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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2349

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CONTENTS

AUSTRIAN JOURNAL TAKES DIM VIEW OF CSSR ECONOMY

Vienna WIENER TAGEBUCH in German Nov 82 pp 4-5

[Article by "L. G.:" "CSSR--Somber Economic Prognosis"]

[Text] Poland is but the grossest example of the failure of the "real socialist" economic system. It is the USSR that occupies second place, its rigorous blocking of news and measures to shut itself off from the outside world only serving to camouflage the degree of this failure concerning large areas of distress. For years there have been areas there where the population has no meat and dairy products and barely enough bread and other basic staples. Romania's economic misery is well known.

But in Czechoslovakia too the economic straits have been increasing to a point where the government is forced openly to admit the poor state of affairs. The previous glossing over and the vociferous assurances at the beginning of the recession in the capitalist world that the crisis in the West cannot affect the allegedly superior planned economy of "real socialism" have become meaningless. Since the time of the reintroduction of censorship after the Soviet invasion of 1968, CSSR media have never admitted the shortcomings and failures of the economic guidance measures as openly as now. As Premier Strougal puts it, it is a question of "unprecedented difficulties."

In the 1982 semiannual report on the state of the economy it was stated that machinebuilding, for instance, is so ineffective that it cannot adjust to the new situation on the world market. Today, per 100,000 dollars of exported products in this branch of industry in Czechoslovakia 19.4 persons are employed in the production process, compared with only 7.2 in Austria and as few as 4.4 in Sweden (VOLKSSTIMME 8 Aug 82). One may recall that this proportion was unfavorable as far as the CSSR was concerned as long as 14 years ago, but the disproportion was not this gross by any means. But the same regime which today admits such data "self-critically" in the course of smashing the Prague Spring canceled all the measures initiated at that time by the Dubcek regime for increasing the effectiveness of machinebuilding and reintroduced the old centralist bureaucratic economic guidance. "Revisionist" economist and experts were dismissed by the thousands at that time. What is happening now is the result of this return to the "real socialist principle."

The most recent plenum of the Central Committee of the CPCZ described the situation stating that "the present difficulties represent a serious challenge for every Czechoslovak." Growth of industrial production lags considerably behind the plan, in construction no fewer than 75 percent of all companies have failed to fulfill the plan, and agriculture this year is producing 1.6 million tons less grain than provided in the plan.

The CSSR, it happens, is facing two problems particularly characteristic of its economy. First, there are the astronomic deficits resulting in construction and from the growth of inventories of goods that it has become impossible to sell. Thus, in 1981 about 35,000 construction projects were in an incomplete state either because the money was lacking or because they had been discontinued to make way for projects of greater priority. The second cancer is the supplies and goods in warehouses of enterprises which can neither be exported nor sold domestically. There is talk of losses between 20 and 30 billion korunas; the actual total of the deficits, which are kept secret, is likely to be much higher. In light of such facts, the Belgrade KOMUNIST notes that there can be no question of the "breakthrough toward intensive production" predicted by Husak last year. For this reason Husak to a greater extent than before was insisting on curtaining investments and on Czechoslovakia importing from the West only what it needed most urgently.

Official data show that, if one compares CSSR plans and plan results, overall industrial production, instead of the planned 2.7 percent, was raised by only 2 percent, while productivity rose only by 1.6 percent instead of the planned 2.3 percent. At the same time productivity in construction (see uncompleted projects) dropped by as much as 1.3 percent. Agricultural production dropped 3.4 percent compared with 1980. While originally the current five-year plan (1980-1985) set a GNP growth of 14 to 16 percent, that planning figure was lowered to 10 to 14 percent. Official announcements (Central Federal Statistical Office in February 1982) state, however, that in 1981 national income dropped 1 to 2 percent, which means that the plans for 1982 are also to be amended accordingly. The drop in real income cannot be concealed any longer.

Proposals concerning modernization of the entire process of production made by advocates of "moderate reforms on the Hungarian pattern," such as Finance Minister Leopold Ler or planning chief Svatopluk Potac, could be realized only through large foreign credits, but in light of the deterrent Polish example Vasil Bilak dismissed this already at the Central Committee plenum of 1981, saying: Whoever becomes indebted to the West is like a Christian who sells his soul to the devil."

Self-criticism? Coming from those responsible for the current state of affairs it sounds implausible.

The only way out of the stagnation is reforms connected with dismantling the centralist bureaucratic system, with self-management of enterprises and industrial companies, as well as with freedom of thought and speech on the part of citizens, which is the only thing that could arouse their initiative again. But precisely that the regime cannot afford.

8790
CSO: 2300/52

UTILIZATION PROBLEMS OF FOREIGN LICENSES CRITICIZED

Prague ZAHRANICNI OBCHOD in Slovak No 9, 1982 pp 8-9

[Article by Jan Kozehuba: "License Utilization in the Slovak Socialist Republic"]

[Text] During the Fifth 5-Year Plan (1971-1975), Czechoslovak organizations purchased 192 licenses, 59 of which were purchased by Slovakia. This ratio and dynamic was also maintained in the Sixth 5-Year Plan. From 1975-1980, 291 passive licensing agreements were signed, 65 of which were purchased for the SSR.

As of 31 December 1981, the Czechoslovak State Bank showed 108 valid passive licensing agreements on the territory of the SSR (including the licenses of firms based in the SSR but belonging to federally managed sectors). Sixty-three of these agreements, or 58.3 percent of the total, relate to licenses belonging to organizations in nationally managed sectors. A majority of the licenses (71.5 percent) were purchased from nonsocialist countries.

The following overview shows the distribution of licensing agreements in Slovakia by sector:

Sector	Number of documented passive licensing agreements	Percentage of total in each sector
Federal Ministry of Metallurgy and Heavy Engineering	23	21.3
Federal Ministry of General Engineering	12	11.1
Federal Ministry of the Electro-technical Industry	9	8.3
SSR Ministry of Industry	28	25.9
SSR Ministry of Agriculture and Food	12	11.1

Sector (Cont)	Number of documented passive licensing agreements	Percentage of total in each sector
SSR Ministry of Construction	11	10.2
SSR Ministry of Health	7	6.5
Other	6	5.6

The implementation of licensed production in Slovak enterprises has had a number of positive consequences and effects:

--The technical and technological sophistication of products has increased substantially. This may be seen, for instance, at the Bratislava Slovnaft enterprises, the Senica Slovak Silk Mills, the Zilina Wood Industry Plants, Bratislava Hydrostav, Hydrostav, etc. This accelerated mastery of findings and knowledge on the basis of purchased licenses also stimulates domestic development and our own mastery of new products. This has been the case in granulated fertilizer production, ski production by the cassette method, etc.;

--Unique technical solutions to construction problems have been based on licenses. The Slovak National Uprising Bridge as well as the construction of several water works are examples of this;

--The increased technical and technological sophistication of production, in the final analysis, also manifests itself in a substantial increase in production efficiency. For instance, the use of a license for PEINER supporting frameworks has reduced labor input, expressed in standard hours, by one-third in comparison with traditional wooden scaffolding frameworks, and reduced the direct cost per cubic meter of surrounded space from Kcs 22 to Kcs 13.43. The application of a license has not only increased the stability and useful life of mining works, but also accelerated the pace of operations by some 30 percent over conventional techniques. At the Topolcany Elektrokarbon enterprise, capacity for "battery" carbon combustion has been increased by 20 percent for a given furnace volume. The production of machines for the cold forging of ball bearings has saved roughly 28,500 standard hours, labor productivity has increased about 185 percent, and production costs have decreased Kcs 1.1 million annually. The expansion of aluminum oxide production at the Slovak National Uprising factory at Ziar nad Hronom represents a new production technology which is to reduce electrical energy consumption 70 percent in comparison with the current sintering method, and reduce the average consumption of initial raw materials 17 percent, while simultaneously yielding better quality aluminum oxide;

--The licensed products which have been introduced create favorable conditions for improving the quality of management. For example, the outcome of the licensed production of Processograf has been an efficient system which monitors production, lost time and material consumption. The licensed

production of air-conditioning equipment at the Nove Mesto nad Vahom Vzduchotechnika plant is supporting the development in our country of computer technology, etc.;

--New products are being manufactured which are enriching the domestic market through their use values. The implementation of licenses in the field of chemistry, for example, is creating favorable preconditions and the requisite base for the development of the textile industry. Cosmetic products are also being produced which are very much sought after domestically as well as for export. POCLAIN TC45.1 self-propelled excavators with 32 types of accessories were included this past year in the first-quality category. PIELSTICK PA-4 six-cylinder engines are being exported to France under a cooperative agreement, and six-and eight-cylinder engines are being exported to the Soviet Union where they are installed in BELAZ heavy-duty trucks, etc.;

--the implementation in production of licenses which have been purchased also raises foreign-currency contributions to defray the Czechoslovak balance of payments. One example is the license for the production of polypropylene I and polypropylene III at the Bratislava Slovnaft enterprise. This is also true of all three currently implemented licenses at the Humenne Chemlon enterprise. Construction of the Zahorie III Combine requires the construction of a galvanized steel silo according to documentation purchased as part of a licensing agreement with a firm from the FRG. A similarly significant project is the production of Kerkoterm insulating tiles at the Kosice Ceramic Factories under an Austrian license.

Cases in which the implementation of a given licensed production process has resulted in the overfulfillment of the originally projected economic parameters, such as exports to nonsocialist countries, profitability, return on investment, and the like, may also be considered as contributions. The most significant instances of such overfulfillment of licensed product targets for 1980, for example, were in the preshrinking of textiles at the Ruzomberok V.I. Lenin Cotton Factories and in the production of polyethylene III at Bratislava Slovnaft. In chemistry, for instance, a mere five firms working on the basis of seven licenses managed to exceed the projected export volume of the licensed production by Kcs 382 million. A significant contribution to state foreign-currency operations was also obtained from the implementation of 12 licneses in the chemicals and foodstuff industry.

Despite the foregoing contributions stemming from the introduction and implementation of licensed production, there also exist certain problems and shortcomings which may be concisely stated as follows:

--sectors and the organizations they manage are not generating sufficient activity in the obtaining of the necessary licenses;

--an adequate level of integration between the plan for licenses and other plan components is lacking;

--the motivation for license procurement is often concentrated on, and priority given to, short-term requirements (for instance, the rapid

elimination of production bottlenecks) instead of long-range requirements justified from the public viewpoint;

--activity in entering into licensing agreements by the nationally managed sectors of the SSR has been relatively low. In 1980, for instance, only nine licenses were purchased by these sectors;

--a significant percentage of licenses are being purchased from nonsocialist countries. At present, the purchase and utilization of licenses offered by socialist countries has been at a relatively low level;

--many of the licenses purchased, especially those from nonsocialist countries, are too demanding in terms of creating the essential preconditions for their implementation (they are highly investment- and import-intensive in terms of raw materials, components such as machinery and equipment purchased mainly in nonsocialist countries for freely convertible currencies, making these imports highly foreign-currency intensive as well). As much as Kcs 13 of investment costs are incurred per koruna of license royalties, of which approximately half (Kcs 7.12) goes for the importing of machinery from nonsocialist states. The nationwide intensiveness figure is only half of this;

--in the nationally managed sectors of the SSR, the licenses which have been purchased and the contributions realized from them have been concentrated in too few enterprises (only for chemical enterprises). At the same time, moreover, the percentage of export-oriented products based on these licenses has been relatively low;

--the effectiveness of utilized licenses overall is lower than originally projected in the approved proposal (the projection based on a technical-economic analysis). This is evident from the fact that license-related costs subsequently grow even though the intended contributions are not realized. For example, for licenses purchased in the SSR from nonsocialist states for enterprises in federally managed sectors, even though raw materials imports from the nonsocialist states in 1980 were 154.5 percent of projections, the licensed-production targets were met at a very unfavorable level of 72.5 percent. This failure to fulfill licensed-production targets was concentrated mainly in the production of fast-cutting automated machinery at the Kosice Heavy Engineering Factories as well as at the licensed enterprises Dubnica Heavy Engineering Factories, Pohorela Strojsmalt, Topolcany Elektrokarbon, etc.

