



TECHNOLOGY OF DENSITY OF CROPS

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Annotation

The new method proposed in this article is a new short-term agronomic technique for intensive planting of various plants and high yields.

Keywords: Dense planting, garlic, pepper, corn, agrotechnology, planting times, fertilization rates, irrigation times, yields.

Introduction

Full satisfaction of the population's demand for food products, ensuring the stability of agricultural prices in the markets, short-term co-cultivation of food crops is one of the most pressing issues in today's rapidly growing world population.

Therefore, in our country, too, requires entrepreneurship in the agricultural sector. Planting secondary crops in one season and harvesting three to four times from the ground not only satisfies the population's demand for environmentally friendly food, but also guarantees lower prices. Such a farming culture is the most important and topical issue facing professionals in a pandemic era.

The Purpose of the Study

Rational use of land in Uzbekistan, short-term intensive planting of garlic, hot peppers and corn and the creation of new agro-technologies for the production of abundant crops.

Methods

Field experiments were carried out on the basis of guidelines for laboratory analysis “Field experiment methodology” and “Methodology of the State variety testing of agricultural crops”.

Results

According to the results of the experiment, the following crops, densely planted in order to use the land wisely, grew well and produced abundant yields during the maintenance process:





The first crop - garlic. Significance and use. Garlic belongs to the family of bulbs (Liliaceae). During the worldwide pandemic of COVID-19 in 2020, garlic was used not only as food, but also to prevent and treat the spread of viruses. Garlic is used as a spice in dishes. The role of garlic in the preparation of sausages and similar products is invaluable. In medicine, preparations made from garlic are used to dissolve the accumulated lime in the body, in the treatment of diseases of the gastrointestinal tract, cardiovascular system and respiratory tract.

Sowing method and duration. Garlic is mainly grown from the clove. There is also an axis from the seedbed. Garlic is planted in two or three rows on a ribbon, in a ribbon-like manner.

Planted bulbs should be highly forgetful, disease-free, unbreakable, heavy. Garlic is a frost-resistant plant. It germinates at a temperature of 3-5 °C and can withstand temperatures down to 7-8 °C.

Initially, the area is cleared of past crop residues and weeds. 150–200 kg (1.5–2 t per 0,1 hectare) of rotten manure is applied per 1 hectare. The soil is loosened to a depth of 20–25 cm, and after the large lumps are crushed, it is well leveled and irrigated. For early cultivation of garlic can be sown from mid-August. It is sown mainly in autumn in early September-October. If planted later, it will not have time to take good root in the fall, resulting in low winter temperatures and various diseases. Depending on the size of the garlic cloves, 100-150 kg of garlic is planted on 10 acres of land. Garlic stalks are larger and yields are also higher as the planting rate increases. When planted in 2–3 rows, the distance between the strips is 50–60 cm, the distance between the rows on the ribbons is 10–15 cm, the distance between the plants in the row is 6–8 cm, and the depth is 3–4 cm. Depending on the size of the garlic cloves, 100-150 kg of garlic is planted on 10 acres of land. Garlic stalks are larger and yields are also higher as the planting rate increases. When planted in 2–3 rows, the distance between the strips is 50–60 cm, the distance between the rows on the ribbons is 10–15 cm, the distance between the plants in the row is 6–8 cm, and the depth is 3–4 cm. On April 15, depending on the weather conditions, a row of garlic from each bud is taken carefully. Instead of this garlic, hot pepper seedlings are planted. Pepper seedlings are well established in the soil in favorable weather conditions in April. Vacant lands are also planted with peppers or other plants belonging to the same family during this period. During this time, the garlic will not be fully ripe. However, garlic and its barra leaves obtained at this time are used in the preparation of various dishes and salads as spices and herbs. By mid-May, the garlic left in the buds is fully ripe. Ripe garlic is harvested in a timely manner and another sprout is obtained for pepper seedlings planted in April.





Fertilization and irrigation. Depending on the type of soil, 10–15 kg of pure nitrogen, 10–12 kg of phosphorus and 5 kg of potassium fertilizers are applied to the land where garlic is planted. It is not advisable to put fresh manure on the land where garlic is planted, because it is a crop delays ripening and it is not well preserved. Garlic is watered 1–2 times in autumn, until frost, in spring and summer, watering plants 5–6 times, loosening the row spacing, weeding, pruning, breaking the buds, feeding with mineral fertilizers and mulching with humus significantly increase yields.

The second crop - pepper. Significance and use. Pepper (Solanaceae) belongs to the family. Varieties of pepper (*Capsicum annuum* L.) are divided into two groups: hot or sweet pepper. Hot peppers contain a large amount of bitter substance - k a p s a i t s i n, characterized by a thin skin, small fruits. Hot pepper is used for food in dry grinding, as well as as a medicine in vinegar, pickling and canning vegetables. Pepper preparations are used to treat anorexia and digestion, colds: radiculitis, myositis, neuralgia, rheumatism. Sweet peppers are used fresh in food, as well as in the preparation of various canned food. According to the amount of vitamin C in it, peppers are the first among vegetable crops. This vitamin is especially abundant in ripe fruits. Bitter pepper is a unique plant, the fruit of which can be consumed when it is blue, red, dried or canned. The following varieties are widely grown in Uzbekistan: Margilan - 330, Astrakhan - 628.

