TECHNOLOGY OF GROWING VEGETABLES IN PROTECTED LANDS

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ABSTRACT

This article covers the intensive technology of growing vegetable crops in homesteads and sheltered areas under rapidly changing climatic conditions.

Keywords: climate, population, homestead, vegetable, crops, cultivation, protected land, intensive technology.

INTRODUCTION

It is not an exaggeration to say that the introduction of many modern scientific and practical innovative technologies to meet the demand for food products at the global level and in our country, to deliver food products to consumers at any time of the year, is one of the urgent issues today. It is known that when preparing each seed for planting, the quality of the seed material should be high (moisture, purity, fertility, etc.) and the seed material should be selected based on state standards and, of course, based on the soil and climate conditions of the regions. In this regard, comprehensive study of the soils of the region is important. Many scientific studies have been carried out on the chemical, agrochemical, physical and other properties of irrigated soils, as well as on the issues of growing agricultural crops and obtaining high-quality crops.

RESEARCH MATERIALS AND METHODOLOGY

Treating seed material before planting can reduce yield loss by 50% or more. Disease losses account for 15-35%, including 60% seed failure. Treatment with fungicides can reduce potential losses by 50-55%. Therefore, pre-sowing seed care is important regardless of whether the seed material is grown in sheltered or open fields.

RESEARCH RESULTS

Vegetables contain carbohydrates, proteins, oils, mineral salts, enzymes and various vitamins necessary for the human body. Vegetables provide the human body

with vitamins. To provide the population with continuous vegetable crops in all seasons of the year, growing vegetables in public gardens and protected areas is of great importance.

In our republic, more than 46-50 thousand tons of vegetable crops are grown per year in homesteads and protected areas, 14-15 kg per square meter, 3.8-5.0 kg per capita. Based on the results of our scientists conducting scientific research in this regard, new technologies are being created aimed at increasing vegetable production to 9.0-10.0 kg per capita. In unfavorable climatic conditions, artificial environment (temperature, light, humidity, etc.) for crops is carried out in protected places. They mainly serve to grow crops in the off-season, and to grow seedlings for the open field. It is covered with glass or cellophane, polymer, etc. It is restored from wood or metal equipment such as iron, steel, aluminum.

Along with tomatoes and cucumbers, greens such as radishes, green onions, cabbage, sweet peppers, potato products, etc. are grown in the protected area. They are planted on a smaller area and in Uzbekistan they are grown mainly in greenhouses covered with cellophane and temporarily covered with cellophane. All kinds of greens are grown in protected areas in Uzbekistan. They are grown from November to April next year. Fruits, grapes, fresh and pickled vegetables are abundant in Uzbekistan at the end of autumn and the beginning of winter. During this period, the demand for greens will be less. Therefore, in the autumn-winter period, only chives, watercress and coriander are planted. In the winter-spring period, mainly leaf lettuce is planted. Greens with a short growing season are grown by sowing seeds. Those with a long growing season are grown by the acceleration method.

Greens can be grown by sowing seeds anywhere, but it is advisable to grow them in heated and unheated greenhouses covered with cellophane. These greens can also be planted between tomatoes and cucumbers in winter greenhouses. However, it is difficult to get a high yield from greens because the temperature needs of the main crops and greens are different. All of them are not very demanding on temperature. 12-18 0C is enough for them. In Uzbekistan, chives, dill, coriander and parsley are grown from green plants in a protected area. Uzbeksky-243, Orom and Andijan local varieties of dill are planted.

DISCUSSION

In winter greenhouses, it is sown among dill, cucumbers, tomatoes, and in spring greenhouses, it is planted in boxes placed in a bright place, among plants in greenhouses, and rarely pure. Greens ripen in autumn-winter in 40-45 days, in early spring in 30-35 days. Planting periods are determined by when the crop needs to be grown. Since dill ripens quickly, it is planted several times in greenhouses. In unheated

spring greenhouses, dill is grown in the autumn period from mid-October to the end of November, and in early spring, from the beginning of February to the middle of March. When it is sown in greenhouses, the seeds are sown at the rate of 40-50 g per hole. Then it is watered with warm water; 0.5 cm thick humus is sprinkled on it and slightly compacted (pressed). The seeded boxes can be placed on top of each other and stored for 3-5 days at a temperature of 20-25 0C. With grass (more than 5%), the boxes are placed in a row. Dill care is optimally maintained at the required temperature (15-18 0C), soil moisture (70-80 %) and relative air humidity (60-70 %). If necessary, the grass is plucked. During the growing season, it is watered 2-3 times and fed with nitrogen fertilizers (at the rate of 3-4 g of ammonium nitrate per 1 l of water). If it is planted as a thickening crop, the yield will be 2 times less. Chives are also close to dill in terms of quick ripening. Therefore, it is also grown like dill. Dill is sown and harvested at the same time. The seed is sown on the ground and planted in narrow rows. It is also grown as a main crop or as a thickener.

