CURRENT STATUS AND TRENDS OF MINERAL FERTILIZERS WORLD MARKET DEVELOPMENT

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ABSTRACT

The world market of mineral fertilizers in the last decade has remained robust, driven by growth in the global economy in general and agriculture in particular. This market is one of the most consolidated and highly competitive.

At present, the global fertilizer industry is characterized by the fact that 1) the raw material for the production of mineral fertilizers are natural gas, phosphate rock and potash, deposits of which are available in a limited number of regions of the world, and 2) a steady rise in prices for energy and raw materials has a significant impact on prices for mineral fertilizers because their production is highly energy-intensive and commodity dependent, and 3) capacity is highly capital-intensive and concentrated near the sources of raw materials, ports, or, to a lesser extent, markets after the global crisis of 2008-2009 was characterized by the fertilizer industry recovery in global demand, and for some products - increase compared to pre-crisis levels, which positively affected both the volume of production, and the sales of mineral fertilizers.

If the consumption of fertilizers in Kazakhstan increase to a certain extent in the future, despite the complexity of current situation to which we now have some prerequisites (and export of fertilizers after the crisis undoubtedly revived), and this will cause an increased interest in the sources of minerals for the production of fertilizers; and to the development of known deposits; and to search for the new deposits, especially in areas close to the major agricultural zones.

KEYWORDS: Material, Mineral Fertilizers, Silvinit

INTRODUCTION

The world market of mineral fertilizers during last decades developed on higher levels, one of the reasons world economy growth as a whole and agriculture in particular. Current market is one of the most consolidated and highly competitive. The regional structure of distribution of world capacities of mineral fertilizers looks as follows. In China there are 62.8 % of all world capacities of nitric fertilizers. Production of mineral fertilizers in Russia carries out by 30 enterprises from which 20 are large players on the market. Currently leading position in the demand structure of mineral fertilizers is shared by nitric fertilizers, their consumption grew in 2011 with advancing rates (3.6%) in relation to phosphoric (2.5%), but lagged behind growth rates of potash fertilizers (6.4%).

Main part

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The regional structure of distribution of world capacities of mineral fertilizers looks as follows. In China there are 62.8% of all world capacities of nitric fertilizers. The leading position on volume of capacities is occupied by China and in a segment of phosphoric fertilizers. In a segment of potash fertilizers the leader is Canada where nearly 25% of world capacities are concentrated.

China is not only the largest producer, but also the largest consumer of mineral fertilizers. So 30% (absolute leadership) are the share of China consumption of nitric fertilizers, 32% (also leading position) in consumption of phosphoric fertilizers and 14% of consumption of potash fertilizers (concedes only to India).

Production of mineral fertilizers in Russia carries out by 30 enterprises from which 20 are large players on the market. In world production of mineral fertilizers Russia occupies 10%, and in production of ammoniac saltpeter 1st place, the 2nd in production of chloride potassium and 3rd in production ammonophos. The largest producer of nitric fertilizers is EuroChem which market share - 25% of all produced nitric fertilizers in Russia.

The largest producer of phosphoric fertilizers with market share - 51% is PhosAgro. JSC Uralkali and JSC Silvinit which has united in 2011 in group of companies produced almost all volume of potash fertilizers. In Kazakhstan the largest producer of chemical production is Kazphosphate LLP.

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According to the forecast of the International Fertilizer Industry Association (IFA), the greatest gain in the world demand for fertilizers will be shared by East and South East Asian countries (by 1.4 million tons respectively) and Latin America (1.3 million tons). In East Asian countries in the next five years the main gain of demand will be increased in a segment of nitric and phosphoric fertilizers — 28 and 33% from world demand for them respectively.

Thus, according to IFA the largest producers of nitric fertilizers in 2011 were China (34%), India (10%), USA (9%).

**Structure of world production of nitric fertilizers by countries**

- 28% other countries
- 24% USA
- 17% Russia
- 16% China
- 8% Morocco
- 7% Tunisia

Source: IFA

According to IFA sources largest producers of potash fertilizers in 2011 were Canada (23%), Russia (19%), Belarus (13%).
Thus it is necessary to note that in 2011 specific weight of consumption of nitric fertilizers from total amount of mineral fertilizers were – 60 %; phosphoric fertilizers – 25 %; potash fertilizers – 15 %.

Currently world industry of mineral fertilizers is characterized as follows: 1) raw materials for production of mineral fertilizers are natural gas, phosphate ores and the potash salts which fields are available in limited number of regions in the world; 2) stable growth in prices for energy resources and raw materials shows considerable impact on a price level on mineral fertilizers as their production differs high power consumption and raw dependence; 3) capacities are characterized by a high capital intensity and are concentrated near sources of raw materials, seaports or, to a lesser extent, sales markets.

