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STATUS OF THE FERTILIZER AND PESTICIDE INDUSTRIES IN BULGARIA [1]

by

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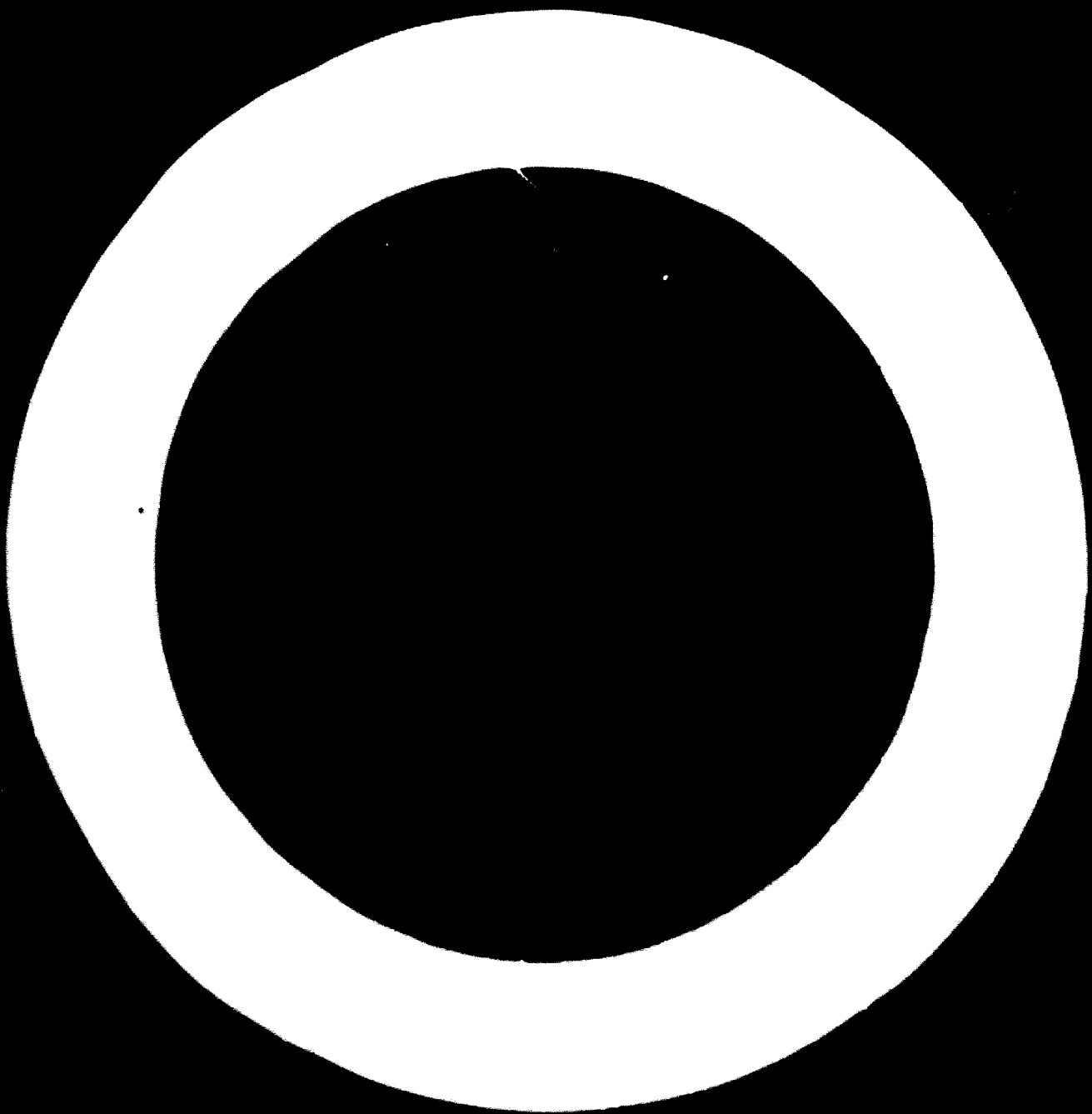


Status of the fertilizer industry in Bulgaria

Stefan Lazarov

The intensive agriculture of Bulgaria requires the application of different forms of fertilizers. Their demand increases, at the mase time increases requirement for its quality.

Today the production of fertilizers occupies an important place of our chemical industry. However, we know that these are the first staps of this branche of the industry.