There are several reasons for this failure to fulfill licensed-production targets and to realize projected economic contributions:

--Inadequate design and construction preparedness. When this is also combined with an underestimation of technical difficulty, large shortfalls in licensed production arise due to the delayed startup of production and breakdowns which disrupt the smooth flow of operations. The resultant situation is similar to that of the implemented licenses at the Novaky W. Piecka Chemical Factories;

--The delayed startup of investment projects and thereby production facilities as well. The ethylene II project at Bratislava Slovnaft was delayed 23 months, the polyethylene II project 10 months, and the production of vinyl chloride at the Novaky W. Piecka Chemical Factories was begun 30 months behind schedule;

--Shortfalls in licensed production have occurred in recent years due to the protracted startup of licensed production. The situation in the production of PIELSTICK motors was influenced primarily by slow progress in the development of subcomponents of Czechoslovak manufacture (fuel-injection pumps at Jicin Motorpal, platinized pistons, crankshafts) and reduced possibilities for importing these components from nonsocialist states. Significant implementational problems also led to limitations in the licensed production of POCAAIN self-propelled excavators from the Martin Heavy Engineering Factories to the Dubnica Heavy Engineering Factories. The latter enterprise was not technologically prepared to handle the production which had been undertaken. At the same time, problems arose in supplier-consumer relations stemming from the failure to meet deliveries of hydrounits and speed governors from France, and the delayed fulfillment of deliveries of modifications to the RABA model from the People's Republic of Hungary;

--For licensed production that is heavily dependent on imported raw materials and components, the increasing prices on world markets have made the foreign currency resources allotted by a VHJ [economic production unit] for the purchase of these raw materials or components, within the framework of foreign-currency regulations, the limiting factor in determining realized production volume;

--One of the most serious problems and shortcomings is the lack of assured markets for licensed products already being manufactured. Such a situation occurred, for example, in the production of biaxially oriented polypropylene foil produced by the Svit Chemosvit national enterprise, due to a shortage of automatic packing machinery at domestic customers. A similar situation occurred previously with the licensed production of an antierosion emulsion from the LURMAN Co of the FRG. Shortcomings can also occur in instances where a licensed product is produced on time, or even ahead of the anticipating schedule, as was the case with the textile fiber license at the Senica Slovak Silk Mills. In this case, no domestic market had been assured for this production because of incompatibility with the facilities of the textile-processing industry. As a last resort, this production was exported at production costs that were roughly doubled, at the prevailing exchange rates.

The existence of these problems and shortcomings has meant that the effectiveness of implemented licensed production has been substantially lower than the original intentions, which often greatly reduces the magnitude of the anticipated positive impact of license purchases. The accelerated solution of representative problems and shortcomings in the application of licenses to our production environment can effectively contribute to an accelerated adaptation by the Czechoslovak economy to new, more demanding conditions.

Several measures have been adopted at various levels to increase the role of science and technology, including the purchase and utilization of foreign licenses.

Measures in the area of license procurement and utilization are primarily intended to:

--focus proposals on innovative products and technologies stemming mainly from long-range comprehensive programs and state target programs;

--create greater lead time for assuring the necessary construction and assembly work;

--adhere consistently to the established volumes and specifications of licensed products. To this end, a system for the systematic control and evaluation of licenses will be introduced.

To assure that these measures are carried out, the pertinent central organs and general directorates have set a fixed time period for the evaluation of the results achieved in license implementation, as well as of the economic incentives for senior managerial employees for the quality and timely preparation of proposals for the procurement and planned utilization of licenses (for instance, at the Ministry of Industry of the SSR, this was a matter of integrating this economic incentive into the bonus indicators for general directors).

The situation requires an accelerated increase in the operational efficiency of our national economy, and above all a strengthening in the function of the plan by improving the quality of its content, integrating more deeply the plan for scientific and technical development with the other parts of the plan, improving projection activity and the selection of appropriate decision making criteria. Economic tools, especially finance, prices and wages, must at the same time sppropriately support the fulfillment of the plan established in this fashion. And within the above management mechanism, licenses which have been purchased must be shifted to occupy a position more at the center of attention. At the same time, it is essential that licenses become an integral component in research and development planning as well as a more effective instrument for the efficient implementation of production.

The Czechoslovak State Bank has called attention to the following needs:

--the seeking out and support of suggestions for the advantageous procurement of licenses;

--the support of investment-related imports which will foster the achievemet of maximum effectiveness primarily by intensifying forms of these credits which return the maximum of foreign currency in conjunction with license implementation and cooperative agreements;

--the exertion of influence on the assurance of licensed production volume in plans of VHJ and organizations, the coverage of the requirements

of domestic customers, and the achievement of the necessary contributions in terms of the balance of payments;

--the support of licenses for the accelerated introduction of new consumer goods through the broader utilization of passive licenses in our production;

--the support of licenses which are not very import-intensive and which can make use primarily of domestic raw materials;

--in credit agreements, to condition the granting of credits on the fulfillment of obligations under licensing agreements;

--to make the consequences of a failure to fulfill projected levels of economic contribution more severe. This should be achieved through the application of credit, interest-rate and foreign-currency penalties.

Within the framework of the proposed Program of the Czechoslovak State Bank for the Assurance of the Resolutions of the 16th CPCZ Congress it is suggested with reference to passive licenses that foreign-currency-repayable forms of their remittance be implemented, and that licensed production be linked to cooperative agreements as a way to stretch out the remittance of license royalties, and of assuring their implementation through the marketing of the licensed production. It is also necessary to assure that there is agreement with the capital-investment plan in relation to the actual implementation of licensed and cooperative production.

Only through consistent pressure for a further increase in the efficiency of licensed production, the search for new techniques, forms and actual content, i.e., subjects of purchased licensing agreements, is it possible to utilize advantageously such progressive mechanism as passive licenses within the framework of state technical policy. The effects generated by the application of these licenses are, and always will, in the final analysis, depend on the work of all the interested organs and organizations in this area.

9276
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BASIC ASSETS MANAGEMENT PROBLEMS DISCUSSED

East Berlin PRESSE-INFORMATIONEN in German No 114, 28 Sep 82 pp 2-4, 8, 10

[Excerpts from a special report prepared by the Press Office, Chairman, GDR Council of Ministers, in cooperation with the State Planning Commission, various ministries, combines and institutes: "Answers to Questions on Basic Assets Management"]

[Excerpts] Why Do We Focus So Heavily on Better Utilization of Basic Assets?

A crucial task we must accomplish to increase our national income is to increase the average resources, continuously to improve the input-output ratio. As Erich Honecker emphasized at the fourth session of the SED Central Committee, this goes above all for the utilization of basic assets.

In the past few years, the material-technical foundation of our national economy has continuously been improved, consolidated and modernized--a process that is inseparably linked with the acceleration of scientific-technical progress. Regarding the national economy as a whole, we presently have at our disposal M 750 billion worth of basic assets. At the end of 1981, the basic assets in the industrial, construction and transportation sectors totaled M 413 billion.

One-third of the basic assets of the industrial sector is no older than 5 years, and over 50 percent, no older than 10 years. Consequently, many workers are presently operating highly productive machines and installations. Quite a few of these installations cost half a million marks and more and on average the industrial sector has M 100,000 worth of basic assets per worker.

In view of this great increase in basic assets over the last few years, everyone will realize that the key economic problems must be solved primarily through better utilization of the available resources rather than through further expansion based on new investments. After all, these tremendous assets are used for no more than 15.1 hours per calendar day; we aim to increase this utilization rate to 16-17 hours by 1985. If we were able to extend the use of our production facilities by just 10 minutes per day, we would increase the industrial commodity output by M 4.5 billion per year.

Thus the objective is to obtain a steadily increasing social product, while maintaining or actually reducing the input of basic assets. Karl Marx pointed out that through improved economy of the stock of basic assets simple reproduction can become a source of accumulation.

There is another consideration that is of great significance for the implementation of our proven policy aimed at securing the unity of economic policy and social policy. In the national economy, the stock of basic assets increased in 1981 by 4.9 percent, but labor productivity increased by a mere 4.4 percent. At the fourth session of the SED Central Committee, Erich Honecker stated that comparison of these two figures makes it "obvious that here the trend must be reversed. So the increase in labor productivity must exceed that of the stock of basic assets."

If we succeed in markedly reducing the great differences between the individual branches and the individual combines, the industrial sector will attain the correct developmental ratio between stock of basic assets and labor productivity. Erich Honecker emphasized that "in this way we could attain a higher rate of production with reduced investment." This includes painstaking service, systematic maintenance and reconstruction and modernization of the basic assets.

Full utilization of all available assets, including basic assets, is an important force for increasing the rate of production and at the same time it is the least costly source. By improving work organization and the rate of utilization--and this is of great importance for economic efficiency--we will be able by 1985 to produce with M 1,000 of basic assets M 368 worth of national income as against M 350 in 1980.

What Do We Mean By Intensively Expanded Reproduction of Our Basic Assets?

The term reproduction of basic assets denotes the creation, utilization, maintenance, modernization and elimination of basic assets. Intensive reproduction requires above all a more effective utilization of the available basic assets. In view of the level of basic assets attained in our country--the industrial sector has M 100,000 worth of basic assets per worker--this is the course to be pursued in the interest of a more favorable input-output ratio.

To this end, there are a number of different, interconnected approaches. A promising course is increased utilization of the basic assets, above all of highly productive machines and installations, through extended use, i.e. primarily through extension of the multishift system. At present, these machines are used for an average of 15.1 hours per calendar day, but there are great differences within and between the individual combines. One must also consider the extended availability resulting from systematic maintenance.

Full utilization of each machine and prevention of downtime caused by breakdowns and shortcomings in production organization--this enables us to extend the use of basic assets.

Besides, there are many ways of extending the service life of machines and equipment through good maintenance. One of the best ways of improving efficiency is the general overhaul. An example from the "Schwarze Pumpe" [Black Pump] Gas Combine VEB is a convincing illustration. This year, the combine is trying for the first time to rebuild within 8 months a battery of four generators by means of general overhaul; in this process, it is taking advantage of new scientific-technical findings. The rate of utilization will rise and the specific natural gas output will be increased. The recovery rate of the capital expended amounts to 2.4 years.

At the seminar the SED Central Committee held with the general directors of the Leipzig combines, Guenter Mittag stated: "Any effort that aims to raise the efficiency of the available basic assets through technical improvements and increased shift utilization is 10 times as effective as any expansion of the assets through investments. So we have good reason to do away with all residues of an ideology that assumes that every productivity increase requires new investments and at the same time elimination of so-called obsolete basic assets."

Thus, regarding the reproduction of basic assets, improvement of the efficiency of available basic assets is of great importance. Even automation does not call for complete replacement of the machinery at hand. As is shown by the installation of microelectronics, the combination with robots, etc., a proven method in this regard is the so-called supplementary automation of available machines and equipment.

We must increasingly make use of simple reproduction, i.e. renovation, modernization and reconstruction, as a source of expanded reproduction. Any complementation, any application of an innovation increases efficiency. The machine or installation thus becomes more productive and profitable.

Modernization of the Available Technology--A Promising Course Toward Automation of Production Processes and Toward Improvement of the Working and Living Conditions

Karl Marx in his time pointed out that in most machines "only very few parts are subject to such wear and tear that they must be replaced after 5 to 6 years." If "the basic principle of the machine has not been made obsolete by new inventions," the worn-out parts could be restored rather easily. This alone shows that careless elimination of basic assets cannot be justified economically or technically. So there is no valid justification for the still widespread view that increases in efficiency and productivity are attainable only through expansion of basic assets, i.e. that they require investment. For this reason, Willi Stoph emphasized at the 10th SED Congress: "The constant renovation, modernization and reconstruction of the basic assets must be given absolute priority in the allocation of investments."

Thus today automation does not mean total replacement of the available machinery. Increasingly, automation is accomplished through integration of old machines and equipment that are restored by means of general overhaul and at the same time modernized through installation of specific mechanization and automation modules. The modernization of the production equipment is inseparably linked with the most extensive employment of microelectronics and with the use of industrial robots: conventional machine tools are being equipped with digital control systems, loading and unloading devices, linear measuring systems and other modules. The objective is to insure--by equipping the machines and installations with tool and material storage units and linkage systems--that the modernized production equipment can be employed in integrated, specialized production lines, thus enabling us to automate entire production sectors.

The restoration and modernization of the machines must be accompanied by improvement of the workers' working and living conditions and by attainment of a higher level of utilization. The plan stipulates that by 1985 the highly productive technical equipment be operated for at least 17 hours per calendar day. By developing specialized techniques and by making available specific parts and units, the producer firms must support the type-specific modification of production equipment.

In the mechanization and automation of technological processes, conversion and breakup are key approaches. On the basis of analyses undertaken by the Zwickau Research Center for Conversion Processes, it is planned to increase the productivity of most of the GDR's 18,500 presses by means of auxiliary devices such as transfer units and gripper systems. The resultant continuous-production process will effect productivity increases of 300-500 percent and significant energy savings. The working conditions of the working people will be improved considerably and heavy manual labor will be eliminated.

Another example of the modernization of available production equipment is the supply robot for timed laundry installations that was developed by a youth collective of the Karl-Marx-Stadt "Textima" Combine. This robot can be used in all large-scale laundry installations. Under the three-shift system, the robot releases six workers and through automation eliminates the heavy physical labor involved in loading the washing machines.

In regard to the modernization of available production equipment, the combines' maintenance and rationalization equipment departments bear great responsibility. In this regard, it is necessary to take greater advantage of regional rationalization, above all through the labor-sharing production of construction units and through supra-plant maintenance collectives.

Why Does Our Investment Policy Focus Above All on Progressive, Highly Economical Technologies?

