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**THE PROSPECTS OF THE NITROGEN FERTILIZER  
INDUSTRY IN UKRAINE**

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# **The Prospects of the Nitrogen Fertilizer Industry in Ukraine**

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DEAR LADIES AND GENTLEMEN,

On behalf of the Ministry of Industrial Policy of Ukraine, I extend my deep gratitude to the Organizing Committee and administration of IFA for the opportunity to speak at this conference.

The production of mineral fertilizers and especially nitrogen fertilizers has been the key sector of Ukrainian chemical industry for many years. It retained its stability of the output as well as acceptable technological level because of modernization and overhauls of the units and other steps for providing reliability of the running equipment.

In 2002, in overall chemical and oil-chemical production, the sector of ammonia and nitrogen fertilizers produced 32% of the branch production, 15% - for domestic requirements and 29% for export. It confirms the great structural role of the sector in different spheres of national chemical industry.

At present, nitrogen fertilizers producing capacities are at the rate of 4 million tonnes (Mt) in 100% N, the level of their operating use fluctuates within 65-70%. Though Ukraine takes effective steps to ensure equal increase in production and consumption of other kinds of fertilizers, nitrogen fertilizers are leading in production (98%) and in home consumption (75%).

Carbamide (urea) and ammonia saltpeter dominate nitrogen fertilizers production in Ukraine. Their volume in the total output equates to 65% and 30% (as to nutrients) respectively, according to the results of the first half of 2003.

Characteristic feature of both products is an increase in both output and sales. Rate of growth of carbamide production in 2002 was 104% and ammonia saltpeter – 136%, and during the first half of 2003 – 115% and 99% respectively. Stable growth of production is practically present in all range of nitrogen fertilizers produced in Ukraine (ammonium sulphate, sodium and potassium saltpeter and others).

In recent years nitrogen fertilizers production in Ukraine underwent certain changes. Dynamics of financial and economic conditions was rather changeable as it was subjected to a considerable fluctuation of market situations.

For better understanding the situation in nitrogen fertilizers production in Ukraine, some main factors are to be pointed out. These factors define the dynamics of production as well as financial and economic processes in nitrogen sector and by this they reflect its key problems and trends of development.

- 1) First, high export rate of nitrogen fertilizers production over total sales. During the first half of 2003, it came to 85%; in carbamide products – 97%; and, ammonia salt pter – 57%. Under the conditions of limited national demand for mineral fertilizers caused by financial insolvency of a considerable part of agricultural enterprises, export deliveries play compensating role in retaining stability of producing and selling fertilizer products.

Ukraine exports 1.9 – 2 Mt of nitrogen fertilizers (in 100% N) annually. Regional structure of nitrogen fertilizers export from Ukraine suffers changes and constantly diversifies. It is preconditioned by situational market changes as well as by antidumping processes concerning mainly Ukrainian products. Today America (mainly Latin America) dominates in the regional structure of nitrogen fertilizers export from Ukraine. Its share accounts for 39%, Asia's – 34%, then come Africa – 14%, and Europe – 11%. Among countries the largest consumers of the Ukrainian nitrogen fertilizers are Brazil – 16%, Turkey – 17%, Vietnam – 9%, Egypt – 7%, Mexico – 6%. Data for the first half of 2003 show that overall, fertilizers are exported to 65 countries of the world.

- 2) The second factor constantly influencing dynamics of nitrogen fertilizers production in Ukraine is its high dependency on natural gas import. In recent years in Ukraine more effective competitive natural gas market started to develop. This is based on usual commodity - money relations and it leads to more transparency in price structuring for ammonia and nitrogen fertilizers. Now Ukrainian nitrogen fertilizers producers buy Russian gas at the declared price of \$ 60 US per tonne.

Consequently, nitrogen sector has an average price level for its gas supplies, lower than in Europe and the USA, but higher than in the Far East and the Middle East. Alongside with low labor price it provides for certain price competitiveness of the Ukrainian products and ensures stability of export “niches” and export potential of nitrogen sector of Ukraine.

