and housing construction, so that the only opportunity for employment of construction workers is an increase in construction contracts abroad.

Producers of equipment have significant accumulated orders, but their execution is made difficult because of the lack of manufacturing components, assemblies and spare parts (especially the imported ones). In 1984, the demand for domestic equipment will show moderate decline. On the other hand, the impossibility of importing equipment will still be exceptionally tight.

It really seems that investment activity in 1984 will continue the declining trend of approximately the same intensity as in 1983. This is why, under the conditions of further reduction of investments, special importance will be attached to the selection of investments which will insure the realization of development priorities and to measures for better utilization of existing capacities.

Table 1 Movement of Social Product and Investments

	Yearly growth rates in percent			
	Social product		Investments into fixed assets	
Year	Nominally	Really	Nominally	Really
1979	29	7.0	25	6.4
1980	33	2.3	22	-5.0
1981	42	1.5	26	-9.8
1982	33	0.7	25	-5.5
1983	(41)	(-1.5)	(19)	(-15.0)

Source: SZS Communication No 415, 1983. (Data in parentheses are estimates)

Table 2. Structure of Allotments of the Social Product in Percent

Year	Social product	Personal consumption	Joint and general consumption	Gross investments: Into fixed assets	Gross investments: Into working capital	Balance of economic relations with foreign countries	Time Demarcation
1979	100.00	53.4	9.5	38.4	7.1	-10.2	1.8
1980	100.00	52.7	9.2	35.1	7.7	- 8.5	3.8
1981	100.00	51.8	9.0	31.0	10.8	- 5.6	3.0
1982	100.00	51.6	8.9	29.2	10.6	- 4.9	4.6
1983	100.00	51.4	8.7	24.9	11.1	- 0.1	4.0

Source: Calculated on the basis of data published in the SZS communication No 415, 1983.

Unlike the long-term declining trend of investment into fixed assets, it has been characteristic since 1979 that investments into working assets show a steady growth, which has been conditioned by the measures of restrictive credit policy and gradual change of social relation toward working assets, viz by the intensification of the liquidity problem.

Table 3. Payments for Investment by Sources

Sources of payments	In million dinars in 1983	Indexes preceding year--100					Structure				
		1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Business OUR's	344,660	123	126	124	146	130	33.5	33.4	34.6	40.0	45.5
Non-business OUR's	84,991	132	138	120	135	123	8.8	9.6	9.8	10.4	11.2
SIZ	26,203	166	121	117	136	84	4.6	4.4	4.4	4.7	3.5
Banks (including marketing)	291,378	127	124	114	111	104	51.3	51.2	50.1	43.6	38.5
DPZ, DPO	10,462	118	106	103	139	123	1.8	1.5	1.2	1.3	1.4
Totals	757,694	127	125	117	126	115	100	100	100	100	100

Source: SDK Communication, No 1637, 18 January 1984. With regard to SR and SAP, investment payments in 1983, in relation to 1982, increased in Bosnia-Hercegovina 20 percent, Croatia 1 percent, Macedonia 6 percent, Slovenia 31 percent, Serbia 21 percent (Serbia without the SAP's 19 percent, Kosovo 36 percent, Voivodina 21 percent). The drop in payments was recorded only in Montenegro--9 percent.

Table 4. Technical Structure of Total Investments (in the social sector and individual property sector)

(in percent)

Aspects of investment	1979	1980	1981	1982	1983
1. Construction	55.8	56.7	56.4	56.2	(55)
Housing construction	(19.9)	(21.1)	(22.0)	(23.7)	(23)
2. Equipment	37.5	35.1	34.0	34.6	(35)
3. Other	6.7	8.2	9.6	9.2	(10)

Source: SZS Communication No 415, 1983. (Data in parentheses are estimates)

Table 5. Movement of Investment Into Fixed Assets

Kinds of investment	1979	1980	1981	1982	1983
	Yearly growth rates in percent				
Production activities	23	21	26	25	(22)
Nonproduction activities	33	24	25	26	(12)
Total investments	25	21	26	25	(19)
	Structure in percent				
Production activities	71.4	70.8	70.9	70.5	(72)
Nonproduction activities	28.6	29.2	29.1	29.5	(28)
Total investments	100	100	100	100	100

Source: SIZ Communication 415, 1983 (Data in parentheses are estimates)

It is characteristic that reduced import of equipment led to a significant substitution, viz demand for domestic equipment.

Table 6. Activity of Sectors Which Work for Investment Needs

	-yearly growth rate-			
Sectors	1980	1981	1982	1983
Construction	0	- 5	- 8	-14
Production of instruments of labor	4	5	2	- 2
Import of equipment--real	-24	-26	-22	-24
Export of equipment--real	0	15	- 5	-14

Source: SZS Communication 415, 1983.

