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ABOUT CABBAGE IS AN IMPORTANT FACTOR FOR PRODUCING AN ABUNDANT AND QUALITY PRODUCT AND SAFE BIOLOGICAL PURE PRODUCT FOR HUMAN HEALTH

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Abstract:
Research has established that in order to obtain a high and stable yield with good taste qualities of cabbage, it is recommended to use phosphorus of 100 kg / ha P_2O_5 against the background of N200 K100. At the same rates of application, ammophos is more effective than nitrocalcium phosphate fertilizer.

Keywords: fertilizer, cabbage, qualities, effective,phosphate, ammophos

INTRODUCTION.

In order to solve the food problem in the world, ie to ensure safety, it is necessary to increase the production of vegetables, to grow quality and environmentally friendly products. To meet the needs of an adult for vitamins, protein, carbohydrates, mineral salts, it is necessary to consume 1200 g of plant products and 70 g of livestock products per day. Vegetables should make up 42 percent of plant production. According to medical standards, a person is required to consume 108 kg of vegetables, 19 kg of melons and 54 kg of potatoes per year.

In January-December 2021, 1,521.8 thousand tons of fruits and vegetables worth $ 957.3 million were exported to foreign countries.

The largest share in terms of value in exports of fruits and vegetables is vegetables (42.2%), fruits and berries (29.3%)

The share of fruits and vegetables in total exports was 5.8%.

At a time when the current global problem situation, the Sovid-19 pandemic, poses a threat to human health, providing the population with vitamin-rich, environmentally friendly products is a huge responsibility of agricultural workers.

In our country, it is important to meet the demand of the population for vitamin products with cabbage and vegetable products.

From this point of view, one of the most important issues is the development and implementation of measures to ensure a rich harvest and quality products from white cabbage.

Materials and methods. To achieve this goal, field experiments are being conducted in the conditions of typical carbonate gray soils of Samarkand region. The experiment is conducted in 8 variants 4 repetitions. The location of the piles was in a systematic tier. Experimental study of 4 norms of phosphorus-containing NKFU fertilizer on the background of N200 K90, the norm of ammophos and Ps-agro fertilizer per 100 kg. In our study, a hybrid of cabbage "Sevirina F1" was planted.

Field experiment soil topsoil (0-30 cm) has the following agrochemical properties: humus - 1.28%, total nitrogen - 0.09%, total phosphorus - 0.22%, total potassium - 2.2%. The Sevirina F1 hybrid was planted.

All technological processes were carried out on the basis of agro-technical recommendations adopted for the region, biometric measurements, soil and plant analysis were carried out in standard methods adopted in agrochemistry and botany.

Results and their analysis. High yields of cabbage are obtained in soils rich in phosphorus. Phosphorus should be applied in the fall to soils with very low phosphorus content, it is better to apply water-soluble phosphorus fertilizers to well-supplied soils before planting.

In our research, various phosphorus-containing fertilizers have played an important role in the production of high-quality white cabbage.

In the fertilizer-free control variant, the yield of white cabbage was 270.5 ts / ha per hectare, while in the variant using 200 kg of nitrogen and 90 kg of potassium, an additional yield of 168.1 ts / ha was obtained. Application of NKFU fertilizer from 60 kg to 180 kg / ha allowed to get an additional yield of 179.1 - 216.1 ts / ha compared to the control option. While the highest yield was observed in the variant using NKFU 180 kg / ha, a reliable additional yield was obtained in the variant using NKFU 100 kg / ha at 473.5 ts \ ha -449.6 ts \ ha = 23.9 ts \ ha (EKIF05 = 7.8 ts \ ha).

In the fertilizer-free control variant, the dry matter content was 7.3%, total sugar content was 6.3%, vitamin C was 22.3 mg,%, and nitrates were 194 mg / kg. In terms of nitrate content, all options were found to be less than the limited amount (300 mg / kg, NO3) and meet quality requirements.

The use of mineral fertilizers had a positive effect on the quality of white cabbage, including ammophos, NKFU and PS-agro fertilizers in the same (100 kg / ha) variants with a dry matter content of 14.5%, total sugar content of 10.6%, vitamin C 34 , 3 - 34.4 mg,% and nitrates 248 - 249 mg / kg (Table 1).

The effect of phosphorus-containing fertilizers on cabbage yield and yield quality.

Table 1

№	Options	Productivity,ц/га	Dry matter %	Total sugar content %	"C" vitamin мг %	Nitrates мг/кг	Bioenergetic Efficiency of Phosphorus Conservation Agents
1	control	270,5	7,3	6,3	22.3	194	-
2	N200K90 – fon	438,6	12,80	10,3	33.1	268	1,34
3	Fon + P100 (Ammophos)	475,4	14,50	10,6	34.4	249	1,27
4	Fon + P60 (NKFU)	449,6	13,60	10,2	34.4	252	1,22
5	Fon + P100 (NKFU)	473,5	14,30	10,6	34.3	249	1,26
6	Fon + P140 (NKFU)	480,7	14,50	10,3	34.6	256	1,19
7	Fon + P180 (NKFU)	486,6	14,90	10,4	34.7	259	1,14
8	Fon + P100 (PS-agro)	476,7	14,50	10,6	34.5	248	1,28
			EKIF	7,8			
			S_x %	3,8			

Phosphorus uptake by cabbage crop depends on the level of phosphate supply in the soil, the form of fertilizer and the demand of the crop for phosphorus. In the control variant in the cultivation of white cabbage in the conditions of typical carbonate gray soils, the amount of phosphorus absorbed from the soil varies depending on the weight of phosphorus in the content of cabbage. In the control variant, the amount of mobile phosphorus absorbed from the soil was 17.6 kg / ha, while in the NK variant the figure was 28.5 kg / ha. It was found out that in the

variants of phosphorus-containing fertilizers obtained on the basis of Kyzylkum phosphorites, cabbage yielded from 29.2 to 33.8 kg of phosphorus per hectare.

The highest utilization rate of phosphorus-containing fertilizers is observed in the variant applied NKFU 60 kg / ha and is 19.4%. In the subsequent increase of fertilizer rates, a decrease in the efficiency of phosphorus was observed

Determination of the bioenergetic efficiency of new types of phosphorus-containing fertilizers in the cultivation of white cabbage under the conditions of typical carbonate gray soils showed that the amount of energy in the obtained by-product was 24206.4 Mj in NK variant, 25790.4 - 31118.4 Mj in phosphorus variants. Its amount depends on the amount of energy expended on the fertilizer. The amount of bioenergy returned with the additional crop ranged from 1.14 to 1.34 according to the options. The highest energy utilization factor was observed in the N200K90 variant.

CONCLUSION

Among the phosphorus-containing fertilizers studied, the fertilizer with the highest bioenergetic efficiency was found to be PS-agro.

Conclusions in the conditions of carbonate saline gray soils of the Zarafshan valley, the application of N200 K90 fertilization rate of 100 kg R2O5 per hectare to obtain a rich and high-quality crop of cabbage provides a reliable additional yield. Subsequent increases in the studied norm do not allow ammophos and Ps-agro fertilizers from reliable phosphorus-containing fertilizers to yield additional yields compared to NKFU fertilizers.

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