The aim was to compare the effects of liquid nitrogen fertilizer - carbamide-ammonia mixture (CAM) and liquid organic and mineral fertilizers manufactured at the base of CAM with the addition of potassium humate (OMF), which brought during cultivation before sowing barley, on elements of the nitrogen regime of chernozem typical.

We investigated the following components of soil nitrogen regime - the total nitrogen content of ammonia, nitrate and nitrogen, which is easily hydrolyzed. The content of nitrogen in the soil was determined three times during the growing season of spring barley. The research was carried out in terms of field short-term experiment. It was established that CAM and OMF application intensifies nitrogen mineralization in soil. It was found that fertilizers application during presowing cultivation at the time of full ripeness of barley increases the content of potentially available nitrogen on variants with application of OMF by 1-12% compared to control (without fertilizer).

**Keywords:** Carbamide-ammonia mixture (CAM), liquid organic and mineral fertilizers (OMF), nitrogen regime, chernozem typical, spring barley.

**References**
