FORMATION OF A HIGH YIELD LETTUCE FOR INTRODUCTION NITROGEN FERTILIZER

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Shows the effect of nitrogen fertilizer norms (N 30–90) in conjunction with the established norms of phosphorus and potassium on yield and quality of products and seed production of lettuce seed varieties on podzolic chernozem of the Right Forest-step Ukraine.

Installationof problem. Science and practice proposed many effective measures, but is the foundation of all variety for early crop, that tends to quickly create their economic properties under optimal conditions. But in many cases growing conditions independent of human reason consists not such as to plant, and therefore scholars and practitioners have offered a lot of techniques, that help create conditions as close to optimal: the choice of variety, method of seedling growing, plant growth regulators , balanced organic and mineral fertilizers , artificial acceleration of ripening, etc. [1–5].

Getting early production contributes not only to accelerate consumption and the extension of general consumption, increase profits from high prices for early vegetables. Therefore, after reviewing the literature, we concluded, that the most effective measures that contribute to obtaining early harvest and thereby extend the time consumption is the varietal characteristics and choice of variety, method of seedling growing, making a balanced fertilizer, application of growth regulators [7,9,10, 11,12].

Lettuce is very picky about the availability of nutrients in the soil. Yes, A.H. Pantiyelyev was reported that the plant makes from the harvest of potassium twice larger than nitrogen and six times more than the phosphorus [9]. At the same time, the introduction of nitrogen fertilizer, as the D.A. Korenkov significantly enhances was used of plants nitrogen from the soil [4]. As noted by other scientists,share in

total soil nitrogen removal with the harvest lettuce on fertile soils is higher, than the relatively poor sod-podzolic [5, 10, 13].

Object ofinvestigation. The aim of research was to study the conditions obtaining high yields of lettuce under different rates of nitrogen application on phosphorus-potassium background.

Result of investigation. Introductionnitrogen fertilizer rate of 30 kg/ha was contributed to a higher content of nitrate nitrogen in the soil layer 0–20 cm and bring it to a level of 29,2 mg/kg, while in control of the content contained at 13,4 mg/kg. Increased standards for nitrogen on the phosphorus-potassium background to 60 and 90 kg/ha was helped increasenitrate nitrogen to 30,9–32,4 mg/kg.

Increasing the number of mobile forms of nutrients in the soil for years of studies found in the upper and in the lower layers of the soil to a depth of 60 cm, which houses most of the root system of lettuce and it shows greater mobility of nitrogen in the soil profile.

Level of lettuce yield is depends on many factors, among which are at the forefront of fertilizers.

Yield variety of lettuce isdepends on the rules of chemical fertilizers and weather conditions of the year. Thus, in 2000 y. lettuce yield was lower by 4,9 t/hacompared with the control, and in 2001 – higher by 2.6 t/ha, which corresponded to the amount of precipitation during the formation of the heads, which were much less in 2000 y., at the same time increasing the dose of nitrogen from 30 to 90 kg/ha against the backdrop of phosphate and potash fertilizers increase yield provided by the variety Kucheryavets odesskiy on 28, 45 and 55 % in Fortunas – 3, 21, 31 %.

It is established that the introduction of nitrogen fertilizer in the norms of 30 to 90 kg/ha phosphorus-potassium background ensured obtaining environmentally sound crop of lettuce, which is characterized by high levels of quality. The nitrate content of lettuce for future sales was at a lower level for the maximum level. Thus, if the definition of MOH of Ukraine for greens vegetables nitrate maximum allowable concentration must be at 2500–2750 mg/kg wet weight, in our studies, their content was observed at the level of 364–535 mg/kg. The highest content of nitrates was observed production of lettuce in 2002 y., when during the growing season

precipitation fell the least, and plants suffer from lack of moisture and under such conditions in the plant tissues accumulated more nitrate.

In general, the produce grown in the experiment was environmentally safe and the content of soluble dry matter, sugars and vitamin C was characterized by relatively high quality. The use of appropriate doses of nitrogen for growing lettuce on a background of phosphate and potash, did not reduce the quality of the resulting product. In the fifth embodiment of the experiment, which made the highest dose of nitrogen, the amount of vitamin C in leaves and heads of lettuce was at 30,3 mg/kg. Least amount of vitamin C differed plant of control variety, where the content was reduced to 25.8 mg/kg wet weight.

Summery. The plant lettuce varieties Kucheryavets odesskiy and Fortunas by growing them with the introduction of nitrogen into the background phosphorus-potassium fertilizers can within a relatively short growing season produce than other vegetables large vegetative mass. Heaviest weight and head diameter provides for the introduction of nitrogen fertilizer to the soil at doses of 60 and 90 kg / ha in the background phosphorus and potassium .

Found that the introduction of nitrogen fertilizer rate in 60 and 90 kg / ha ai helped increase the area of leaves of lettuce seed varieties Kucheryavets Odessa at 2,52-3,12 m2/m2 and utilization of PAR at 2,60-2,76 % and grade Fortunas respectively 2,5-3,3 m2/m2 and 2 64-2,82 %.

It is shown that increasing doses of nitrogen from 30 to 90 kg/ha phosphorus-potassium background ensured the growth of productivity in a variety Kucheryavets Odessa respectively 5.5, 8.8 and 10.9 t/ha, sort Fortunas – 1.9, 5.4 and 7.3 t/ha and showed no negative influence on the content of vitamin C, soluble sugars and dry matter production of lettuce grown in seed varieties Kucheryavets odesskiy and Fortunas .