It is worth pointing out that the competitiveness of Ukrainian nitrogen fertilizers is traditionally rather high and meets the requirements of the majority of markets in regions and countries. Certain amount of production has been certified by ISO system and many enterprises have activated this process. Fertilizers characteristics as commodity products are constantly improving as well as packing design and others.

- 3) The third important factor of Ukrainian nitrogen fertilizers production is market changes that take place in the whole sector and among some of their producers. These changes are:
  - a) Equal existence of enterprises with different forms of ownership as the result of their privatization. Thus, there are six producers in the sector, two of which are still state-owned, one enterprise control stock belongs to the state, and the remaining three enterprises are controlled by private shareholders;
  - b) Moderate level of concentration of production, the share of the largest producers does not exceed 25-27% of the total fertilizers production;

c) Absence of any direct or indirect subsidies or grants from the state.

The above-mentioned changes form a rather open competitive environment and provide equal opportunities for all Ukrainian producers of nitrogen fertilizers.

- 4) The fourth factor influencing inner processes in nitrogen sector is the necessity to radically improve the technological level of nitrogen production and also modernize and reconstruct the main operating units in the production of ammonia, nitric acid and other products which are raw materials for nitrogen fertilizers. The priorities in the development of chemical complex of Ukraine are given to technological competitiveness of the sector and decrease in the sources and energy consumption.

This process needs financing and therefore is rather a long-term objective and needs concentration of considerable investments. Now in Ukraine the development of a new gas-turbine plant ГТТ – 8 (GTU – 8) for the units of nitrogen fertilizers production is going on. (The company ALVIGO in partnership with turbine-building plants of Ukraine is busy with the project). Some enterprises stated reconstruction of carbamide production, projects for modernizing ammonia units are being developed and other steps are being taken.

At present the nitrogen sector of Ukraine has greatly improved catalytic provision of technological processes. During the last three years joint venture “Alvigo-KS”, founded on the basis of “Amalgamation Azot” producing catalysts, with the assistance of specialized research institutes, practically completely renewed the range of the produced catalysts for the production of ammonia, methanol and gas purification.

Current technological and technical innovations, directed at the reduction of production costs, material input per unit of production and decrease of power intensity are implemented at most nitrogen-producing enterprises of Ukraine. But in general the sector has just started technological renovation of the functioning plants. The main deterrent is the absence of necessary investment resources, both their own and borrowed.

There is a number *of external factors* that influence the dynamics of nitrogen fertilizers production in Ukraine, especially permanent anti-dumping processes initiated in various countries or regions concerning the supply of nitrogen fertilizers produced in Ukraine.

Today Ukrainian products are the object of anti-dumping procedures or sanctions in a number of countries and regions (Brazil, USA, Hungary, Slovakia, and others). Special regime of market economy (MES) applied to Ukraine and the leading plants producing nitrogen fertilizers changed little in anti-dumping probes. Ukraine has just started to acquire the experience of defense from illegal anti-dumping sanctions and expects the understanding and support of IFA.

It is necessary to mention that Ukraine in 2002, for the first time, initiated anti-dumping investigations as to the delivery of ammonia saltpeter to Ukrainian market. It was over in May 2003 by introducing restrictions of supervision over the import of this kind of fertilizers in Ukraine. Similar procedure has been introduced as to the delivery of phosphorous fertilizers in Ukraine. In order to prevent anti-dumping procedures on some products and regulate market-pricing policy in Ukraine, there is a system of indicative prices that extends to ammonia and carbamide.

In the second part of my speech, I would like to describe the state and trends of *home market of nitrogen fertilizers in Ukraine*. The dynamics of internal consumption of mineral fertilizers in general and nitrogen ones in particular are unsteady. Taking into consideration the non-agricultural use of mineral fertilizers, their average annual volume of domestic consumption was, during the last several years, from 400,000 t to 500,000 t (in 100% N-P-K), and from 320,000 t to 442,000 t of nitrogen fertilizers (in 100% N).