Attainment of a favorable input-output ratio depends above all on the technological level of production. In the 1980's, we must introduce new standards in our investment policy. Thus one of the most important tasks is through systematic allocation of the investment capital to modernize the available production capacities so as better to utilize the basic assets. In the report on the Directive of the 10th SED Congress, Willi Stoph stated that this will be feasible only if the investments "are concentrated on the comprehensive economical utilization of those research and development results that are of crucial significance for the development of a highly effective economic structure. To be able to tap efficiency reserves on the economically requisite scale, the investments must be based on the progressive technological solutions."

In the first 6 months of 1982, 15 percent of the industrial investment volume was allocated to fields such as microelectronics, robotics, and raw material refinement. This established the basis for raising the technical and technological level of production--above all through automation of entire production processes--and for improving the input-output ratio. The projects put in operation during this period included capacities for the refinement of energy sources and raw and secondary materials such as the Konti wire mill train in the Brandenburg Steel and Rolling Mill VEB; capacities for the refinement of synthetic fibers in the Pirna United Cellulose Works VEB and for the refinement of polyester silk granulate in the Guben "Herbert Warnke" Synthetic Fiber Works VEB; capacities for the production of microelectronics and electrical engineering products, and other capacities.

Once a progressive technology becomes part of the production process, it must enable the combines to produce--through their own scientific-technical advances--top-grade, internationally competitive products. In comparison with other

technologies, the progressive technology is characterized by the fact that the raw materials are highly refined and that the specific material input is significantly reduced. The progressive technology saves labor and releases workers for other activities. Ultimately, such technologies help to reduce investment and they further the intensively expanded reproduction.

The economically significant scientific-technical advances that were introduced into the production process in the first 6 months of this year include the process for crucible-free drawing of large-diameter silicon crystals, another process for reducing the fuel-heat consumption in the production of electric energy, and the energy- and water-saving refinement processes in the textile industry. New processes and a higher level of technology necessitate increased use of special equipment, industrial robots, and process engineering. In the Textima Combine VEB, the workers are aided above all by their own centralized department for rationalization equipment construction. This year, for example, a centralized, continuous-production plant for friction-welded parts was put in operation. This plant welds rotation-symmetrical parts of diverse diameters, maintaining a high level of productivity and material economy; the process effects savings of 150 tons of rolled steel and 8,000 hours of working time per year.

In the machine tool building industry, this is especially evident in the transition from the manually operated, digitally controlled machine to the production cell requiring little control or supervision. Here the development proceeded from the digitally controlled, automatic machine tool via the tool-changing machining center to the production cell, where other functions--e.g. measurement and modification of the machining figures--are automated. In comparison with manually operated, digitally controlled machines, the setting-up and operation costs are reduced to approximately 30 percent. An advantageous feature of this setup is that the day shift can be used for filling the storage units and resetting the production cell for new articles so that the night shift requires no supervision.

Robot Technology Improves Utilization of Basic Assets

Large-scale application of robotics represents one of the most effective ways of improving labor productivity and increasing the rate of utilization of basic assets. At present, as many as 16,500 robots are in operation in our national economy. Like the microelectronic control systems employed in the course of technological reorganization of production sectors and sections, they were one of the factors in the utilization of scientific-technical findings that helped effect in the first 6 months of 1982 savings of 235 million hours of working time in our national economy. This is the equivalent of the working capacity of over 250,000 workers in this period.

The industrial robots are economically most effective in those areas where their use is combined with technological reorganization and rationalization of entire production sectors. In this way, robot technology becomes an instrument of modernization. If the use of industrial robots is combined with technological and work organization-related rationalization measures and extensive use of the available equipment, it is possible to streamline the production process and at the same time improve the working conditions. A telling example in this regard is provided by the Berlin Heating Appliances and Apparatus Works VEB: By means of an assembly line installed by the firm, it was possible to automate the production of the

Gamat 461 gas heaters. For this process, the plant set up a heater welding line, which comprises 5 supply robots and 5 welding robots, thus releasing 30 workers and saving 55,000 hours of working time.

However, this approach is economically profitable only if such production sections and plants are utilized in at least three work shifts. This greatly helps to reduce the recovery rate of the investment capital expended. One of the premises underlying such a setup is that on average each robot must release at least 2.5 workers.

Robot technology paves the way for automated operation requiring little supervision: Robots, microelectronic modules, measuring, test and control devices relieve man of operating, measuring and supervisory functions. This low-supervision production process is accompanied by significant increases in labor productivity.

At the seminar the SED Central Committee held with the general directors of the combines, Guenter Mittag pointed out that robot technology is becoming the most effective way of automating entire technological processes "in that available installations are raised to a totally new productivity level, the production processes are made continuous and at the same time flexible and the continuous three-shift system becomes feasible and necessary."

How Can We Reduce Downtime?

Downtime is caused by a variety of factors. Since most of these factors can be changed, they must not simply be accepted. These factors include waiting time and production stoppage, unpaid leave granted to workers, absenteeism and sick leave. Reducing the incidence of these factors is equivalent to improving economic efficiency. Thus thorough analysis is of great significance in all enterprises. One thing is obvious: Full utilization of working time is to a large extent dependent on consistent, continuity-oriented management in the combine or enterprise.

A manager is good if he or she organizes the production process in such a way that orders are filled one after the other without any unnecessary breaks, i.e. if intra-plant cooperation functions well, materials are supplied on time and the machines are in good working order at all times. Under such conditions, the collective can productively utilize the working time available and this in turn has a great effect on work discipline.

However, the material-technical conditions and the work and production organization are by no means the only concern. The WAO [not further identified] studies have proved very helpful in this respect. The work requirements are another key factor. Analyses have shown: In those work collectives where the work is interesting, varied and intellectually demanding, absenteeism due to illness is lower than in the collectives with less exacting requirements.

We have not nearly tapped all reserves for reducing the losses resulting from this. Between comparable enterprises and combines, there are striking differences that cannot objectively be justified. At the fourth session of the SED Central Committee, Erich Honecker pointed out that the downtime share of the working time fund (8.1 percent in 1981) is too high. Whereas the downtime caused by illness dropped to the lowest level since 1974, there was an increase in waiting time, production

stoppages, and absenteeism. The 1981 losses equaled the annual working time of 15,000 production workers.

The progress made in reducing absenteeism due to illness is based above all on the closer cooperation between the enterprise managements and the health organizations, on the improvement of preventive health care, on the elimination of poor working conditions and on the improvement of work safety. It has again been shown that society benefits when we avail ourselves of the advantages of socialism.

In the Schwedt Petrochemical Combine VEB, the workers have to undergo fitness tests on a regular basis. Every 4 weeks, the social workers of the combine enterprises meet with representatives of the enterprise health care system; they also invite to these conferences the leaders of collectives showing a high incidence of illness. In close cooperation, these experts analyze the causes and initiate measures to eliminate them. In the combine, there are several collectives that have been working for a long time without any accidents; one of these collectives is the "8 May" Brigade that has not recorded a single work-related accident for 15 years.

Likewise, in the Neubrandenburg Food Production Equipment VEB the drop-in health care for shift workers, the protective vaccinations and similar measures are as much an everyday routine as the close cooperation between the technical director and the head of the enterprise health service. If a particular worker's state of health is not quite satisfactory, the physician, the state director and the safety inspector jointly arrange for a less stressful work place for the person concerned. The lectures on work safety are complemented by practical demonstrations; they are informative and that they are very effective is evident from the reduction in work-related accidents during the first 6 months of 1982.

Prudent management, order and discipline have proved effective instruments for improving the utilization of working time. Open and honest discussion of grievances and nontoleration of negligence are proven means of persuasion aimed at increasing output.

How Can the Agricultural Sector Improve the Utilization of Basic Assets?

In the last 10 years, the stock of basic assets in socialist agriculture increased by over 180 percent. At present, the stock of basic assets per cooperative farmer and worker equals the average for the national economy as a whole. Thus in agriculture, too, improved utilization of basic assets is one of the most important reserves and tasks in regard to further improvement of performance.

At the 12th GDR Farmers' Congress, it was emphasized that in agriculture, too, intensification of rationalization is one of the most effective measures toward more efficient use of basic assets, further reduction of production input and a larger contribution to the national income. To accomplish this, it is necessary to increase crop production, especially in regard to concentrate and protein feed crops, to reduce losses of all kinds and to insure a high level of livestock production by means of home-grown feedstuffs. To this end, we must better utilize all available resources--soil, all types of fertilizer, technology, soil improvement and construction installations and--last but not least, livestock.

The increasingly close cooperation between the LPG and the Crop and Livestock Production VEG is of special importance for an improved utilization of basic assets. The 1982 harvest operations have shown that significant progress has been made in this regard. A promising approach has been to increase the utility of the technical equipment by improving certain details in the course of repairs, i.e. gradually to introduce scientific-technical innovations, to use the equipment over several work shifts and to extend its service life. Use of equipment aggregates and full utilization of the engine power on all jobs to be done are likewise helpful in this respect.

In the interest of efficient use, service and maintenance of the equipment, more shelters and maintenance stations have been built and the production of rationalization equipment has rapidly been increased. This goes also for the production and employment of robots. Through the gradual introduction of microelectronics, robotics and electronic data processing, the agricultural sector opens up reserves for an improved utilization of basic assets.

After the 12th Farmers' Congress, the most efficient ways of rebuilding small and medium-sized stables have been published in a rationalization catalog. The catalog now is available to all LPG and VEG interested in a more efficient utilization of their assets.

On the basis of scientific-technological progress, all these methods of improving the rate of utilization of basic assets lead to increased production and efficiency. Most importantly, this also insures reproduction of the cooperatives' property.

Do Order, Safety and Discipline Contribute to Satisfactory Utilization of Basic Assets?

To increase the efficiency of the presently available machines, equipment and installations, it is necessary to insure safe production conditions and a high degree of technological discipline. In the past few years, the stock of basic assets in our national economy increased to M 750 billion. Approximately 50 percent of the machines installed between 1976 and 1981 are fully or partially automated and thus highly productive. Moreover, economic processes are becoming more and more closely interconnected. For these reasons, process disruptions, equipment damage and downtime have an increasingly negative effect on our national economy. Consequently, in each enterprise and each work collective, plan fulfillment through efficient utilization of basic assets must be combined with strict discipline, order and safety.

In the progressive combines and enterprises, this task is already being carried out. In Cottbus Bezirk [GDR administrative unit], for example, the workers in the open-pit mines, briquette works and power plants and in the chemical industry are competing to attain the "zero disruption rate." The objective is to reduce the disruption factors and thus to attain efficient use of working time and a higher rate of utilization of the basic assets.

Equally important in regard to improved performance, productivity and efficiency are the commitments of approximately 90 percent of all the collectives participating in the socialist competition. Here the objective is to fulfill and exceed the ambitious plan targets without accidents or breakdowns. What can be achieved in

this respect is shown by the fact that in 1981 the number of work-related accidents per 1,000 working people dropped to 28.5 as compared to 33.0 in 1975.

There are still too many breakdowns, fires and disruptions. They endanger lives, reduce the efficiency of the basic assets and inflict considerable losses on our national economy: several hundred million marks per year. Not infrequently, they are caused by poor management and seemingly insignificant violations of legal regulations:

In Dresden Bezirk, inattentiveness on the part of a superintendent of the German Railroad caused a collision between a freight train and a locomotive. Both engine drivers suffered considerable injuries. The damage to the locomotives and the freight cars totaled M 850,000. In Karl-Marx-Stadt Bezirk, a glass-producing plant was forced temporarily to shut down, because excavators had damaged a natural gas pipe. The accident occurred, because the construction supervisor had not thoroughly studied the layout of the utility lines.

Analyses have shown that many fires, breakdowns and disruptions are caused by human error. If supervisors neglect their duties, if the work requirements are not well defined and if the persons concerned do not know the pertinent legal regulations, there arises a work atmosphere that makes for breakdowns.

Thus order, safety and discipline are of great importance in regard to the utilization of basic assets. For this reason, all supervisors must assume full personal responsibility for these tasks and every collective taking part in the competition must strictly observe the health, work, fire safety and technical regulations and they must call to account those who tolerate shortcomings. In the event of breakdowns or disruptions, it is necessary to uncover the causes and to initiate measures precluding recurrence of the trouble.

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CONFERENCE ON CEMA COOPERATION PROMPTS EXAMINATION OF RECORD

Budapest FIGYELO in Hungarian 28 Oct 82 p 10

Efficiency of Specialization Viewed

[Article by "mj": "Efficiency of International Production Specialization in CEMA"]

[Text] Thus far the relationship of those participating in international specialization and cooperation within the framework of CEMA has been regulated primarily at the macro-level--by central plan offices and branch organs. In the course of the production and commercial exchange of specialized products the enterprises have not really come into direct contact with one another. The direct cooperation of enterprises has been limited to at most small batches of export products or the manufacture of individual items.