We produce ammonium nitrate, urea, phosphates. Today the production of nitrogen fertilizers almost meet the needs of our country. However, the production of phosphates is restricted. The potassium fertilizers we do not produce.

We produce the granulated ammonium, nitrate by a technology of the Soviet Union. But in the last years we realised reconstruction and now the quality of this produet is very improved.

We produce ammonium nitrate containing :

- nitrogen - 33.5 ÷ 34.5%
- humidity - 0.2 - 0.3%
- dissolved additions - circa 1.0%
- inert additions - circa 0.5%

The dimensions of granules are:

size 1 - 2 mm circa 75%

under 1 mm 5 ÷ 8%

over 2 mm - circa 20%.

We produce granulated area by the technology of Stamicarbon -Holland, containing :

- nitrogen - 46%
- biuret - o.8 - 1.2%
- humidity - o.4 - o.6%

We produce also crystalline urea.

The basic raw materials for our fertilizer industry are oil products.

The principal problems of the fertilizer industry in Bulgaria are :

- Ammonium nitrate.

The general proglem is the quality of this product. We have some success in this field but we want reach more. First, improve the dimentions of the granules, second, to find the optimal temperature for the packing of the product. A problem is also to increase the adhesion of inert materials and the particles of ammonium nitrate by the powdering. Today we are interested in the problem to produce ammonium nitrate suitable for the transport without packing.

- Urea

The agriculture has higher requirements in last years for the containts of humidity and biuret in urea. This problem is very difficult to be solved. Moreover a problem is that agriculture avoid to use the urea and prefer the ammonium nitrate.

- A general problem is the guture reconstruction of the plants and the changing the raw material base of our fertiliser industry. We expect to receive natural gas the Soviet Union, and now this problem is an important one.

- Another important problem is the automation of our fertiliser industry. This problem is connected with the quality and pris

of the production.

- There are also problems concerning the corrosion and the safty work by the production of ammonium nitrate and urea.

Status of the Pesticide Industry in Bulgaria

St. Gaitandjiev

The People's Republic of Bulgaria is a country of an intensive agriculture which is distinguished for its variety of the plants grown. This requires the application of a comparatively large number of pesticides for plants protection.

In comparison with the other branches of the industry, the pesticide production is not so well developed. The chemical industry produces mainly fungicides and some herbicides. At present the insecticides production is chiefly based on the import of active substances which are formulated into the respective agricultural chemicals suitable for application. A part of the demands is met by the import from both the countries-members of the Council for Mutual Economic Aid, and from some West European countries. On its part the P.R. of Bulgaria supplies a lot of countries with the fungicide »Perozin« on sineb base.

The problems of the industry to be solved result from the great variety and the relatively small quantities of the pesticides applied which impedes the development of this industry. In this respect, the international specialization and co-operation of the Socialist Countries have a favourable effect.

Another problem to be solved is the supply with the needed raw materials, the full provision of which, on the basis of own

sources, is much difficult for a small country. The quick change in the pesticide variety owning to the decrease of the chemical efficiency because of fenomena of resistance manifestation or the natural selection of insects, fungi and weeds sensitive to certain pesticides by others which are resistant to them, causes difficulties too.

The toxicological problems cause also considerable complications, since the medical requirements toward the pesticides are on a quite high level in Bulgaria.

In a number of cases the pollution waters and waste products put problems for solution by the industry authoriries. In most cases their innocuity entails rather great expense for construction of purifying installations.

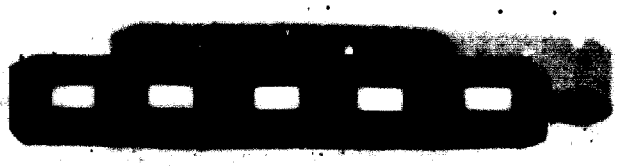
A possible way to get over the difficulties in the pesticides production, and to provide the needed variety of pesticides is the import of active ingredients and home production of the final preparation forms. In this respect, the prices at which the active substances are purchased are most frequently determinative, as it makes their formulation in our country economical profitable or not.