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COMMENT ON LIVESTOCK, FEED PRODUCTION PROBLEMS

Downward Trends Continuing

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 18 Jan 84 p 4

[Text] Fluctuations with a tendency toward decline or stagnation have prevailed for several years now in livestock production and on the livestock market, and this has been manifested in a demand exceeding the supply and an appreciable rise of market prices. Last year conditions in production deteriorated still more because of the shortage and the considerable price rise, above all for imported protein-rich livestock feed. Nor is the situation much more favorable with other livestock feed. This especially applies to corn, whose market price in 1983 rose considerably in spite of the record harvest in the previous year. It should be borne in mind here that corn in our country is the most important raw material for the production of industrial livestock feed--complete feed mixes, in which its proportion is about 65 percent.

Reliable sources and good supply of livestock feed to livestock producers have the greatest impact toward a larger volume and stable development of livestock production. Over the last several years, last year especially, the problem of the supply of livestock feed worsened appreciably, which had a direct unfavorable impact on the volume of production and quality of the livestock, meat and milk produced. It is well known that certain producers have cut back or altogether given up production (swine, broilers) primarily because of the shortage of livestock feed, its quite poor quality, and its expensiveness.

The livestock population and meat production have been stagnant or in decline for several years now. During 1983 as a whole there was a further drop in the number of cattle and horses by about 2 percent, swine about 1 percent, while at the same time the poultry population increased by about 3 percent and the sheep population about 1 percent over the previous year. A similar trend in the number of livestock continued in 1983 [sic] as well, which, given the worsened supply of livestock feed, has had an adverse effect on the available supply of meat relative to demand and on the supply of meat to the market.

Diminished Meat Production

Because of the smaller production and inadequate supply of livestock for slaughter in the first half of last year, slaughterhouses reduced even further the already inadequate utilization of capacity. In the second half of the year, that is, even at the beginning of the third quarter, there was a certain revival of livestock production and the livestock supply, so that the drop in meat production from the first half of the year was offset to some extent, but it was not halted. According to the statistics, the number of cattle slaughtered in the meatpacking industry in the first half of 1983 was down about 13 percent, the number of swine about 15 percent and the number of sheep down about 17 percent from the same period of the previous year because of inadequate supply of livestock for slaughter. In that same comparison, the only increase was for the number of poultry slaughtered, mainly an increase of about 7 percent for fattened fryers and "broilers."

The reduced slaughtering of livestock has had an impact on meat production, which in the first half of last year was down about 10 percent from the same period of the previous year. During the first 9 months of last year there was a certain improvement in the offering of livestock, so that the drop in meat production in the first half of the year was offset to some extent, but total meat production was still about 7 percent below the same period of 1982.

The unbalanced relations between supply and demand on the market for livestock feed and livestock have also contributed to the immensely high growth of market prices of raw materials for the production of livestock feed and livestock. Thus imported protein-rich components (soybean oilcake, fish meal, powdered milk, etc.) went up 100 percent in price in 1983, or indeed even more, compared to prices in the previous year. The prices of these products from domestic sources mainly kept pace with the price movements of imported high-protein components. For example, the price of imported fish meal at the end of 1983 ranged from 100 to 130 dinars, while a year earlier it had usually been 50 dinars per kilogram, that of soybean oilcake went from 50 to 60 dinars from 30 dinars per kilogram in the previous year. Using that same comparison, the market price of corn increased between 70 and 100 percent.

Disparity Between Producers' and Market Prices of Livestock

Much the same is true of the movement of the market prices of livestock for slaughter. Last year they recorded their largest increase, so that the prices of cattle at the end of 1983 were about 100 percent higher than the market prices at the end of 1982, and the difference in the case of swine was 70 to 100 percent. Because of this kind of increase in the market prices of corn and livestock large disparities have occurred between market and producers' sales prices of these products, which does not act as an incentive, but as a disincentive, and is diminishing the production of livestock and meat.

The disrupted balances and the very expensive livestock feed, along with marked price disparities (livestock feed, livestock and meat) are not

motivating producers to commit themselves permanently and to a greater extent to livestock production, which otherwise require considerable investments and the assurance of stable economic conditions.

The declining interest in livestock production as a whole, especially in the most intensive agricultural areas (Vojvodina and Slavonia), are a consequence of many factors. Among the most important are certainly the changes in rural areas accompanying the rapid stratification and aging of the rural population, the inadequate representation of livestock production on socialized farms (because production is expensive and inefficient), the nonexistence of uniform incentives for the advancement and development of livestock production (subsidies for livestock feed, bonuses for livestock, etc.) which are applied in the advanced countries, and which we ourselves had earlier.