Thus interstate links and links between enterprises, basically a process presuming mutual interdependence, have developed independently of one another, which did not aid an improvement in the technical and quality parameters of the specialized products or the efficiency of their manufacture. Consequently, this did not noticeably influence the acceleration of scientific-technical progress. The more developed the specialization or cooperation within a branch in one country the more favorable are the possibilities for increasing specialization at the international level and the better the conditions for an acceleration of scientific-technical progress.

The VOPROSI EKONOMIKI mentions the Hungarian factory industy as a good example where the necessary conditions have developed in a number of areas of actively linking into the international division of labor. Here the ratio of the export of specialized products within total machine industry export was 50.6 percent in 1978. This ratio was 65.3 percent in the manufacture of transportation equipment, 49.8 percent in tractor and agricultural machine manufacture and 11.7 percent in energetics and electrotechnical machine manufacture.

According to the calculations of S. Heyman labor productivity in specialized factories with specialized scientific research institutes the development offices is 20 percent higher and the return on investments is 25 percent faster. Thus the essence of manufacturing specialization lies in the development of a network of enterprises with narrow profiles specialized for the manufacture of a limited list of products and in the creation of optimal manufacturing series.

This is supported by the calculations of Czechoslovak economists according to whom material expenditures are reduced by 24 percent, wage expenditures are reduced by 91.5 percent, labor demand (in norm hours) is reduced by 89.5 percent and total production costs are reduced by 58.2 percent with parts and subassembly specialization and concentration in series manufacture.

The efficiency of specialization can be increased considerably by virtue of product and parts manufacturing specialization and technological specialization. One means for this is the so-called functionsl manufacturing specialization developed in recent years. Here one builds up a network of enterprises with narrow profiles which manufacture uniform functional subassemblies from which the chief enterprise make the most varied basic machines.

In the economies of a number of member countries one can still find the mistake of developing material-demanding production structures which cannot be satisfied from the natural resources of the country itself and of a forced expansion of the product structure. Experience shows that the economy of the CEMA countries can develop efficiently only if they can supplement one another in a many-sided way by making more profound their international production specialization and cooperation. This means that individual countries should reduce or completely eliminate the manufacture of certain products in order to concentrate manpower and investment assets on those areas where the natural and climate conditions and raw material supply are most favorable.

Certain steps in this direction have been taken already. Hungary and Bulgaria have stopped production of complete technological equipment for the manufacture of sulfuric, phosphoric and nitric acid, of drilling equipment and of paper and cardboard manufacturing equipment. In the past 5 year plan period Hungary ceased manufacture of about 27 products. Czechoslovakia wants to limit or eliminate production of petroleum and gas extraction equipment, grain combines, caterpillar tractors, bulldozers, metro cars and a few agricultural machines.

The production specialization activity of the countires will not in itself increase the concentration of production. This will be realized only if production is concentrated at concretely specialized enterprises.

When preparing concrete proposals for international specialization it is of great significance, in addition to a long-range developmental trends of the given branch of industry, to determine that sphere of industrial enterprises at which the manufacturing conditions for the specialized products are most favorable.

CEMA Cooperation Among Enterprises

[Budapest FIGYELO in Hungarian 28 Oct 82 p 10]

[Article by Kalman Pecsi: "Cooperation of Enterprises"]

[Text] The question of developing contacts among enterprises is nothing new. It was first initiated by the 1962 conference of party and government leaders of CEMA countries and in 1971 the Complex Program prescribed the development of micro-level contacts.

But many questions are still unclear in regard to the development of direct contacts. The most important of these are:

--is the joint property of a national or international character;

--do national or, to a certian extent, international mechanism elements regulate contacts among enterprises;

--to what extent can the enterprises participaing in the contacts operate in an autonomous way;

--monetary-financial questions (establishing rates of exchange, use of convertible currencies, how profit is generated, internal and foreign price aspects, taxation and related property law problems, etc.);

--the institutaional forms for contacts and their relationship to functioning CEMA organs.

The things listed represent the conditions necessary for the development of contacts and for the functioning of international forms of undertakings.

The Theory is Lacking

An analysis of the economic environment shows that the internal national mechanisms regulating the functioning of enterprises plan export-import deals and the intermediate and final results of management activity in detail. It follows from this that within the national economies the enterprises meet the quantitative and efficiency requirements set for them, varying from country to country, in a situation free of risk and conflict.

According to the present international mechanism the regulation of economic contacts between countries takes place at the macro-level, and little opportunity remains for building up micro-level economic contacts. Due to the economic tensions now probable for the middle range it is to be feared that the several governments will not be able to make available the resources needed to develop contacts, because even in a favorable case these will result in the expected efficiency only in a middle or long range perspective.

The backwardness of theory is not helping common action. We lack a common debate about fundamental economic categories such as, for example, international socialist production relationships, the functioning of commodity and financial relationships on the regional CEMA market, macro- and micro-integration, the problem of international socialist property and the mutual link between property forms of countries with different social systems, etc. Clarifying these things would be timely because significant experience has been accumulated already in creating contacts between the enterprises of various countries.

The enterprises of the CEMA countries have established direct contacts most successfully in third countries, with local firms. By the beginning of the 1980's the number of these had reached about 600. This is followed by direct cooperation forms between enterprises organized by government committees for multilateral cooperation such as, for example, exchanges of experiences, study trips, exchange of experts, etc. Other forms of contacts established thus far have shown little success.

During the past 10 years the budgetary financing of international coordination and management organizations of CEMA has not been transformed successfully into self-accounting financing.

A New Approach

The most important lesson of the success of direct contacts and forms of undertakings on the markets of third countries, with the firms thereof, is that interest in forming them exists at both the macro- and micro-level; the efficiency of the joint activity can be measured unambiguously in convertible exchange. A deficit leads to ending the contacts; the economic environment prescribes an increase in competitiveness as a commanding necessity.

A new approach to the development of contacts between enterprises makes necessary a clear determination of the economic content of cooperation, a precise accounting of assets flow and of profit.

We should distinguish between two types of contacts among enterprises--straight and direct. Both come into being to achieve definite natural and economic goals. In addition to internal and external monetary and financial aspects the economic goals usually involve trade policy goals (increasing marketing security and competitiveness) for both the countries and the enterprises. To a significant extent these influence the achievement of natural goals as well as the domestic financial conditions (profit and premiums for leading workers) and the external exchange and financialconditions (export and import prices, credit or productive capital use).

By straight contacts we mean non-economic (exchange of experiences), economic and production contacts between enterprises organized at the level of macro-guidance and based on mutual interests appearing at this level. The most successful forms of this so far have been exchanges of experiences between countries and enterprises. Going beyond interest at the macro-level, the effectiveness of these also depends on enterprise interest, which is motivated primarily by the internal economic mechanism. According to the professional literature--and this is supported by practice also--the enterprises are not sufficiently interested in technical-scientific innovation, in improving quality or even in handing over or taking over outstanding production or economic methods, neither within a country or between countries.

By direct contacts we mean independently established economic activity based on mutual interest relationships which is based on combining various forms of resources and achieving quantitative and qualitative economic goals, within the frameworks of national management regulation.

Conditions

The interest of the enterprises and the forms for combining resources could be of various types. The economic goal would be efficiency appearing in various measures of profit. Achieving the goal has various uncertainty factors. For example, it will depend on what control the enterprise handing over resources has in regard to the efficiency of use. It depends on the economic policy

measures being implemented in the several countries and on the economic environment. The receiving country has control over the generation of profit with monetary and financial tools, by the possibilities for transferring profit, by distributing investments, by taxation measures, etc. So questions connected with the economic and political weight of the participants play an important role in direct contacts coming into being at the independent initiative of the enterprises. Because of all this, when establishing direct contacts between enterprises, one must always examine the movement of natural and financial resources as a function of controllability, efficiency and risk.

We have not created the economic and legal preconditions necessary for the normal functioning of straight or direct contacts; we have not carried out the prescriptions of the Complex Program pertaining to this. Taking this into consideration one can recommend the creation of new forms only with a high degree of caution and it will be useful to create only those forms for the functioning of which the preconditions already exist.

Every sign indicates that political and economic measures are needed. The political measures should encourage the creation of contacts primarily within the internal economy. The economic measures, on the other hand, should result in modifications of the national and international mechanisms which will ensure interest at the macro- and micro-level, the necessary efficiency of assets movement and the possibility of a precise and unambiguous accounting of results.

The most complex question is how to create the economic preconditions. At present one can develop these contacts only by taking into consideration certain limiting factors of a general character. Contacts also depend on the creation of economic and legal preconditions for planning.

District Cooperation Among Consumers Encouraged

[Budapest FIGYELO in Hungarian 28 Oct 82 pp 10, 11]

[Article by Annamaria Inzelt: "CEMA, Institutional Forms for Direct Contacts, How the Experts See It"]

[Text] The World Economy Research and Economic Sciences Institute of the Hungarian Academy of Sciences and the CEMA International Institute for Economic and Guidance Problems of the socialist World System held a conference in Sopron on direct contacts between the enterprises, associations, authorities and ministries of CEMA countries and on the monetary-financial, foreign trade and legal conditions for the creation and development of them. The debate initiating address was given by Kalman Pecsi.

The integration process of the economies of the socialist countries has entered a new phase. The participants at the Sopron conference agreed that direct contacts between economic organizations and creating the necessary preconditions for them were extraordinarily important and timely tasks from the viewpoint of every member country and the community as a whole, tasks which must be solved within the framework of the CEMA Complex Program. It cannot be said, however, that they succeeded in coming to uniform conclusions in connection with the method of solution. According to the opinion of a number of participants it would be necessary to work out a common economic policy model in order to create the conditions for direct contacts. On the basis of this the national

mechanisms could come closer together and monetary and financial contacts serving this could come into being. The differing levels of economic development of the CEMA member countries make necessary step by step changes in the mechanisms of the several countries, changes which will ensure gradual integration.

A colleague from our journal put the same questions to three participants in the conference: Oleg Dimitriyevich Bakovetskiy, a chief scientific worker in the socialist world economy institute of the Academy of Science of the Soviet Union; Ladislav Rusmich, a leading researcher in the finance and financial systems scientific research institute working with the Czechoslovak Ministry of Finance; and Zoltan Gasztonyi, director of the AGROMAS International Association.

[Question] Do the present economic difficulties of the member countries increase or moderate interest in expanding and deepening integration?

O. B.: Basically the problem arising in the CEMA member countries are interdependent with conversion to the new economic development model, with the intensification of production processes. It is primarily a development of internal economic processes which can aid a solution, but the functioning of the economics can become more efficient only with the unfolding of the integration process. At present--unfortunately, or perhaps luckily--there are no possibilities for cooperation like those of the early 1970's when Soviet deliveries of raw materials and energy were expanding and the processing industry products of the CEMA member countries enjoyed an advantage. I believe we have reached a boundary, but one where we can forward by improving the efficiency of the production processes and by ever better exploitation of the machine industry cooperation possibilities. This is important, because every socialist country is struggling with a shortage of investment assets.

L. R.: The present economic circumstances increase the objective interest in creating socialist integration. A few new measures are needed for its realization. For example, as was noted a number of times in the debate at the conference, we need a currency which is freely convertible. The absence of this is one of the brakes on cooperation at present.

Z. G.: More efficient forms of cooperation again came on the agenda at the debates in connection with the functioning of AGROMAS. For example, how to increase the interest of the member countries and their enterprises so that they would be able to counterbalance the present economic problems with new possibiltie is not used thus far. One of the chief problems is that we are ordering fewer than necessary agricultural machines from one another. Within the Association, as at the present conference, one of the important proposals is to expand direct contractual contracts between enterprises.

[Question] In what direction do you think the CEMA mechanism can be developed?

O. B.: First, before all else, the CEMA member countries must agree in their economic policies on those elements connected with cooperation. Second, the development of direct contacts, with which the present conference dealt also. Third, expanding enterprise cooperation, creating new, efficient forms of cooperation. Realization of this process will require possibilties for more active use of commodity and financial relationships, rates of exchange and forms

of credit. Joint planning must serve this, but more active cooperation is needed in developing price formation, the transferable ruble and forms of multilateral cooperation. If we solve these things then we can talk about a new phase of integration. We need a real collective currency which will fill the function of money as described by Marx. Naturally, the development of CEMA production cooperation requires not only a more perfect money, it also requires a more active price formation policy for this could be a great stimulus to cooperation and specialization.

L. R.: I would start from a conception of the 26th congress of the CPSU pertaining to the development of socialism according to which we must exploit every economic law together and not let one law suppress another. I think that in the period before us the lack of influence of the law of value may lead to a rigidification of the old structure. In connection with the development of integration, we must solve economic problems in accordance with the economic laws, taking into consideration the mutual effect of every law. In this way we will find that what is advantageous to one state or to several enterprises will be advantageous at the same time to the other state or to the cooperating enterprises. This will require, in the process of integration, the coordination of economic interests, beginning with the enterprise, through the state, to the community of socialist countries. In my opinion we need to modernize and coordinate the national mechanisms. If the mechanisms do not change then they cannot be coordinated. This also is a precondition for the development of the international mechanism.

