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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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STATUS OF THE FERTILIZER AND PESTICIDE INDUSTRIES IN HUNGARY 1/

by

Ferenc Hargitai
Officer-in-Charge of Pesticide,
Department of Plant Protection,
Ministry of Agriculture and Food

Tibor Zaifkov
Chief of Section,
Quality Control Institute for
Agricultural Products

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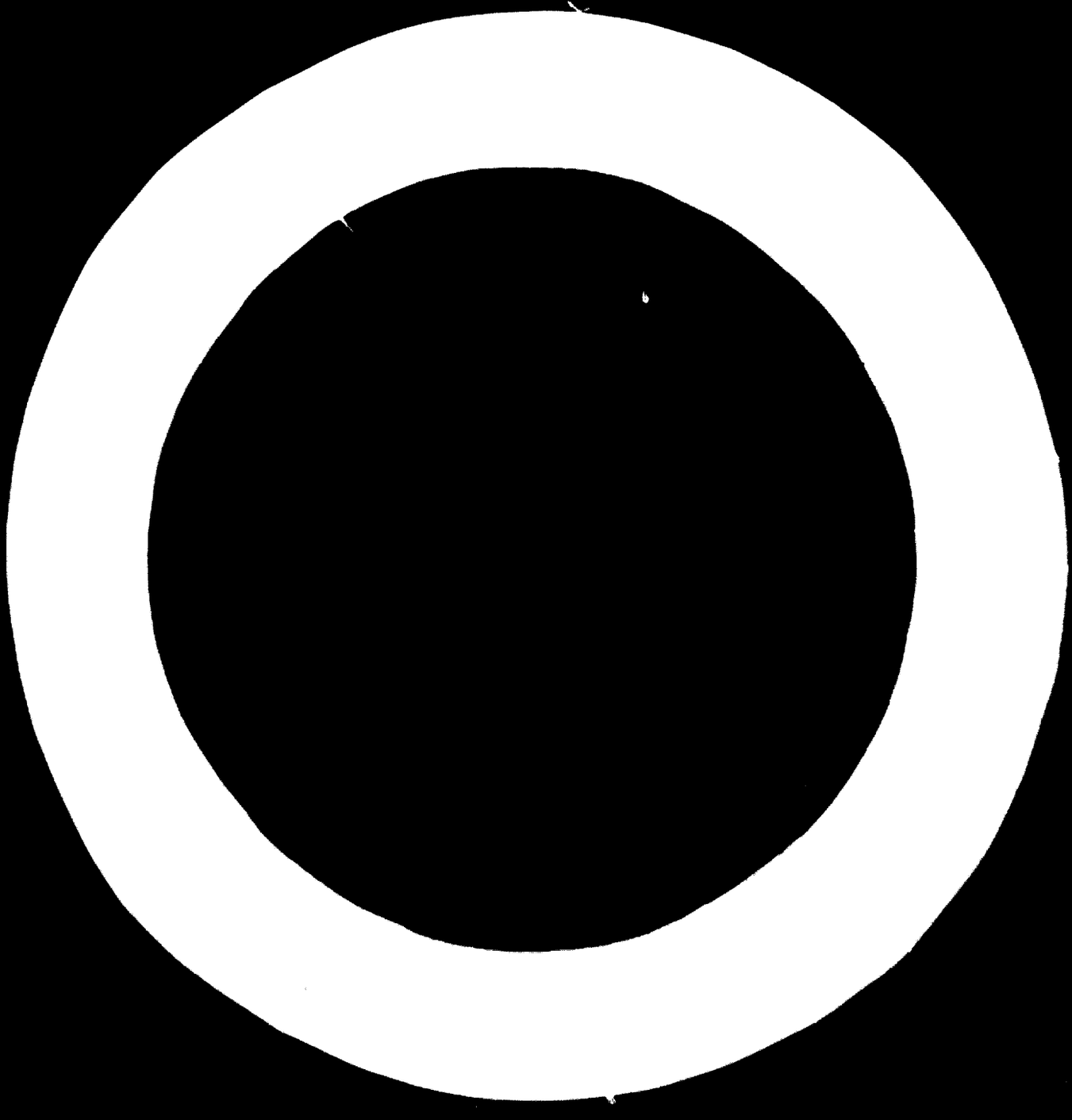

The Situation of the Fertilizer Industry and the Trend of Its Development in Hungary

For elucidating the problems concerning the production of fertilizers and the further development of the production in Hungary, it is necessary to make some statistical data known in advance. First of all, it must be, however, pointed out that as regards the utilization of fertilizers, our country occupies the European medium rank. To obtain this rank has taken some twenty years and it has created the safeness of production of the Hungarian agriculture.