It is important to note following key factors of fertilizers world consumption growth

- world population growth conducts to increase in demand at the main food at simultaneous reduction of a resource of free world cultivated land counting on the person that causes need of an intensification of agriculture, development and introduction of new technologies. Needs of agricultural producers for mineral fertilizers as a result grow, and also their qualitative characteristics change.

- in recent years difficult climatic conditions negatively affected a crop of agricultural cultures in many of leading countries of producers and led to decrease in world reserves of grain that in turn led to increase in demand for mineral fertilizers.
• Increase of the income per capita in emerging economies conducts to food allowance improvement. There is a growth of consumption of production of animal husbandry, in particular, meat and dairy products that demands production of additional volumes of production of plant growing, and, as a result, conducts to increase in demand at mineral fertilizers.

• Increase of demand on biofuel (bioethanol, biodiesel engine) respectively draws additional demand for agricultural products of technical use and for fertilizers.

After crisis of 2008 — 2009 the world industry of mineral fertilizers was characterized by restoration of world demand, and on some products — a gain in comparison with pre-crisis level that positively affected both volume of production, and sales of mineral fertilizers.

Demand on mineral fertilizers increased practically in all regions of the world, except Eastern Europe and Central Asia where it remained stable, and Western Asia where it was reduced by 3 %. Advancing rates it grew in the countries North (10%) and South (12%) America, South Asia (4,5%) and Western and Central Europe (5,2%), in comparison with lower rates in the African countries (3,4%).

As a whole global consumption of mineral fertilizers in 2011 according to IFA increased up to 5%.

**World consumption of mineral fertilizes (In Useful Substance), Million Tons**

![Chart showing world consumption of mineral fertilizers]

Source: IFA

The gain of capacities in 2011 occurred lower in comparison with predicted rates. Loading of capacities as a whole in industry was estimated at 83%, including in the nitric industry — in 98%, in production of phosphoric acid — in 96% that caused a high price level on specified production.

The major factors defining a situation in the market of mineral fertilizers were:

• an expected rise in prices for the Russian gas in Ukraine for industrial producers that will lead to growth of export price minimum through passage for the Ukrainian producers on ammonia and nitric fertilizers, defining at present a "threshold" price level on nitric fertilizers in the world;

• rather low price level on natural gas in the USA that raises level of competitiveness of own production of ammonia and nitric fertilizers (exist plans on renewal of production of ammonia and nitric fertilizers in the USA);

• saving of high quotations on agricultural products that will make positive impact on a price level on mineral fertilizers and their consumption in leading agricultural regions;

• preservation of high degree of dependence of world quotations in inter-season period in other regions from an import of limited number of the countries which actually dictate the prices in the market (India — in the field of phosphoric and nitric fertilizers).
On IFA forecasts in the short term the offer of nitrogen-containing products, a carbamide and phosphoric acid in the world market will grow advancing rates in comparison with demand that conducts to a growing imbalance between their supply and demand and can negatively affect the prices.

The main characteristic of 2012 — preservation of the general macroeconomic instability in the world and growth of volatility of quotations on mineral fertilizers, growth of influence of speculative factors in formation of the prices.

**CONCLUSIONS**

It is necessary to note a tendency of transition of the centers of influence in the field of mineral fertilizers from the traditional markets of Europe and the USA on quickly emerging markets of Asia and Latin America.

Thus, it is important to emphasize that Kazakhstan plans to enter the world market of mineral fertilizers. In the republic the largest producer of chemical production is Kazphosphate LLP. Made production is exported to CIS countries, EU and other foreign countries. The company is the unique producer of phosphorus and orthophosphoric acid in the CIS, the large producer tripolyphosphate sodium and phosphoric fertilizers.

In 2011 in comparison 2010 volume of production growth estimates 65%, at the expense of increase in production in 1.3 times tripolyphosphate sodium and yellow phosphorus, in 1.5 times of mineral fertilizers and in 1.8 times of phosphoric acid. In 2011 export of yellow phosphorus was about 60 thousand tons, tripolyphosphate sodium 86 thousand tons, phosphoric acid 8.5 thousand tons, ammophos 84 thousand tons etc.

If further, for a number of years, consumption of mineral fertilizers in Kazakhstan, despite complexity of a situation, nevertheless considerably increases, to what now there are certain preconditions (and export of fertilizers after crisis will undoubtedly revive), it will cause also heightened interest in sources of mineral raw materials for production of fertilizers: and to development of already known fields, and to search new, first of all in the areas approached to the main agricultural zones.

Today industry at a stage when further development is impossible without large-scale technological modernization of production, introductions of resource-and energy saving technologies and, perhaps, the most important – improvement of structure of management of industry. Realization of these measures will allow to carry out industry modernization in all directions and to provide competitiveness of the enterprises making mineral fertilizers in long-term prospect. This task quite achievable. The potential for development of chemical sector of national economy and a rich source of raw materials is exist.

**REFERENCES**