Z. G.: From the macro-economic viewpoint I consider the creation of a common currency to be the fundamental problem to be solved. This is the base to which are linked the modernization of the price system, the price level, putting the price formation mechanism on a realistic basis, etc. The present practice of trying to balance the bilateral balances, which I expereince in the course of my everyday work, causes great damage to cooperation. Because of this, the realization of the multilateral plans prepared at AGROMAS takes place, in the final analysis, in bilateral plans, and this narrows the marketing and/or acquisition possibilities. In the absence of a common currency we usually sell less or satisfy fewer needs than the supply or demand would permit.

[Question] In what areas do you consider joint planning important--this not being the same as the practice of plan harmonization?

L. R.: It is very important, as a goal, to supplement the integration of planning with the integration of economic policy. We must coordinate not only the plans, the quantitative and value prescriptions, but also those tools with which the state ensures the interest of the enterprises in the integration process. Plan harmonization takes place even at present, but real integration will appear in the coordination of economic policies and tools. This may help the individual countries to have a balanced balance of payments. Naturally this does not mean that one country should have a balanced balance of payments with another, but rather that each country, as a whole, should have a balanced balance of payments. We must coordinate the means to this end, for example, the real rates of exchange for the currencies of the countries, the operating conditions of the enterprises, conditions for access to the markets of other countries, etc.

Z. G.: At AGROMAS joint planning begins with working out long-range forecasts. We survey the capacity development ideas of the factories manufacturing agricultural machines and the expected changes in the needs of users. On the basis of this we prepare a plan conception for AGROMAS which, according to present practice, becomes an action program during the bilateral plan coordination of the countries.

[Question] Given the present financial and credit relationships of the CEMA countries, to what extent can direct contacts between branches of industry or between enterprises be created?

O.B.: Certainly one necessary international condition for the development of direct contacts is the perfection of the transferable ruble. One cannot imagine intensive development without direct contacts. Expanding the integration process may create direct contacts in the microsphere. This will require a change in the structure of the national and international mechanisms, primarily a modification of those elements which have an effect on integration. There is need, however, for the direct contacts to become general. This, however, is very difficult now because at present the Soviet, Hungarian, Bulgarian, GDR, etc. enterprises work according to different systems. At present in the Soviet Union, for example, there are no joint enterprises established with the enterprises of CEMA countries, but the Soviet Union has established joint enterprises with Mongolian enterprises in Mongolia, in the extraction industry and in rail transportation. Cooperative projects have been established with a number of enterprises, which have brought great achievements in joint development and in increasing series sizes. But improving the effectiveness of this awaits solution. For example, dividing up the profits of these enterprises, creating joint incentive funds, establishing a joint technical development fund, ensuring a common currency fund, etc. We have a lot to do to work out these things.

L. R.: At present only those direct contacts come into being which have been thought out by central organs and given to the enterprises as a task. And the enterprises "wait for" the tasks. The integration process of the intensive phase requires a creation of a possibility for establishing direct contacts which the enterprises can initiate too. In reality we will have economic integration only when cooperation with the enterprises of other countries is an indispensable necessity and is in the interest of the enterprises themselves. It is very important that integration come into being not only at the macrolevel but also at the microlevel, not only among the economic guidance organizations of the state but also directly between enterprises and various management organizations. When this developmental process is completed--the development of direct contacts between the management organizations of the countries--then we can talk about integration.

Z. G.: Not long ago, within the framework of AGROMAS, a cooperative project was started between Hungarian and Soviet enterprises for the manufacture of machines to harvest cucumbers and peas. The joint manufacture is only bilateral, but the agrotechnical requirements were coordinated jointly when deciding on machine types. So we expect the others to be customers also, because their needs were

taken into consideration. But it is not certain that they will place orders in accordnace with their reported needs. In my opinion we should make progress in this area also; there should be some way to make the reported needs, serving as a basis for development, a sanctioned obligation. It frequently happens that something is developed on the basis of the need of another country and when the machine appears, even though it meets the parameters undertaken, they do not buy it.

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FURTHER CRITICISM OF ECONOMIC PLANNING PUBLISHED

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[Article by Witold Ochremiak "The Record of Our Assets"]

> [Text] Our society is very concerned with the state of the implementation of the economic reform. A collision between hope for quick results and hard realities of everyday life has caused growing criticism, voicing of many reservations, and even calls for the revival of the compromised orders-distribution system. The growing unfavorable attitude threatens not only the implementation of particular objectives, but the very idea of the reform. This would be the worst thing that could happen to us.

There are several causes for the adverse social barrier and the growing wave of criticism. The first cause is the extremely difficult economic situation, further aggravated by restrictions that drastically limit supplies of raw and other materials. The second cause is the attitude of a great part of the management cadre that still cannot adjust to the needs and demands of the reform. The third cause can be found in incompletely worked out practical solutions and the conflict between the principles of the reform and the content of some executive acts. This is the backdrop for the flawed tax, price, wage, and organizational structures that make it difficult to create a consistent system of incentives for enterprises and work forces. However, the principal cause of the concern, the reservations, and even irritation is the lack of understanding of the essence of the reform on the part of many people, and the inability to use economic instruments.

The authorities carefully observe the implementations of the reform's first stage and they plan to draw conclusions from oversights and irregularities found in some legal acts (and especially in executive decisions). This is evidenced by statements in defense of the reform, principles contained in over a dozen resolutions and over 40 decrees, and promises of modifying some original principles.

No reasonable person could expect that the implementation of the reform will initiate a string of successes and changes freeing us from all economic concerns. On the contrary, we should have expected a difficult period of adaptation to new activities that were never before undertaken on such a scale.

This situation requires simultaneous solving of many problems pertaining to legal-constitutional, organizational-executive, and psychosocial spheres within both ruling organs and economic organizations.

In the legislative and ideological area the reform is implemented to a high degree. Practically nothing is lacking concerning basic legal regulations. Adoption of the resolution concerning cooperatives and their affiliates, and the finalizing of the work on resolutions (on national councils, regional self-government, and about improvements and bankruptcies of enterprises) will complete the whole of the legal-constitutional aspect of the reform.

Concerning the creation of lower level executive acts, i.e., decrees and dispositions containing interpretations of statutory decisions, we are still at the midpoint at best. Much has to be done to put the financial-economic system in order, to initiate actual structural changes either to fill gaps in some regulations or modify them. This was made clear already.

We are at the starting point concerning remodeling of the way of thinking and functioning on the part of managerial and executive bodies. Here the reform is met with the greatest resistance caused by insufficient knowledge, fixed routine, and misunderstanding of the idea and the goal of the reform.

Thus, we are progressing in the three directions at a different pace and with various levels of dedication. This should be noted when evaluating the reform.

The results of the implementation of the reform are generally looked at through the prism of the economic situation. However the situation is affected by many factors that have nothing in common with the reform. The daily decrease of about 40 percent in the import of supplies had to have a negative influence on the economy, its functioning, efficiency, and the production results, regardless of the reform. Our economy is also seriously affected--and will be for a long time to come--by structural imbalance and disproportions, as a result of the policy of the seventies. Time is needed to correct the problems. Since January of this year, we had to cope with a gradual decrease in production from about 14 percent to 10 percent in January, to 7 percent from February and March until August, when, for the first time in 26 months we achieved a slight increase in production. We should not be, however, simply satisfied with the improvement, and attribute it to the reform alone. It is apparent, though, that the process and the tendencies are becoming a constant, influenced by the reform. It is difficult not to recognize that projects undertaken in enterprises, that were initiated by the government and its bodies--are beginning to bear fruit. For example, there is progress in labor productivity. It is still low, as compared with the capabilities of the country production apparatus, but the fact that for the first time since May we have a steady increase in productivity is telling.

The unsatisfactory state of employment causes some doubts. However, it should be noted that we are faced with a sizable decrease in employment for the first time in many years. Employment decreased 5.5 percent, and even though it was mainly caused by the decision concerning early retirement, it should be seen

as the beginning of efficient employment. In some enterprises the sudden loss of workers and managers caused problems, and the authorities are fully aware that a mistake was made in the diagnosis. It is disturbing that the decline in employment is much larger in the group of employees working directly in production than in the group of employees working in administration. This is a result of such factors as the lack of connection between work and wages that is still felt. The enterprises themselves will have to assess their needs and advantages and solve the problems. They should not count on any administrative regulations to bail them out.

During the first 9 months of this year some progress was made concerning the frugal use of raw and other materials. It is estimated that for every half a year the decrease in the delivery of raw and other materials to industry equalled about 12-15 percent, with the decrease in production equalling only 6 percent. This is a tangible result. This trend should be felt even more in the reform mechanisms.

Last year the quality of production deteriorated further, and so far nothing has changed. This is shown in the increase of defects, as well as in the decrease of the number of produced goods with the high quality stamps. To a considerable degree, this is caused by gaps in supplying and by the necessity of using substitute materials and technology. Insufficient market pressure has additional negative impact, caused by the market that, starved by the lack of goods, tolerates departures from high quality. Economic mechanisms within enterprises should pay much more attention than they have had up to now to quality improvement. We do not have good traditions in this regard.

Among current results of implementation of the reform, significant are not only the indicators, but also the symptoms indicating changes in attitudes of enterprises. Investigations conducted in many enterprises confirm the observation that the reform had a positive impact on the concern of the directors in cost-effectiveness. This is especially valid concerning the change of attitudes in enterprises and the introduction of the principles of self-financing and autonomy. For years there have been calls and appeals to make cost-effectiveness a real category. Finally, it is happening.

It is also promising that enterprises are beginning to manage planning well. There is a growing conviction that it is possible to plan rationally and independently, without directives--guided by the opportunities presented by material-technological supply. There are signals that enterprises, guided by the principle of the cost-effectiveness, give up cooperation with costly and troublesome co-producers who ask high prices for semi-finished products. There are also negative signals. Some enterprises that find themselves in monopoly-like situation take advantage of it to dictate unjustified changes in cooperation conditions and to intercept profits. Antimonopoly measures are needed to stop the practices whenever thay are uncovered.

Reorientation of a part of enterprises to production linked to exports is also a hopeful indicator. After all, concerning supplies, foreign trade is a factor determining the future of production. Results accomplished in August and investigations have shown that enterprises are encouraged to take action by the system of foreign exchange allowances and recently introduced income tax

reductions for the export production, as well as by the opportunity to acquire a license or freely choose a foreign trade agency. However, there are also attempts to limit these activities and to make them difficult, and there are numerous cases of breaking the autonomy rule.

It is expected that the reform would engender many different reactions. It is a great undertaking that changes the position of enterprises, the relationships within enterprises, and between enterprises and the environment. The most violent criticism of actions undertaken in the framework of the reform comes from those who will not have a place in the new system, and from those who, when faced with problems, would like to return to the old system of guiding the activities of enterprises. This kind of criticism does not deserve any more attention.

However, there is also criticism that should be taken seriously because it concerns the functioning of the new system. It is quite obvious that some very violent criticism is generated by a part of the public opinion against justified price increases and against passing on to the society the results of bad management.

The reform was initiated as a result of the price revolution. Changes in the system of producer prices altered completely the geography of the effectiveness in the industry and in other areas of the economy. The changes in retail prices also had far-reaching results. The introduction of official, regulated, and contract prices was an undertaking that still shows important results, positive as well as negative.

In the society, there is a conviction that the official prices are widely used to gain unjustified profits. Investigations and the data for the first half of this year show that this is only partially true. Beginning with February the increase in arranged prices gradually levelled off. The prices grew in February 50 percent on the average, in March--30 to 40 percent, then there was a 5 percent increase, and in June there was only a 1 percent increase. A tendency to the decrease in prices was noted in the following months. However, this conclusion is based on the averaged equation. There are enterprises that often for no reason set prices that are considerably higher (a few hundred percent higher) than would be suggested by cost accounting.

The income tax problem is a subject of sharp criticism. In some areas of the economy, the graduated tax and high profitability indicators have resulted in the growing popularity of the thesis that the present system does not motivate the production growth, economical use of materials, and an increase in management efficiency. Sometimes an attitude: "If I have to pay 90 percent income tax and profit only 10 percent, I would rather not profit at all," could be encountered. Fortunately, this attitude is not common. Concerning the tax rate the situation is varied. In the enterprises that have low processing costs the current tax system is much criticized. However, in the enterprises that have a high share of processing costs the system is not criticized quite so much. The problem requires closer analysis to correctly determine what improvements should be made.

For example, it has been proposed to introduce the profit rate instead of the profitability rate. It is something to consider for the next year. This year we are only beginning to reassess fixed assets.

Sharp words of criticism are directed to the industry concerning allowances for the vocational activization fund. The situation varies from one enterprise to another. Mostly, the current system allows for wage increases of 15 to 20 percent (including the workforce's participation in the profits).

It should be emphasized that there were plans to consider the matter of the market balance in addition to that of incentives during the implementation of the system. This made sense, since there cannot be a viable system of incentives if money has no value.

