

THE IMPORTANCE OF MINERAL FERTILIZERS IN CORN GROWING

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Abstract

This article provides information on the role of mineral fertilizers in corn cultivation, their impact on yield and grain quality. The importance of nitrogen, phosphorus and potassium fertilizers in corn growth is analyzed and the economic efficiency of their moderate application is highlighted.

Keywords: Corn, mineral fertilizer, nitrogen, phosphorus, potassium, yield, soil fertility.

Introduction

MAKKAJO‘XORI YETISHTIRISHDA MINERAL O‘G‘ITLARNING AHAMIYATI

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Annotatsiya:

Mazkur maqolada makkajo‘xori yetishtirishda mineral o‘g‘itlarning o‘rni, ularning hosildorlik va don sifatiga ta’siri haqida ma’lumot beriladi. Azot, fosfor va kaliy o‘g‘itlarining makkajo‘xori o‘shidagi ahamiyati tahlil qilinadi hamda ularni me’yorida qo‘llashning iqtisodiy samarasi yoritiladi.

Kalit so‘zlar: makkajo‘xori, mineral o‘g‘it, azot, fosfor, kaliy, hosildorlik, tuproq unumdorligi.

Аннотация:

В данной статье представлена информация о роли минеральных удобрений в выращивании кукурузы, их влиянии на урожайность и качество зерна. Анализируется важность азотных, фосфорных и калийных удобрений для роста кукурузы, а также подчеркивается экономическая эффективность их умеренного применения.

Ключевые слова: кукуруза, минеральные удобрения, азот, фосфор, калий, урожайность, плодородие почвы.

Introduction

Achieving high productivity in agriculture is one of the important tasks of today. The growing population increases the demand for food products. Therefore, the cultivation of high-yielding crops and improving their care technology are of great importance. Corn is one of such important crops, which is a valuable product for food, fodder and industry.

Due to the presence of starch, protein and other useful substances in corn grain, it is used for various purposes. The productivity of this crop largely depends on soil fertility and the fertilization system. If there are not enough nutrients in the soil, plant growth slows down and the yield decreases. Therefore, the rational use of mineral fertilizers is one of the main factors in achieving high yields.

Mineral fertilizers contain the elements nitrogen, phosphorus and potassium necessary for plants. These substances play an important role in the development of the root system of corn, the formation of stems and leaves, and the quality formation of grain.

The role of mineral fertilizers in the development of corn

Corn is a nutrient-demanding crop. When there are not enough nutrients in the soil, plant growth slows down, leaves turn yellow, and yield decreases. Therefore, the use of mineral fertilizers is one of the main factors in obtaining high yields.

MAKKAJO'XORI YETISHTIRISHDA MINERAL O'G'ITLARNING AHAMIYATI

Mineral o'g'itlar makkajo'xorining sog'lom o'sishi, yuqori hosil va sifatli don mahsulotini ta'minlashda muhim omildir.

TO'G'RI O'G'ITLASH – YUQORI NATIJ!

- ✓ O'g'ini o'z vaqtida berish
- ✓ Me'yoriga rioya qilish
- ✓ Tuproq tahliliga asoslanish
- ✓ Suv va agroteknika e'tibor berish

Hosildorlik oshadi
To'g'ri o'g'itlash don-hosilni 20–40% gacha oshiradi.

O'sish jadallashadi
O'simlik tez va bir maromda o'sadi, tanglar yirik va sog'lom bo'ladi.

Ildiz rivojlanishi
Kuchli ildiz tizimi urazning suv va ozqin moddalarini yanishi o'zlashtirishi ta'minlaydi.

Tuproq unumdorligi
Mineral o'g'itlar tuproqni sog'lom holatda tutib turishga yordam beradi, unumdorlikni oshiradi.

ASOSIY MINERAL ELEMENTLAR
Makkajo'xorining to'liq rivojlanishi uchun uchta asosiy element zarur:

N Azot (N)
O'SIMLIKNING O'SISHIGA TA'SIRI
Barg, po'puz va novdalarining tez o'sishini ta'minlaydi. Yashil massa hosil bo'lishini kuchaytiradi.

P Fosfor (P)
ILDIZ VA RIVOJLANISHGA TA'SIRI
Ildiz tizimini kuchaytiradi, o'sish va rivojlanishni yaxshilaydi, gullash va don bog'lanishini rag'batlantiradi.

K Kaliy (K)
SIYQ VA CHIDAMLILIKKA TA'SIRI
O'simlikning siyq saqlash, ushbu siyq bilan kasalliklarga chidamligini oshiradi. Darning siltash va xarabasi oshiradi.

TUPROQ UNUMDORLIGI
Mineral o'g'itlar tuproqni sog'lom holatda tutib turishga yordam beradi, unumdorlikni oshiradi va katta miqdordagi oziq-ovqat mahsulotini ta'minlaydi.

ILMGA ASOSLANGAN O'G'ITLASH – YUQORI HOSIL VA FAROVON KELAJAK KAFOLATI!

Nitrogen fertilizers play an important role in the formation of stems and leaves of corn. If there is enough nitrogen, the green mass of the plant develops well and the photosynthesis process is enhanced. However, excessive use of nitrogen can also have negative consequences. For example, the plant becomes excessively tall and the ripening of the grain crop is delayed.

Phosphorus fertilizers improve the development of the root system. When phosphorus is sufficient, corn ripens early and increases its resistance to drought. Phosphorus is also important in improving the quality of the grain crop.

Potassium fertilizers increase the plant's resistance to diseases. Potassium regulates the process of water exchange and helps corn adapt to adverse weather conditions.

To obtain a high and high-quality yield of corn, it is important to apply fertilizers in the correct proportions. Since the composition of each soil is different, the amount of fertilizer is determined accordingly. According to agrochemical experts, the combined use of nitrogen, phosphorus and potassium fertilizers gives good results. According to studies, to grow 1 ton of corn grain, the plant takes an average of 25–30 kg of nitrogen, 10–15 kg of phosphorus and 20–25 kg of

potassium from the soil. If these substances are not enough in the soil, plant growth slows down, leaves turn pale, and productivity decreases.

According to the research of many scientists, the moderate use of mineral fertilizers significantly increases productivity. For example, when nitrogen and phosphorus fertilizers are used in combination, the quality of grain improves and the yield increases. If the yield of corn in areas without fertilizers is usually 35–40 centners/hectare, then in areas where mineral fertilizers are used in moderation, this figure can reach 50–70 centners/hectare.

Excessive use of fertilizers can lead to soil salinization and environmental problems. Therefore, strict adherence to agrotechnical rules is required during fertilization.

The use of mineral fertilizers not only increases productivity, but also brings economic benefits. High yields increase the income of farms. In addition, high-quality grain is also important for animal husbandry and the food industry.

Currently, land fertility can be maintained by properly organizing a fertilization system based on modern agrotechnologies. In particular, a fertilization system based on soil analysis gives effective results.

Conclusion

In conclusion, the use of mineral fertilizers in corn cultivation is one of the important agrotechnical measures. Nitrogen, phosphorus and potassium fertilizers have a positive effect on plant growth, development and high yield formation. In particular, the scientific and standard application of fertilizers not only increases productivity, but also helps maintain soil fertility.

Through rational use of mineral fertilizers, it is possible not only to obtain high-quality crops, but also to increase the economic efficiency of farms. Therefore, the proper organization of a fertilization system based on modern agrotechnology is of great importance in the development of agriculture.

Foydalanilgan adabiyotlar

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