Between 1951-1960 in Hungary the use of fertilizers per hectare was 14 kg. In 1970 the increase was over tenfold of that. Between 1966-1970 the use developed in the following way:

	total active ingredient kg/ha
1966	69
1967	91
1968	112
1969	125
1970	150

At this same period the domestic production of fertilizers was 1000 tons in active engredient:

	K	P_2O_5
1966	167	131
1967	185	153
1968	245	156
1969	300	170
1970	350	167

The pieture of the yields of some more important cultural plants in q/ha looked like this:

	wheat	rice	maize	sugar-beet	potato
1966	21,7	16,4	31,6	330,6	62,8

	wheat	rice	maize	sugar-beet	potato
1967	25,9	21,3	28,5	324,1	89,4
1968	25,2	19,3	29,9	334,2	89,2
1969	27,1	22,6	37 9	340,4	113,5
1970	21,3	19,1	33,6	287,3	104,1

Increasing merely the doses of fertilizers,however,could not meet the more and more differentiating demands.Under such circumstances the present situation had to be realisticly assessed with profound analysis and on the basis of this the trend of development had to be established.Of coarse,in this work it had to be taken into consideration that the quantitative development of the agricultural production requires agrotechnical and other measures as well.

Approximatelly 40 % of the fertilizers to be used at present stems from the import.This import covers both simple and compound fertilizers,in addition of this,of coarse,the raw phosphate also belongs to the import.In the domestic production the simple fertilizers are preponderant and today the proportion of the compound fertilizers is still small not only quantitatively,but also from the point of view of assortment.The compound fertilizers together with the import amount today only to 15 %,regarding the total domestic use.

The quality and the package of our fertilizers to the active ingredient content may be said to be proper.Under the effect of the measures taken recently their physical condition and spreadableness have got much better,though in this field still further improvement is necessary.

Our nitrogenous fertilizer production is capable of meeting quantitatively the present and the subsequent needs.Here at the same time it must also mentioned that the use of urea may be said to be favourable on the basis of experiences obtained hitherto.

The quantity of the phosphoric and potash fertilizers does not meet the needs.Their further development is motivated by the fact that we intend to change the rate of use in the people's economy of the N:P:K in accordance with the

tendency in the favour of phosphorus and potassium. Besides this the absolute quantitative demands will be also increased.

Essentially the things mentioned previously refer to the fact that the present assortment of fertilizers in Hungary is not satisfactory. Particularly we desire to develop the production of the compound fertilizers to an extent that their proportion within a reasonably short time should reach the 40 % of the total of fertilizers and their active ingredient content should have a variation much wider than the present one. This program as a part, includes the factory of compound fertilizer based on nitrophosphate being under investment and the mill of mixed fertilizer based on ammoniumphosphate to be built subsequently. Both establishments will produce NPK products with a composition variable on a wide scale.

The production of compound fertilizers combined with some microelements exists for the moment, too. In international cooperation we likewise deal with the production of spray-fertilizers combined with microelements and plant hormones. In the future, however, we also intend to increase the quantity and assortment of these.

The problems concerning the solution-fertilizers are waiting for being solved. In this field the close cooperation of industry and agiculture will be needed. It must be referred to that in several professional circles there was raised the demand for producing suspension fertilizers, coated fertilizers and polyphosphates, too.

Summing up in short, this is the present situation of the production of fertilizers and the trend of its development in Hungary.

The Situation of the Production and Utilization of Plant Protection Chemicals in the Hungarian Peoples Republic

1. Development of Chemical Plant Protection

During the last decade the use of the plant protection chemicals has been increased by leaps. There was no exception to this in Hungary either: in comparison with that of 1960 the utilization expressed in value was increased by 430 % in 1972; with herbicides the increase reached 1500 %. The increase has been accelerated particularly during the past 5 years. Expressing in terms of dollars, the use developed in the following way:

in 1968	24,5 millions of dollar
in 1969	24,6 millions of dollar
in 1970	32,0 millions of dollar
in 1971	41,0 millions of dollar
in 1972 as to be expected	53,0 millions of dollar

Plant protection is one of the factors of the complete production technology; therefore its significance, role, economic efficiency are inseparable from the level of development of the complete technological system.

While with the conventional methods of cultivation plant protection has the role of increasing yields and of improwing quality in the first place, with the technologies of

the complex big farm mechanization it already becomes the precondition of production. Estimating the future trends and possibilities of development we must state that the role of plant protection - and primarily that of the chemical plant protection - will be increased even further. In Hungary we reckon with the accelerated pace of the use of pesticides during the following years as well. This fact, of course, determines the principal things to be done on the part of agriculture, too.