To sum up, the reform is implemented with great difficulties. Some positive results have been accomplished. But can it be said that there are no dangers now?

The public associates the considerable decline in the standard of living with the reform. In reality, this is a result of the crisis, and it would happen regardless of the reform. The inappropriate propaganda presenting the decline as an unavoidable cost of the first stage of the reform was an additional factor. This thesis is false and very dangerous.

The lack of many goods on the market is a cuase of a growing demand for a wider control system. However, the controls lead only to a growing deficit of goods and, unavoidably, force the introduction of elements of the orders-distribution system. We are facing the challenge to fulfilling the society's basic needs without resorting to administrative orders.

If we do not take the advantage of the opportunities presented by the growing public involvement, the reform will fail. That is why so much hope is linked to new functioning of self-governments. It is hoped that they will lead to integration of the society and work forces and to insuring greater work satisfaction. Without it there will be no expected results and little hope for improvement.

9959
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TECHNICAL IMPROVEMENTS NECESSARY FOR AGRICULTURAL PROGRESS

Bucharest ERA SOCIALISTA in Romanian No 13, 5 Jul 82 pp 15-17

/Article by Dr Docent Dumitru Teaci, scientific secretary of the Academy of Agricultural and Forestry Sciences: "To Practice Agriculture Means To Operate Scientifically"/

/Text/ No modern, intensive and highly productive agriculture is conceivable without the all-around contribution of agricultural science and of advanced technologies. It is no news that the essential processes of agricultural production are the same as they were in the Sumerians' time, that is one plows, sows, weeds or cultivates, reaps, threshes and grinds the grain, just as one plants the vineyard, tends it, harvests the grapes, and makes wine. About 400 kg were harvested from 1 hectare of wheat in those times, while 8-10 tons are produced today. Similarly 2-3 tons were produced from 1 hectare of vines, while today 20-25 tons are obtained. The amount of live physical labor per unit of output is about 1,000 times less than in those days. These changes are chiefly due to technical progress, a complex process conducted over the millennia with perseverance and tenacity but which has shown an altogether impressive growth rate in this century, thanks particularly to the professional level of agriculture. As contrasted with other factors, technical progress alone can provide for exploitation of the earth's productive capacity at far higher quotas, which cannot be reached by agriculture based on ancestral-traditional systems of exploitation. We cannot overlook the fact that our whole agricultural output is raised on objectively limited areas of land and therefore we must obtain the maximum yield from every plot, and that is possible only through wide-scale introduction of technical progress. In stressing this major requirement in his speech at the Expanded Plenum of the RCP Central Committee in June 1982, Nicolae Ceausescu pointed out that "Agriculture requires very thorough knowledge of the biological and agricultural sciences and scientific understanding of what must be done to obtain the maximum from the land." This means it is necessary not only to improve scientific agricultural research but also to raise the technical and professional standards of the peasantry if we are to have a highly qualified agricultural worker able to apply scientific advances and modern technologies.

Transition to a new quality in agricultural production means, among other things, all-around integration of scientific research in the general effort to develop

agriculture so that the research results will be completely generalized in practice and become the common property of all agricultural units and all agricultural producers.

The increasingly consistent contribution of scientific research to all sectors of agricultural production is well known, which contribution demonstrates the capacity of Romanian agricultural science to solve the problems presented by creation of a modern, intensive and highly profitable agriculture. That capacity encourages a better performance, since the existing human and material scientific potential is capable of producing results in keeping with world standards.

The rates of production and introduction of technical progress have been unequal in both time and space. If we consider the two big sectors of agricultural production, crops and livestock, and analyze the way elements of progress are created and introduced, we find that the rate of production and introduction is very rapid in the crop sector while it proceeds much more slowly in the crop sector.

Hence we infer a certain "mobility" and a particular "resistance" to progress in the different sectors of production or in elements within them. For instance in the last 30-40 years all plant varieties and hybrids were replaced in Romanian agriculture and even 2-3 times in the case of some species, while the varieties of some plants like wheat for example were replaced at intervals of 5-7 years.

But the same thing is not true of zootechnical production, where the livestock breeds have been only partially replaced. On the other hand the technologies have been replaced to a greater extent, especially by introducing those of the industrial type (95 percent for poultry, about 80 percent for hogs, and 40-50 percent for cattle).

All this indicates the demands being made on scientific research concerning not only the quantity but especially the quality of the brood stock as well as intensified replacement of the less productive livestock breeds.

As we know, renovation of the production process to obtain higher yields per unit of area, per animal and per hour of live labor requires partial or complete replacement of the old and less productive brood stock with a newly created one, greater productive capacity of the soil, and mechanization and automation of the operations, all of which conform, as a matter of fact, to the main objectives of scientific research.

In the last 30 years improvement of the biologic stock has resulted in gains of 80-100 percent in crop production and of 30-50 percent in livestock production, but the results do not reach the higher quota of Romania's potentials. Some varieties are inadequately adapted to the natural climatic and soil conditions in various cultivated areas, nor do they meet the new technical requirements of Romanian agriculture. Other varieties lack the necessary resistance to diseases, pests, falling and shedding. Some varieties are not early enough to fully ripen in cool years.

Intensified scientific research is likely to provide the created or improved varieties and hybrids with such properties in this five-year plan as a greater capacity to absorb nutritive substances and to adjust to the variety of climatic

and soil conditions in Romanian agriculture, as well as resistance to diseases and pests. While imparting those properties, it is also intended to enhance the biologic potential of production by creating varieties of wheat yielding 8-12 tons per hectare, corn hybrids yielding 16-20 tons per hectare, and sunflower hybrids yielding 4.5-6 tons per hectare. Note that production of such varieties and hybrids requires development of types of plants different from the present ones, with rich and deep root systems, small sizes to permit greater densities, dark green leaves in a vertical position with much greater photosynthetic power, and higher productivity.

In agriculture the land, the main production means, cannot be reproduced at will. We can make lathes or dump trucks as we wish, but we cannot make one hectare more than those objectively existing in nature. The land is limited in area and cannot be mamufactured in any way. Therefore technical progress in agricultural is primarily intended to increase the productive capacity of the land and to make intensive and rational use of the ecological resources.

Extensive land improvement projects (drainage, irrigation, erosion control, improvement of salinized and sandy soils, etc.) have been undertaken to maintain and enhance the productive capacity of the land. They have all resulted in a 30 percent gain in the productive capacity of the lands in the last few decades. Unfortunately there have also been some losses in the productive capacity of the soil at some points, due particularly to processes of erosion, landslides, salinization and swamping, which losses must be remedied as soon as possible.

No intensive, highly profitable agricultural production is conceivable without allowance for the actual productive capacity of the soils and their conservation and greater fertility. Transition to agriculture on the basis of an energy balance, which is based upon the overall geochemical composition and the amount of humus in the soil, provides for development of agricultural production in proportion to the potentials of the soil as a renewable energy resource and to the amounts of energy and matter that the soil receives and yields. The possibility of producing 6-8 tons of wheat per hectare or 16-20 tons of corn has become a certainty today. But it is equally certain that such yields are impossible without an accurate inventory of the soil resources or knowledge of the productive potentials of the soils, which are indispensable to realist scheduling of agricultural production based on increased fertility of the soils.

Soil science is expected to develop, more prudently and responsibly, methods for the most rational protection, improvement and management of the soil resources so that by means of those methods and the plants that are developed on soils by an intensive agriculture the destructive (entropic) processes will be curtailed and the bioaccumulation (antientropic) processes will be accelerated, in order to obtain high and effective yields. Exclusive use of chemical fertilizers must be attenuated, because (Why not say it?) they have become a myth to some. Sometimes the great, constantly valid truth is denied that we must first "feed" the soil which in turn feeds the plant, a truth known not only to agronomists but also to ploughmen. That explains why veritable mountains of manure pile up around the livestock complexes. The older attitude, obtaining in some areas of Romania, of not using horse manure, which was usually burned, is now "justified" by accrediting the idea of saving fuel by not transporting organic fertilizers. And so the old attitude in a new form is considerably paralyzing the use of a

valuable and irreplaceable fertilizer. In a way this situation is the price we are paying for abandoning cyclical agriculture (crop production-animal husbandry-natural fertilizers) and shifting to linear agriculture, which has partly divorced crop production from livestock production in the sense that many zootechnical complexes have been built in areas where not enough fodders are produced and they have to be transported. In such cases the managements of the zootechnical complexes have no interest whatever in shipping the manure back, and the producers of concentrated fodders invoke the high shipping costs.

Use of 85 percent of the total material photosynthesized on agricultural lands to fodder the livestock is one of the problems that are still misunderstood. It is a vast volume running into tens of millions of tons that is converted to several million tons of livestock products. Therefore it is vital for the fodders to be consumed "in place," where they were produced, for at best the livestock product is at least 4 times lighter than the fodder.

When agriculture becomes more or less industrial and increasingly specialized, it is absolutely necessary to take a series of measures to permit the soil to remain a support and reservoir of elements vital to plants as well as a renewable energy resource. The more humus there is in the soil, the more the plant receives, stores and provides the plant with the natural nutritive substances as well as a better use of the chemical fertilizers.

This leads to a very important conclusion that cannot be disregarded, namely that it is impossible for agriculture, no matter how modern and industrialized it may become, to replace crop rotations with fertilizing plants and organic fertilizers because the humus in the soil cannot be maintained or increased unless crop production is rotated in order to introduce the fertilizing plants in the rotation of crops and make combined use of the natural and chemical fertilizers. Shorter or longer crop rotations (3-4-6 years) include fertilizing plants (alfalfa, clover, sainfoin, peas etc.) that make an outstanding contribution to improvement of the chemical, physical and biological properties of the soil and save a great deal of the energy expended on production and application of nitrogenous fertilizers.

Rationalized energy and fuel consumption is one of the decisive factors for any modern, intensive and highly profitable agriculture of an industrial nature. The world energy crisis, which also affects Romania, makes this even more necessary and urgently demands reconsideration of energy consumption in the sense of shifting to technologies with the least possible energy and fuel consumption, application of the various alternative energy resources, raising the index of conversion of s olar energy to biochemical energy, etc. Current agricultural research and procedure must start developing systems of self-supply with fuel and energy by properly cultivating and processing the so-called "energy plants" that can produce the raw materials needed to obtain fuels or other energy resources.

Radical improvement of the technologies makes it possible to replace the present system of working the soil, which has become unsatisfactory in all respects. This is a major problem, because it is the only way to reduce the number of operations per hectare, which is extremely high now and causes settling of the soil with consequent gradual deterioration of the soil structure as well as high energy inputs and other material outlays on production.

If fall plowing is not done on time and put off until spring the yield is 30 percent less on the areas plowed in spring. What is more, plowing done outside the best period, which unfortunately has become a current practice in many agricultural units, gradually but surely impairs the structure of the soil and consequently its fertility.

Accelerating the rate of renovation of the products, an important indicator of technical progress, is an area wherein science should prove more effective.

It is an obvious truth that agricultural products are old as the world but the way of producing them is always new. Therefore we need to find indicators that will express the renovation process and refer to the productivity of the farmer or of all those who ultimately help the items reach our tables.

It is mistakenly claimed that in some developed countries apparently 3-4 percent of the active population works in agriculture or in the food-producing sector, overlooking those who work before and after the agricultural worker and who, together with him, amount to nothing less than 30-35 percent, provided of course that they actually supply the entire population and no food is imported.

In this case when we refer to technical progress in agriculture we must allow for the machine builders, the producers of chemical fertilizers and pesticides, the keepers and processors of the products, the manufacturers or processors of foodstuffs, the performers of all kinds of services for agriculture, etc.

Proper correlation of all those engaged in the process of producing, stockpiling and processing the agricultural products for nutrition and other human uses is a sine qua non for a correct evaluation of the sources and ways of introducing technical progress.

Complete exploitation of the results of scientific research through their effective generalization in agricultural production is essential to creation of a modern, highly productive and profitable agriculture. We can gather from that the importance of perfect operation of the mechanism for transferring technology and knowledge to production, a requirement that is particularly necessary now that only a part of the store of acquired knowledge is being effectively applied and the number of agricultural units making satisfactory use of the recommendations of scientific research is still limited. Quite a few agricultural units are not satisfactorily applying many of the essential elements of the technologies developed by scientific research such as crop rotation, performance of the basic operations, fertilizing, and controlling diseases, pests and weeds.

This situation is aggravated by insufficient involvement of scientific researchers and those in higher education in the mechanism for transmitting the biological creations and the technologies developed and helping to apply them to production. Of course the responsibility of the specialists in the agricultural units for applying the technologies recommended by scientific research cannot be overlooked either, because it is the mission of every specialist in production to organize the production processes on the basis of the modern technologies, while regularly checking the way those technologies are to be applied in accordance with the particular conditions.