Feed Shortage Threatens Production

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 28-30 Jan 84 p 3

[Article by M. Filipovic: "Resolution--Only From Above"]

[Excerpts] The shortage of livestock feed, and especially corn, in Serbia proper is seriously jeopardizing not only fulfillment of the planned targets for larger production of meat and milk this year, but even preservation of the foundation livestock herd.

In Serbia proper, as indeed throughout the country, livestock raising is falling into ever greater difficulties. Last year's result indicates a step backward. Nor is the situation a bit better at the outset of this year. On the contrary, the problems are being compounded, so that the eyes of stockmen are fixed upon the competent authorities, which are expected to allow a change in the purchase price of corn.

At the very outset of the year considerable problems are burdening the present situation and jeopardizing the planned production and exports of livestock products. The shortage of livestock feed is the principal limit on the further development of animal husbandry. The last 2 years have brought a rich corn harvest, and organizations of associated labor, farmer cooperatives and livestock feed mills in fact did purchase about 300,000 tons last fall. Had they had more money, a considerably higher percentage of needs could have been met. The purchasing of corn was also hampered by inadequate storage space, in which more wheat than ever was put because of the exceptional harvest and the taking up of market surpluses.

Last year there were large and uncontrolled exports of corn through compensation deals, which organizations outside agricultural production were also involved in to a great extent. A new blow ensued on the domestic market as a consequence--a sizable rise of corn prices to 20-25 dinars per kilogram. The decision of the Federal Executive Council was also made in the meantime, prescribing the purchase price of corn at 17 dinars per kilogram, which is considerably below the price which has been paid on the market for a long time. Work organizations fattening livestock in their own operations or through

cooperation and livestock feed mills do not want to violate that decision, nor in fact do they dare to. There is an open question, then, as to how the raw materials are to be obtained--corn, fish meal and other high-protein components--at prices considerably lower than those on the market?

It has even been suggested to the Executive Council of the Serbian Assembly, which is also a signatory of the Agreement on Imports of Livestock Feed, that this act be consistently implemented by foreign exchange being set aside by work organizations and the National Bank of Yugoslavia to import high-protein components. It is also expected that the Serbian Self-Managing Community of Interest for Foreign Economic Relations will examine the possibilities for increasing the foreign exchange rights of organizations of associated labor in livestock production to import soybean oilcake on the basis of actual exports of livestock and livestock products. (Last year 50 percent of these imports were based on American commodity credit, but organizations did not altogether use this opportunity because of the greater differences in rates of exchange.) A ban on exports of corn has also been proposed until the actually available amounts of this grain and also the needs of socially organized livestock production are ascertained.

Macedonian Livestock Feed Shortage

Belgrade BORBA in Serbo-Croatian 17 Jan 84 p 12

[Text] Evaluating the situation in feeding more than 100,000 animals in fattening and 2.5 million laying hens to be alarming, Macedonian stockmen have called upon the Federal Directorate for Reserves to extend them an urgent allocation in the form of a loan to the next harvest of 60,000 tons of corn, 10,000 tons of soybean oilcake and 1,500 tons of fish meal.

The eight livestock feed mills in this republic have ceased to operate because of the shortage of raw materials, and their inventories are sufficient to feed the animals being fattened and the hens for only a few days. If they are not to be slaughtered, which would have untold consequences for the further development of swine and poultry raising, the farmers are now feeding the swine and poultry barley intended for feeding cattle.

Swine farms in Macedonia produce more than 10,000 tons of pork per year, one-fifth of which is sold in other centers of consumption in the country, and about 550 million eggs, a third of which are sold outside the republic.

The disturbing situation in the supply of corn to livestock feed mills (in spite of its record harvest in the country last year) and the supply of high-protein components is not something new, but never has it been so difficult and critical as now. It came about mainly because of our own low level of production and because livestock feed cannot be purchased at the prices which have been set in the other centers of production in the country. Since the inspectorate does not allow higher prices, and punishes violators, the stockmen--placed in a situation with no way out--have called for a loan through intervention until the issue of livestock feed is resolved. Otherwise the last act would be performed in the slaughterhouses.

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BRIEF

MACEDONIAN LAMB EXPORTS--About 1.4 million lambs, or nearly 100,000 more than last year, will result from the present lambing cycle of ewes in Macedonia. This very month the first shipments will be made from Macedonia to Italy and Greece--traditionally the largest customers of lambs, and in coming months the shipments will reach a total amount of over 3,000 tons. In addition, about 50,000 live lambs are being exported to Iraq, Iran, Saudi Arabia, the United Arab Emirates, Tunisia, Algeria and Morocco. [Text] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 18 Jan 84 p 4] 7045

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