We must take notice that all kinds of industrial development, commercial activity or strict official supervision are futile, if the utilizer himself does not work with the required special knowledge and conscionsness. We may gladly state that recently the international organisations realized the importance of the utilizer's responsibility. The outward forms of the pesticides are very simple: dusts, liquids, maybe granules. The work with them, however, requires at least such special knowledge as handling a complicated machine.
That is to say the action of pesticides can spread much farther by way of contaminating the environment than the treatment itself. The necessity of the special knowledge was soon realized in Hungary and a law of 1968 prescribed the obtainment of special qualification depending on the position occupied in the production.

Of course, as being one of the most developed means of production, an adequate service-network had to be developed for plant protection as well. With plant protection chemicals this service is constituted by the strict system of registration and the strict controlling network.

The registration regulated by law in the Hungarian People's Republic is similar in many respects to the system of the German Federal Republic commonly known, but in some regards it is more severe than that and is directly attached to the Ministry of Agriculture and Food.

The constant chemical inspection covers the control of quality /in factories, in commercial store-houses, even at the farmers'/ and the analysis of pesticide residues. As a result of the work of the laboratories for analysis of pesticide-residues equipped in up-to-date manner, the inspection of all the import and export plant products and of those grown in big farms for domestic consumption is carried out.

The requirement of special knowledge and the development of the controlling systems make plant protection safe and in consequence a further increase in the demand for pesticides is to be expected. According to our estimates, the use of pesticides in Hungary by 1980 will be twofold the present one. With an increase in the demand to an extent like this, it must be necessarily considered whether the development of manufacturing can keep up with this.

2 The Situation of Pesticide Industry

As is well-known, at the beginning of the 60-ieth years the Hungarian industry produced a considerable quantity of DDT and HCH. In 1967 the use of both chemicals was prohibited, thus the proportion of the home industry in the trade of pesticides fell from 70 % below 50 %. Parallel with this the import from Western-Europe has been significantly increased. In 1967 its rate of participation was 22 % and at present it approaches 40 %. Of course, it is not allowable that the financial basis of the Hungarian plant protection

should decisively depend on the shaping of import, therefore increased efforts have been made for developing the home products.

As a first step we addressed ourselves to more leading manufacturing companies of Europe with the request of licence purchase, but the answers concerning the up-to-date products were uniformly negative.

In this situation there were two possibilities left: domestic formulation of active ingredients from abroad and the development of the independent production of active ingredients. Undoubtedly it is the easier and more rapid solution to form the active ingredient from abroad - in this way, however, the foreign exchange savings are not significant and the strong dependence on foreign industry is invariably left over. Thus from the point of view of the people's economy, carrying through the production of the active ingredient seems to be more advantageous. Besides the chlorophenoxy-derivatives, chloraminotriazines, mercaptotriazines, DCPA, trichlorphon, DDVP and DNOC traditionally manufactured for years, in addition to the formulation of about 15 active ingredients from abroad, the Hungarian industry, on the basis of independently developed procedures, effectuated the production of the paraquat-di /methylsulphate/, trifluralin, linuron, monolinuron, propachlor, pyrazon, prolate, chlorphenvinphos, O-ethyl-S, S-diprophyl-phosphoditioat /Mocap/, dioxacarb, benomyl, a mercury-free seed-dresser and a number of other compounds.

An intermediary industry serving the above productions and a biological-toxicological investigating station meeting the needs of industry are in process of development. As a result of these developments, we calculate that though the demand for pesticides will be doubled by 1980,, the import from Western Europe will be decreased to the half or one-third its present level. Naturally, those foreign c companies which themselves support the development of the Hungarian industry within the framework of cooperations of different types will be best able to hold their ground on the narrowing Hungarian market. Such cooperations have already come into being, or rather the talks are at an advanced stage.

With a knowledge of agricultural efforts to develop chemical plant-protection, and of the problems of development of industrial production, it is in the following fields that I see possibilities for UNIDO to support countries desiring to develop their industry and agriculture at a powerful pace.

Fields of Support by UNIDO

Efforts must be made that the industrial companies of the developed countries should sell the developing countries not the products considered to be out-of-date in their own countries, but they should transport the most contemporary and newest ones, or should transfer the licence of those.

The partners must establish an efficient cooperation in the field of formulation and independent production of active ingredients, and also in production of intermediates. The cooperation must be realized not only in technical field, but in the exchange of specialists and in their training.

Since safe agricultural application is also in the interest of the industry, the industry and industrial organizations should support the establishment of networks of specialists for the farms, the supply of the inspecting and controlling networks with specialists, instruments, and the realization of controlling systems.

At this moment the Hungarian People's Republic expects support in the up-to-date technologies of formulation, and in exchange she undertakes the extension training of specialists working in the controlling network.

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