As Nicolae Ceausescu pointed out in his speech at the Expanded Plenum of the RCP Central Committee in June 1982, agriculture had to suffer from long neglect of improvement "of the peasants' professional and technical standards in order to have a highly skilled agricultural worker whose training would be in no way inferior to that of the electrician or any other worker." Therefore it is the duty of the scientific researchers, personnel in higher education, and specialists in the agricultural units to militate firmly for generalization of the modern technologies in large-scale production by organizing model plots on large areas in the state agricultural enterprises and agricultural cooperatives. If the results of scientific research and technological development are to be received and mastered by those who actually apply them and who work "in the furrow" so to speak, the latter must be adequately qualified, make an effort to learn, and realize that modern agriculture is not any routine ancestral occupation.

Complete finalization of the research results in production can only be the result of all the specialists' efforts, regardless of whether they work in the research institute, experimental station, state administration or production unit. At whatever level and in whatever sector he works, it is every specialist's professional obligation to make a regular effort to raise the production results to the level of the research results.

This also includes improving the professional competence of the specialists in the central and county agricultural organs, whose functions include transmitting the recommendations of science to production. This requirement is especially urgent because today scientific activity is enlarging the area of improvement of the production technologies by developing new methods and procedures, new varieties and hybrids are appearing, and agricultural equipment is being modernized and diversified.

Knowledge of these results on the basis of constant contact with scientific research provides the favorable background that enables the specialists in the agricultural units to substantiate the decisions they make in order to improve and perfect the production processes. It is a particularly necessary requirement because there have been cases where technical actions have been taken that were not recommended by scientists or even opposed by them, due to insufficient collaboration. Moreover regular study of the research results is an inexhaustible source of creativeness, encouraging the search and struggle for the new. The deficiencies in this respect partly explain why the research cycle is still long, as well as the period of testing for approval, in the investigations to create new varieties and hybrids, which leads to impairment of their effectiveness. Sometimes modern methods of investigation have been neglected in agricultural research that permit results in a short time and ensure prompt and efficient application of the results to production. This explains to a great extent the slow rate at which advances in genetics, physiology and biochemistry have been and are applied in the effort to create new varieties and hybrids of plants as well as lines and hybrids of livestock breeds. Furthermore, despite the good results obtained in creating varieties and hybrids, large-scale production has not benefited enough by the researchers' support, because for a long time the mistaken idea has gained ground in research that the activity is finished once the varieties and technologies have been approved. As a result only a small part of the store of knowledge acquired from a prolonged research effort was applied to production, and the number of agricultural units making satisfactory use of the research

recommendations was quite limited. It is no accident that some agricultural units obtain large harvests every year while others show poor results although the climatic and soil conditions are comparable just as the potentials for applying the technologies are the same.

Just as all specialists' effective participation in generalizing the research results in production is unquestionably a necessity, organization of this activity on its various levels of authority and specification of the functions of each element in the research-education-production relationship are also decisive for efficient application of the scientists' recommendations. Therefore I consider it vital to organize a uniform system to introduce technical progress, with express specification of the tasks of those who produce the innovation and of those who are to apply it.

Improvement of the scientific activity requires improvement of the system of planning the time available by preparing uniform standards of activity for researchers and for teachers and establishing a rational ratio between the time allotted to research properly speaking and that allotted to application of the research results to production, which must be reinforced with modernization of the working methods, eliminating the empirical ones, methods that expedite the results and the solution of highly complex problems.

Promotion of the new quality in Romanian socialist agriculture requires full commitment of the human potential, mechanization specialists, cooperative members and specialists in production, scientific research and agricultural education, for radical improvement of the activity and for an agricultural output in keeping with the great tasks of agriculture in this five-year plan. Only the united and sustained efforts to promote the new and science can be converted with certainty into a quantitative and qualitative agricultural output meeting the current requirements.

5186
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COMMERCIAL ACTIVITY AT BUCHAREST INTERNATIONAL FAIR

Bucharest REVISTA ECONOMICA in Romanian No 42, 22 Oct 82 pp 13-14

[Article by Nicolae Suciu, director of the Enterprise for Fairs and Exhibitions]

[Text] The 8th edition of the Bucharest International Fair opened its doors on Thursday, October 14, recording a productive balance both with regard to its job of providing information as well as with regard to commercial activity.

The broad theme of the Bucharest International Fair, which starting last year became an annual exhibition, brought to a large extent both the number of Romanian firms and foreign participating firms as well as a variety and high level of their offerings, from the areas of machine construction, chemistry, metallurgy, wood processing, transportation, building materials,light and food industry, light industry and handicrafts.

A confirmation of the prestige which the international fair hosted by Romania's capital has gained through the years is the participation and exhibits of the 1,150 production and exporting firms from Romania and from another 36 countries in the 8th edition. participating in the current edition with official pavilions were 31 countries from all geographic zones: Austria, Bulgaria, Canada, Czechoslovakia, the People's Republic of China, the Korean Democratic People's Republic, Cuba, Switzerland, Egypt, France, GDR, Greece, India, Jordan, Israel, Italy, Yugoslavia, Japan, Libya, Pakistan, Poland, Portugal, Sri Lanka, the United States, Turkey, Hungary, the USSR, Venezuela, Zaire. Among these, Pakistan, Sri Lanka and Venezuela were participating for the first time. At the same time, also participating was the PLO. Of the total exhibit area of around 71,100 square meters, 23,720 were for the foreign exhibits.

The Romanian offering at the Bucharest International Fair for the most part consisted of new or improved products from all the branches included in the profile of the fair, a fact reflecting the dynamic process of modernization and promotion of what is new in Romanian industry. Situated along these lines, the offering of the Romanian production and export enterprises, numbering more than 650, is capable of arranging for the highest demands of the foreign partners.

As the organizers of this exhibition, we strove to use the excellent conditions offered by the modern Bucharest International Fair exhibit complex as efficiently as possible as well as the experience gained up until now in order to provide all the participants with a framework best suited to commercial activity and for carrying out productive contacts, exchanges of experience and ideas to conclude fruitful transactions throughout the eight days.

Together with the exclusively commercial activity, the Bucharest International Fair also offered broad opportunities to provide information for the foreign visitors about the most recent and most characteristic aspects of current and future development for the technical-economic sectors within the fair's profile through the organization of adjacent demonstrations such as specialized meetings, conferences, symposiums, film presentations, practical demonstrations and so forth.

A major coordinate of the recent exhibition, clear to all the Romanian participants, was the attention given the technical innovation, presentations along with the goods and a broad range of engineering services. ROMCONSULT, the Romanian Consulting Institute, specializing in consulting and engineering activity in the areas of machine construction, electric and electronic equipment, building materials and building industry, agricultural and rural development, ore extraction, chemistry, petrochemistry, energy, urban development, water and sewer supply, telecommunications, transportation, education, health protection, tourism and sports, presented Romanian inventions which recently have enjoyed special international evaluations, such as "The New Interior Body for the Ammonia Synthesis Reactor," distinguished with the gold medal at the International Salon for Inventions and New Technologies in Geneva(1981), "Methods for Nondestructive Control of Concrete in Reinforced Concrete Constructions" and "Continuous Current Motor With Rotor Disk and Axial Air Gaps" which received silver medals at the same international demonstration.

A direct illustration of the performances obtained in various branches of the economy, the exhibits in this area represented peak areas of Romanian technical creation, showing the high scientific potential of research in the most diverse branches. Among them, we mention the following:

"The process and installation for obtaining sulphuric acid through double catalytic conversion and intermediary absorbtion," "Single reactor with management of reaction medium to manufacture phosphoric acid," "Containerized aeropropulsion transportation system," "Complementary ion-protein complex in animal nutrition," "The procedure for obtaining lanoline from the water resulting from washing sheepskins with wool, with 85-90-percent output," "Automatic milling machine, CLEARSON tool shape," "Counter apparatus for axles, cars and trains," "Alarm system for cars," "Complex superficial treatment for building friction-resistant parts," "Technology for building the membranes for alignment of the loudspeaker coils," "ROBOPAS-001 experimental industrial robot activated step-by-step and commanded through optical fiber," "The procedure and synthesis combustion chamber with variable turbulence," (a procedure by which up to a 60 percent reduction is obtained in fuel consumption for motors), "The procedure of utilizing tires used by cars and tractors by recovery of the rubber and reusage for casting of rubber parts--tires, conveyor belts, trapezoidal belts" (by applying this procedure it is possible to replace 50 percent of the pure elastomer used in manufacturing tires and spare parts). New achievements from the area of industrial design also were presented in the ROMCONSULT pavilion.

Another area of interest in the Romanian offering of engineering services was the display by ROMPETROL, the enterprise for foreign economic cooperation. Romania, which has more than 120 years' experience in oil extraction and processing, currently is one of the world's main producers and exporters of oil equipment, with the F 400-3DH drilling installation even by 1978 having established the European record for depth--8,000 meters.

As proof of the quality of services offered by ROMPETROL, we should stress that the Romanian enterprise has done jobs in dozens of countries, among which we mention Afghanistan, Albania, Benin, Burmania, Bulgaria, Czechoslovakia, the People's Republic of China, the Ivory Coast, the KPDR, Cuba, Ecuador, Egypt, Ethiopia, the Philippines, GDR, Ghana, Greece, India, Indonesia, Iraq, Jordan, Yugoslavia, Libya, Malta, Morocco, Nepal, Nigeria, Pakistan, Syria, Sudan, Somalia, Tanzania, Turkey, Venezuela, Socialist Republic of Vietnam, Yemen Arab Republic, People's Democratic Republic of Yemen and so forth.

The important commercial transactions concluded for the 1982 Bucharest International Fair prove that the achievements in the area of science and technology favorably affect the competitiveness of Romanian products. Romanian foreign trade enterprises have signed export contracts for heat exchangers,relief pressure valves and gas tanks with the USSR; diesel motors, subassemblies for oil equipment and drilling installations and mining equipment with the USSR, Syria, India and Czechoslovakia; metallurgical equipment with Czechoslovakia; motor storage for France; machine tools and devices with Czechoslovakia, Hungary, Bulgaria, USSR, Poland, Colombia, Greece, Saudi Arabia, france, Sweden and the United States; Dacia cars with Czechoslovakia, GDR, Poland and Greece; compressors and portal cranes with Czechoslovakia; overhead cranes with GDR; excavators with Hungary; various parts for equipment with Yugoslavia. UNIVERSAL TRACTOR, the Romanian foreign trade enterprise, presented a complex range of tractors and agricultural machinery at the Bucharest International Fair, drawn and self-propelled, machinery among which, as innovations, are the 100- and 85-HP tractors supplied with simple and double traction, the motor cultivator for working on slopes, the C16U high-capacity combine with high output and lower fuel consumption, and these were of interest to the specialists and commercial agents, ensuring the concluding of export contracts whose value was 20 percent higher than that obtained at previous editions.

So the exhibits presented by UNIVERSAL TRACTOR were the subject of productive transactions concluded with partners from the Soviet Union, GDR, Iran, Saudi Arabia, Greece, Italy, Czechoslovakia, Algeria, Hungary, Portugal and so forth. Contracts also were improved for the exporting of agricultural machinery, sowers, self-propelled combines, threshers and spare parts, TIH-445 frontal loaders with the GDR; concrete mixers with Bulgaria; trucks with Cuba; equipment for various sector of light industry and subassemblies and spare parts with the GDR and Bul ria; various types and sizes of bearings with the GDR, Switzerland and Finland; and equipment for the wood industry with Czechoslovakia.

At the same time, contracts were concluded for the import of chemical and mining equipment and supports for magnets and parts for compressors from Czechoslovakia and the GDR; oxygen installations from the USSR andcold-box from France; various machine tools from Austria; metallurgical equipment from the GDR; crankshafts with Czechoslovakia; machine tools from Czechoslovakia; Skoda and Trabant cars from Czechoslovakia and the GDR, respectively; various parts for building equipment with the GDR and USSR; agricultural combines and headers with the GDR; and devices for the wood inudustry with the GDR.

In the area of electronics and electrotechnology, the Romanian enterprises concluded many export contracts, among which are automation facilities with the USSR, Bulgaria, Czechoslovakia and the GDR; televisions with Czechoslovakia; connectors and telephones with Hungary; low-tension apparatuses, electric motors, transformers and

traffic sets with Czechoslovakia, GDR, USSR, France and Sudan. Import contracts were concluded for electronic components with Czechoslovakia, GDR, France, and GFR; computer technology with Poland; telescopic antennas with the PRC.

Metallurgical industry enterprises concluded contracts for exporting steel-concrete, whets ones, pipes with GDR, Israel and Iran; steel profiles with Libya; rolled steel with the USSR; import contracts were concluded for carbon steel, stainless steel and rolled steel with the GFR, Austria and Bulgaria.

Romanian chemistry enjoyed special interest, with the specialized firms concluding many contracts, among which we mention for export various basic chemical products, dyes and paints, cosmetics and drugs, materials and products from polyvinyl chloride, complex fertilizers, ammonium nitrate and nitrocalcite, rubber and rubber products with the United States, France, Ghana, Switzerland, USSR, GFR, Italy, the Netherlands, PRC, Turkey, India, Greece, Mongolia, GDR, Poland, Japan, Iran, Egypt, Sweden, Austria, England; and, for imports, acetic anhydride from Italy, iodine and from France; tartric acid from England, butylic acid from GFR, polyvinylchloride leaf with Austria; latex rubber from France and others.

