

## **MAIN ASPECTS OF LABOUR SAFETY DURING MINERAL FERTILIZER WORK**

**Mykhailova E.O., Moroz M.O.<sup>1</sup>**

*Simon Kuznets Kharkov National University of Economics,<sup>1</sup>  
O. M. Beketov National University of Urban Economy, Kharkiv*

Scientific research and world practice testify to the great importance of mineral fertilizers in agriculture. It is known that mineral fertilizer use increases the yield by 30 – 40 %, creates a balance of nutrients in the soil, and improves the circulation of biogenic elements.

Mineral fertilizers are artificially synthesized chemical preparations, which include necessary plant development compounds: nitrogen, phosphorus, potassium and others. Mineral fertilizers are produced and used in powder, granule and liquid form. The aggregate fertilizers state does not change during operation, but some components may enter the working area air in dust, vapour and gas forms. Get into the human body, mineral fertilizers' dangerous components affect the cardiovascular and digestive system's work, cause upper respiratory tract diseases, and irritate the mucous membranes of the eyes and skin. The pollutants concentration in working area air depends on work type, mechanization production process level, the aggregate fertilizers state and the completeness of sanitary standards compliance. In addition, under certain conditions, mineral fertilizers can be explosive and fire-hazardous.

To organize a safe work process during mineral fertilizer work the following requirements are put forward:

- compliance with norms, rules and instructions on labour safety during mineral fertilizer work, in particular, the Law of Ukraine "On Pesticides and Agrochemicals" (1995) and the NLALP "Minimum requirements for the safety and health of workers at work during storage, packaging ammonium nitrate and its use for the production of complex and liquid mineral fertilizers" (2021);
- mandatory use of collective and individual protection by employees;
- minors, pregnant women and persons who have not passed a medical examination are not allowed to work with mineral fertilizers;
- powdered mineral fertilizers are delivered to the place of their application on a special vehicle equipped with unloading equipment;
- liquid mineral fertilizers are delivered to the place of their application in containers on trucks or transport barrels;
- it is not allowed to transport ammonium nitrate with other mineral fertilizers on the same vehicle;
- it is not allowed to carry out work related to ammonia-containing mineral fertilizers during the dark hours of the day;
- containers from mineral fertilizers are subject to disposal, it is forbidden to use them for storing fodder, water, etc., even after they have been disinfected.

Compliance with the specified requirements will significantly reduce the risk of industrial injuries, preserve employees' health and lives, and relieve the employer of dangerous working conditions responsibility.