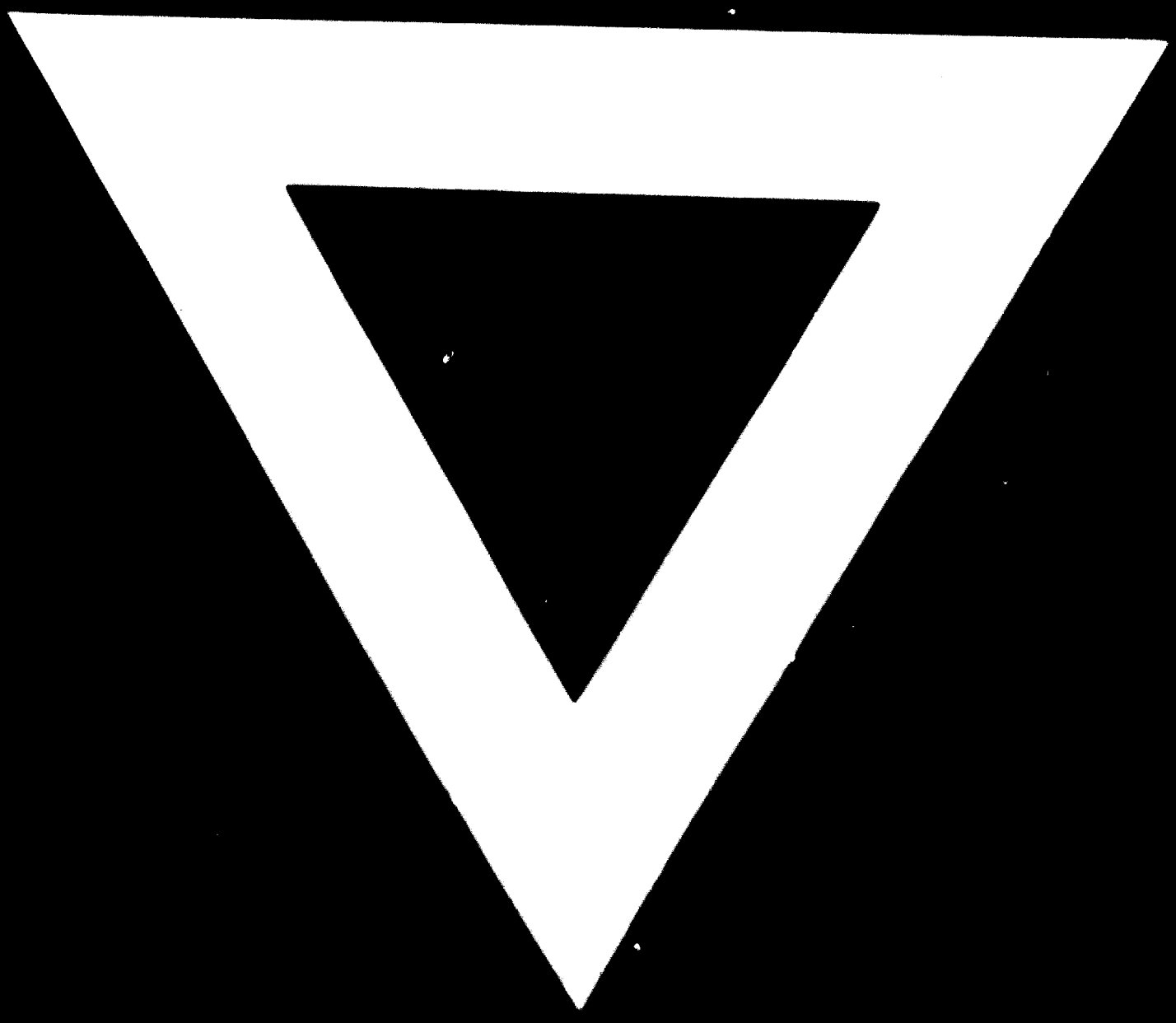
There are also problems concerning organisation of (1) the production of highly concentrated wettable powders from active substances having, comparatively, a low melting point; (2) formulation of compounds for low-volume and ultralow-volume spraying and (3) production of agricultural chemicals in the

form of smallsize granules. The problems of packing, as a whole, including the use of rather cheap and of high quality packing of available material, as well as, its second utilization, have to be taken also in view.

A point of interest for our industry is the possibility for use of universal installations or plants. These facilities allow, by means of small reconstructions, to produce several agricultural chemical of similar technology.

It is of importance to mention that there are high requirements concerning the labour security in our country. In this connection the high level of mechanization and automation securing a high degree of safety work is not economically acceptable for small installations. It is another problem to be solved.





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