Well known on the international market of furniture producers and exporters, the TEHNOFORESTEXPORT firm was presented at the fair with several of the latest creations built in the big wood-processing combines of Romania. The furniture presented at the fair this year--covering a broad range of products, of period furniture (with inlays and sculpture), up to modern , functional furniture made of resinous wood and, for the first time, metal furniture built in the combinations of chipboard and aluminum--was noted by the beauty of line, irreproachable execution and high-quality finish which fully show the excellent raw materials used. The visitors especially appreciated the "Canion" oak furniture for dining rooms and youth rooms built in Piatra Neamt, the "Imperial" bookcases produced in Radauti and "Anatolia" in Sighetul Marmatiei, both of oak, the "Roxana Lux" kitchens and SB 518(entering into the set are a complete buffet with table and corner grouping) made in Sibiu, molded living room (formed of sofas, armchairs and oval table) built in Rm. Vilcea. Particularly attractive are the resinous furniture pieces presented by the producers from Reghin and Piatra Neamt. Besides the furniture intended for various rooms, TEHNOFORESTEXPORT presented a number of small furniture pieces characterized both by the high quality of executionof the period furniture and by the functionality of the modern, and musical instruments and sports articles. The wood processing industry concluded contracts through the Romanian specialized forms for exporting furniture to Switzerland, Israel, Japan, Iraq, France, Austria and other countries.

The building materials industry aroused interest from firms in England, Saudi Arabia, Egypt, Libya, Czechoslovakia, the USSR and so forth, with which contracts were concluded, among other things, for the following: cement, pottery, sandstone plates, marble, health articles (both complete sets as well as separate parts), among which are colored bathroom fixtures of steel are being offered for the first time by VITROCIM.

An important branch of the Romanian economy, currently supplying around one-tenth of total exports, the light industry in the 1976-1981 interval launched more than 1,300 materials and new products. Their superior quality, the opinion they are enjoying on the international market are reflected in the growing number of countries to which they are being exported--around 110. In the area of light industry, we should mention, among other things, the contracts concluded for exporting clothing

to Austria, the United States, Canada, England, the Netherlands, Hungary, Jordan and Austria; wool and viscose material to the United States, GFR and Libya; polyesters and cotton material to Denmark, Switzerland, GFR, Cuba and the importing of raw leather and various accessories for shoes and leather goods from the United States. The products of the food industry and handicrafts industry were contracted for export with firms from Libya, Jordan, Czechoslovakia, Finland, Italy, the United States, USSR, Poland, Israel, GFR, Greece, France and other countries.

The remarkable variety of themes, the technical level, the level of varieties and qualities of the presentations, the entire recent economic-commercial competition in Bucharest, the productive results as well as climate favorable to the movement of ideas and experience among specialists permit us to say that the 8th edition of the Bucharest International Fair was a new and valuable contribution to the development of international economic collaboration.

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SHORTCOMINGS IN FIREFIGHTING ACTIVITY IN CHEMICAL INDUSTRY

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[Article by Ionel Craciun and Amuliu Proca, engineers]

[Text] The place and importance of the chemical and petrochemical industry in the overall national economy are well known. We also know the degree of danger, loss and explosion and, implicitly, the diversity and complexity of problems for preventing and putting out fires raised by the production processes in the units of this industry. That is why, in conformity with the indications from the higher state and party leadership, the steadfast improvement in fire prevention activity in the chemical and petrochemical industry is a permanent concern and one of the main directions of the effort of the firemen's command. An expression of this concern is also the recent check on prevention as carried out by the firemen's command and subordinate units, together with specialists from the Ministry of the Chemical Industry and the industrial centrals in the combines and chemical and petrochemical enterprises. The check followed the way in which the provisions of Decrees Nos 232/1974, republished, 29/1977 and 400/1981 are being applied as well as the standards of the Ministry of the Chemical Industry and measures established by the minister of the chemical industry with order No 650/1982.

The findings of the checking collec tives brought out that in the first half of this year the concern of the collective leadership organs and unit leaders, of the technical commissions for preventing and putting out fires, of the specially employed technical cadres and civilian firefighting formations has increased for fulfilling the legal obligations and tasks belonging to them in insuring the safety of the chemical and petrochemical projects against fires. It was felt that a decisive role in this regard has been played by application of the provisions of Council of State Decree No 400/1981 on Establishing of Certain Rules for Operation and Maintenance of Installations, Equipment and Machinery, strengthening order and discipline in work in the units with continuous firing or those which have installations with a high degree of danger in operation as well as measures established for this purpose by Order No 650/1982 of the Ministry of the Chemical Industry. As a result, the organization of prevention activity on the job has improved, the level of training of the personnel employed in work in knowing and respecting rules and protective measures against fires has risen as well as the spirit of responsibility in supervising the installations and equipment with a high danger in operation; order and discipline during working hours have been strengthened and this has resulted in a considerable reduction in violations of the smoking restrictions, access to the enterprises while smoking, using matches and other materials or products which could cause fires or

explosions. Also, the responsible factors in certain chemical units have shown greater concern with solving certain problems which were affecting the safety of the installations and equipment against fires. So installations to detect dangerous concentrations, to signal and put out fires and to supply water have been repaired and put into operation (the chemical combines in Tirnaveni, Savinesti, the Tirgu Jiu enterprise for technical articles of rubber and devulcanized rubber, the Farmec and Napochim enterprises in Cluj-Napoca); vibrations in some equipment have been eliminated (the Pitesti petrochemical combine and Solventul in Timisoara); the bulkheads of the retention tanks from reservoirs have been repaired (the Tulcea Aluminum Enterprise, the Romanian Polyamid Fiber and Wire Enterprise); the bank of oil pipes from Constanta Chimpex has been strengthened; supply of the civilian firefighters' formations with firefighting techniques has been improved (the chemical fertilizer combines in Tirgu Mures and Piatra Neamt) and so forth.

Despite the positive results obtained, activity for preventing and putting out fires in many units of the chemical and petrothemical industry still has not reached the level of current demands and does not insure eliminating of all shortcomings and a firm move to a new quality in this area, too. In certain technological installations of the chemical and petrochemical projects there continue to appear and remain causes which bring fires, explosions, damage or other events with serious consequences for human life and production processes. It has been found that certain irregularities have not been eliminated, ones which can cause fires or bring the danger of fires, causes which long have been signalled by the checking organs. For example , the R_1B reactor at the Borzesti Petrochemical Combine has been operating with defects; checking of certain technological processes at the Sinteza Chemical Enterprise in Oradea has not been automated; measures have not been taken to repair or replace compressors at the Ocna Mures Combine for Soda Products, although there has been advanced usage; measures have not been taken to avoid land slides signaled at the PECO oil products warehouses in Sebes, Bircea and Cluj-Napoca. There still are frequent violations of standards on the loading-unloading ramps for oil and chemical products. Loading-unloading operations for combustible liquids still are being carried out without insuring against electrostatic discharges, work is done with metal devices which may produce sparks through impact, "stationary" leaks have occurred on the ramps, hoses are used which are too short to fill the vats and so forth. Such serious deviations from the standards have been found on ramps of the chemical and petrochemical combines in Borzesti, Brazi, Teleajen, Victoria and at the following chemical enterprises: in Turda, the Terapia in Cluj-Napoca, Carbosin in Copsa Mica and the aluminum enterprise in Tulcea and PECO warehouses in Huedin, Baneasa, Tulcea and others. In this regard disorders at the ramps for combustible fuels"set up" at the Cluj-Napoca railroad station for the Terapia enterprise are conclusive. Here the loading of vats is done without supervision and making the opening for unloading the vat car "watertight" is done empirically by bending the hose and wrapping it with wire.

Despite the fact that we know the role played by the electric cable managements in insuring full safety for the technological processes, in some chemical units (Valea Calugareasca, Giurgiu, Carbosin in Copsa Mica and so forth), there have been delays in designing and obtaining materials and building the installations and safety projects protecting against fires in these vital points. Also firm and efficient action has not been taken in some cases to prevent destruction of the electric cables due to the presence of aggressive substances in the sewers (Turda chemical enterprise).

In some units there still are cables running over or close to pipes and equipment at high temperatures, which favors the apperance and maintenance of possible causes of fire.

The leaders of projects and technical commissions for preventing and putting out fires in some chemical and petrochemical units have shown serious shortcomings in fulfilling the legal duties belonging to them with regard to carrying out and insuring the maintenance and operation of installations for detecting and signaling fires as well as those to put them out. At the Slatina aluminum enterprise, the Zalau tire enterprise and Danubiana in Bucharest, the enterprise for plastic processing in Nasaud and Sf. Gheorghe, Carbosin in Copsa Mica, Viscoza in Lupeni, the chemical enterprise in Marasesti and others installations have not been finished and put into operation for detecting, signaling and putting out fires. In some units not even the supply with water needed to intervene in case of fire has been provided. All these defects could have been eliminated if the particular units had enjoyed the natural help from the design organizations, industrial centrals and construction-assembly units and repair units, even those belonging to the Ministry of the Chemical Industry.

The safe operation of technological installations with high operating danger as well as the depots for reservoirs in the chemical and petrochemical units also is affected by the lack of certain materials, apparatuses and spare parts or, in some cases, by their inappropriate quality. On the list of these materials, apparatuses and parts are breather and relief pressure valves, level indicators, measurement and control apparatuses, apparatuses for automatic proportioning, gas detectors, devices, tools, gauges, valves, faucets, motors and electrical apparatuses specially built for work under conditions surrounding the chemical industry, rubber hoses for steam installations as well as certain chemical substances for putting out fires. We feel that an even greater contribution can be made by the production units under the Ministry of the Chemistry Industry as well as machine construction enterprises for the chemical and petrochemical industry to solving this problem of major interest in insuring safety against fires and explosions.

The storage of materials, substances or packaging utilized or resulting from production processes in the chemical industry in conformity with the standards for preventing and putting out fires has not been a permanent concern of the responsible factors in some units. As a result, in some cases high danger of a fire's breaking out remains. In this regard what is significant is the situation of the PVC packaging stocked for many years within the Sinteza chemical enterprise in Oradea. The enterprise leadership until today has not found a solution for reusing this immense quanity of packaging, but neither has it received help from the industrial central for drugs or from the central in the Ministry for Technical-Material Supply and Control of the Managment of Fixed Assets.

Other violations of the standards for preventing and putting out fires in the chemical industry have been found during the checks made. In many units firm measures have not been taken to efficiently eliminate leaks and escape of combustible products, to correct certain defects which appear in the electrical installations in the zones with danger of fire and explosion. Also, the necessary measures are not always taken for protection while repairs, checks and welding work are being done and,in conformity with Decree 400/1981, there is not permanent supervision of all installations and equipment with continuous burning or with a high degree of danger during operation,

methods for putting out fires are not kept in a perfect state of operation and the way of using them in case of fire is not known. There still are many shortcomings in the area of order and discipline on the job, too.

In majority of cases these shortcomings were eliminated during the checks. This precisely demonstrates the fact that such shortcomings could have been eliminated effectively by the responsible factors in the units (leaders of projects, technical commissions, civilian firemen's formations, specially employed technical cadres, heads of sections, workshops, installations, warehouses, work formations) if the prevention activity truly would have been one of their permanent concerns. But the existence and perpetuation of such deficiencies in prevention activity, on the contrary, show that the responsible factors listed are continuing to demonstrate superficiality and formalism in fulfilling their legal duties, starting with checking on knowledge and respect for the standards for preventing and putting out fires in all the technological installations and on all the jobs. Here we have the difficulty of discovering and effectively eliminating the shortcomings existing and, primarily, the potential causes of fires and explosions. Along this same idea, it is necessary for all leaders of projects to permanently, not sporadically, check on the way in which organs and persons appointed by written order are fulfilling their duties in carrying out activity to prevent and put out fires.

The check made in the chemical and petrochemical units once again has brought out the acute need to take firm and exacting action to insure full safety against fires in these important projects of our national economy, to establish and keep a special system for the use, checking and maintenance of all technological installations, to establish strict order and discipline in work with a view to preventing and eliminating any situations which could endanger the people's lives and health or could disturb the continuity of the production processes.

Editor's Note: On 26 July 1982 a meeting took place of the Executive Bureau of the Leadership Council of the Ministry of the Chemical Industry, during which analysis was made of the activity for preventing and putting out fires during the first half as well as conclusions from the recent joint check made in units of the chemical and petrochemical industry. At this time the Executive Bureau of the Leadership Council adopted measures which will provide for continued improvement in the activity of preventing and putting out fires in the units under the Ministry of the Chemical Industry, to know and have strict application of the provisions of Decree 400/1981 and order of the Ministry of the Chemical Industry No 650/1982 as well as to aid the units with a view to solving the problems for fire protection.

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