1 ton of dried hot pepper is currently priced at \$ 8640 in the world market.

Sowing method and duration. Pepper seedlings are prepared by each gardener. It is necessary to act in early January. Each family and farm has special greenhouses with a length of 10 meters and a width of 3–4 meters, in which pepper seeds are obtained qualitatively. First of all, special-sized polyethylene cups are filled with soil and placed on special-sized shelves. Initially, in the second half of January, pepper seeds are collected in boxes at room temperature, placed in polyethylene cups filled with soil above, and cared for until planting. About 15 May, all of the garlic will be harvested. After that, the pepper seedlings are pulled from the adjacent field using a hoe to form a new bud. 90 x 20 cm is planted in the ground near the groundwater, 70 x 20 cm in other places. As soon as the garlic is harvested, the processing of pepper seedlings begins.

Feeding and irrigation. Water is given after the seedlings have formed buds around them. Once the soil is ripe, it is chopped again. In this case, the soil is cleared of weeds, loosened, the soil is pressed around the pepper seedlings. In the cultivation of hot peppers in the form of salt is given 7.6 kg of ammonium sulfate, 2,6 kg of ammophos, 1,6 kg of potassium chloride per 1 hectare. In order for a hot pepper plant to grow well and produce abundant fruit, the layer where its root is located must be supplied with





air. For this, it is desirable that the water was spaced in rows. Bitter pepper is a water-demanding plant, irrigated in deep groundwater during the growing season at a rate of 14 - 16 per 1 hectare at a rate of 5 - 6 m³, groundwater in surface meadows and meadows - 10-12 times in wetlands, in deep groundwater watered every 10 - 14 days until harvest. Excessive watering of hot peppers can reduce the bitterness in it. If hot peppers are harvested in the blue, the yield will be relatively higher. In late autumn, before the onset of frost, pepper seedlings are uprooted, piled up in one place. In winter, peppers are harvested when prices rise and can be put on the market. Most of the blue peppers in the pepper tubers will be reddened, and the price of these red peppers will be much more expensive.

The third crop is corn. Significance and use. Corn is one of the most valuable and high-yielding cereals and is used for a variety of purposes. In animal husbandry it is fodder, food for humans and a raw material for processing in industry. Grain contains 65-70 % of carbohydrates, 9-12 % of protein, 4-8 % of fat, 13 % of water, mineral salts and vitamins. Worldwide, 20 % of corn grain is used as food. Its grains are used to make flour, cereals, sweet oats, sweets, canned food, badrak and other food products. In industry, starch, ethyl alcohol, dextrin, beer, glucose, sugar, syrup, fat, acetic acid, vitamin E, ascorbic and glutamic acids are obtained from grain (processed). Don's cheeks contain 40 % fat. It is used for the treatment of oil extracted from corn husks. Corn stalks, leaves, cotton paper, cardboard, liolium, insulation materials, activated charcoal, artificial foam, plasma, analgesics, glue, paint, tar and prepared many other products. Corn grain is the best food for all types of animals and birds. 1 kg of dry grain is equal to 1.34 food units and contains 78 grams of undigested protein. Corn grains are widely used in the compound feed industry. Corn stalks retain their nutrition even when the grain is fully ripe and are used as fodder for livestock. There are 37 nutrient units in 100 kg of dried stalks of corn and 35 nutrient units in 100 kg of sorghum.

In our country, corn ranks first as a crop for silage. Corn silage is well digested. For food, more than raw, its grain is silage made from the stalks of stalks, which harden in the end (or milk - in the ripeness of wax). During this period, 60 % of soybeans are milk-waxy. At this time the plants are still buried - blue and wet. Such silage contains 0.30 nutrient units per 1 kg. When self-care of corn plant, 40 -50 s / ha of grain and 500 -700 s / ha of green stalks can be grown.

Co-care of corn and pepper. The shade of the corn plant has no adverse effects on the peppers. Maybe it protects from hot weather, wind, disease and pests. The actual seedling thickness of additional sown corn at 10 sots is 2 - 6 thousand bushes. Hence, according to the recommendation of intensive cropping, corn is planted as an additional crop. Corn grains ripen in 110-120 days; the stems are used as hay for pets.





The agronomic techniques of garlic and pepper, peppers and corn, which must be cared for together, irrigation times, fertilization norms will be the same in the proposed new technology.

Conclusions

Practice the rational use of land; Grow more than one field in a short period of time, saving water and mineral fertilizers, to get more income, to ensure food abundance.

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