Direct supplies of nitrogen fertilizers to agricultural enterprises stabilized lately at the level of 320-350,000 t (in 100% N). Therefore, in Ukraine, real application of nitrogen per one hectare of land under cultivation is 16-18 kg/ha (that is 30-35% of lower than the minimal calculated need). The main reason for this situation is the absence of effective demand of agrarian workers, incomplete reform of the agricultural sector in Ukraine, low technological level of agricultural production.

The structure of home consumption of nitrogen fertilizers in Ukraine is unstable. Till 2001 home consumption was supplied primarily with national products, which held a 95% share of the domestic market of nitrogen fertilizers. Starting in 2001, began the process of active delivery of Russian ammonia saltpeter and nitrogen in the form of complex fertilizers to the Ukrainian market. The share of nationally manufactured products dropped in 2002 to 73%; and for the first six months of 2003, it is 80%.

It is necessary to underline that the Ukrainian market of nitrogen fertilizers (and mineral fertilizers in general) is characterized by a high level of market saturation while volume of supply of nitrogen fertilizers is at low level of demand. I would like to mention some peculiarities characterizing today's market of mineral and nitrogen fertilizers in Ukraine.

- (1) Starting in 2001, the system of state deliveries was cancelled in Ukraine and transition to market mechanism of supplying home market with mineral fertilizers was implemented. Nowadays in Ukraine there is a system of indirect subsidizing of agricultural products producers and traders by means of soft credit, on favourable terms, for buying petroleum products and agricultural chemicals for farming. The level of indirect subsidy is very limited and amount to \$50-60 million per year. It is clear that this is one of the important factors reflecting demand restrictions in the market of nitrogen fertilizers in Ukraine.
- (2) Within the structure of home consumption of mineral fertilizers, nitrogen fertilizers dominate steadily — about 75%. It mainly comprises ammonia saltpeter; its share in the home consumption of nitrogen fertilizers is over 85%. It is obvious from this information that in Ukraine today, the optimum combination of nutrients incorporated into the soil is greatly unassumed. Lately the trend for the increase of use of complex fertilizers is noticed. During the first six months of 2003 the share of nitrogen applied as complex fertilizers was about 15%.
- (3) The Government of Ukraine, some Ministries, enterprises producing agricultural chemicals and producers of agricultural products have undertaken measures for boosting home market of mineral fertilizers. These are: introduction of optimal seasonal and minimal release prices, creation of chains of wholesale and retail trade, expansion of the fertilizers range. At present in Ukraine the production of calcium-ammonium and calcium saltpeter as well as mixed and complex mineral fertilizers and other fertilizers are being brought into production.

Potential capacity of home market of mineral fertilizers in Ukraine is very high, at about 4.4 Mt (100% N-P-K), including 2.2 Mt of nitrogen fertilizers (100% N). The process of expansion of home market will be progressive.

By our estimates, the rate of growth of home consumption of nitrogen fertilizers is possible up to 8-10% per year in the coming years.

Therefore, there are no prospects that home market can use considerable volume of the produced nitrogen fertilizers. Nitrogen sector in Ukraine will remain export oriented. It is necessary to keep in mind that some kinds of nitrogen fertilizers produced in Ukraine are practically not used in home market. These are carbamide, carbamide-ammonia mixtures and others. That is why the process of further integration in world nitrogen industry is especially important for Ukrainian nitrogen industry.

This process is also considered in the context of our joining the WTO. We hope that these integration processes will allow us to eliminate trade discrimination and use generally accepted laws for the protection of Ukrainian exporters' interests.

Ukraine is ready to follow generally accepted norms at the world market of nitrogen fertilizers to avoid trade disputes and opposition to Ukrainian export.

Thank you for your attention.