Coriander seeds germinate well, it is warmed for a day. The rate of planting seeds is less than that of dill; 12-18 g/m2 when planted alone. Seeds of Urojaynaya, Sakharnaya, Nilufar, Bordovikovskaya varieties are planted in greenhouses. In September, it is sown in wide rows, in many rows (10-15 cm between rows), leaving a path between them. Seeding rate is 1.5-2 g/m2. After planting, there will be 2-3 cm between the plants in the row. Parsley should have sufficient heat (15-17 0C), relative air humidity (60-70%) and comfortable soil moisture (60-70% relative to field moisture capacity). It is watered abundantly (but not often or it will rot). In December-January, when the light decreases, it suffers from high humidity. Parsley is harvested several times. Between harvests 50-60 days in autumn-winter, 30-40 days in early spring. It is possible to mow 5-7 times during the whole season (from September to May). In this case, 8-10 kg/m2 of parsley is harvested. When growing parsley by seedlings, the rhizomes are planted at a depth of 8-10 cm, making 6-8 cm between the rows and 7-8 cm between the bushes. Medium-sized tubers are selected and planted at the rate of 5-6 kg/m2. The root neck is left open, then the leaves grow well. It grows for 35-40 days. During this period, the temperature is maintained at 19-20 0C. Then it is harvested, the yield is 6-7 kg/m2. Only leafy celery is grown in Uzbekistan. It is grown from rhizomes. For this, 60-70 g of rhizomes are prepared, 8-10 cm between the rows and 3-4 cm between the bushes are planted. 120-140 celery seedlings are planted on 1 m2 area, covered with soil (up to the root neck) and grown for 35-40 days at a temperature of 12-18 0C.

Green onions can be grown in Uzbekistan all year round. It is not planted from seed in a protected area. Sometimes spring onions are planted. In this case, 4 cm large

onion heads are planted densely at the rate of 10-12 kg/m2. Onions are grown in the first period in greenhouses and greenhouses covered with cellophane. It is grown in winter greenhouses in 2-3 periods or planted as a thickening crop. When growing lettuce, the initial temperature should be 12-14 0C. After releasing the first leaf, it rises to 16-18 0C. Air humidity for salad should not exceed 80%. Salad is carefully watered. Watering is carried out little, but abundantly, excess moisture is removed. Lettuce is fed once or twice with ammonium nitrate (40-50 g per 10 l of water). Spring onions can be grown in Uzbekistan in an open way throughout the year, so onion seeds are not planted in protected areas. In some cases, it is cultivated to obtain barra from onions. In order to get onions, 4 cm diameter onion heads are planted close to each other at the rate of 10-12 kg per 1 m2 of land. In the cellophane greenhouse and greenhouse, small onion heads for greens are planted in the first rotation. In the winter greenhouse, it is sown in two to three rotations or as a thickening crop. Before planting onions, the head of the neck is cut. Such cutting creates good conditions for the rapid growth of onions and shortens the period of emergence.

Green onions ripen in 25-35 days at a temperature of 16-22 0C. A higher temperature will slow down the formation of onion bars. When growing, it is watered and fed with ammonium nitrate (20-30 g per 10 l of water). The crop is harvested when the onion reaches 30-35 cm in length. 1015 kg of harvest is obtained from 1 m2. In some cases, kale leaves are grown in Uzbekistan. Planted roots are made from old plantations that are perishable. It is planted densely, 6-8 kg of roots are used per 1 m2 of land. At first, the temperature is kept at 10-12 0C. Then it rises to 18-20 0C. Leaves are cut 3-4 times. The yield is 2-4 kg per 1 m2 of land.

CONCLUSIONS

Radish is mostly grown in early spring as a thickening crop in all protected areas in Uzbekistan. Compared to green crops, radish is light-demanding and does not like high temperatures. Because of this, radishes are not grown in the autumn-winter period. In Uzbekistan, it is grown only from seeds and its varieties such as "Saksa", "Krugliy krasniy", "Ertapishar", "Zarya", "Teplichniy", "Lola" and "Krasniy Velikan" are grown. In winter greenhouses, radish can be planted between cucumbers or tomatoes as a thickening crop. 6-8 days before planting the main crop, it is sown in 4-6 rows on both sides of the field in the form of a ribbon. Radishes can also be grown in seedling boxes on bright corridors. The planting depth is 0.5-2.0 cm, and 3-4 g of seeds are sown per 1 m2 by hand or with a seeder. In this case, the food area will be 5x5 cm. After sprouting, yagana is made. Care of the plant includes maintaining the recommended temperature (-16-18 0C on a sunny day, -12-14 0C on a cloudy day), air humidity (60-65 %) and soil nutrition (75-80 %). In the winter greenhouse, in addition, as the plant

grows, soil is sprinkled under it. Watering is not carried out until full germination, as it causes the seed to rot. If the upper layer of the soil dries up, water is sprinkled on the surface. After germination, it is watered less at first, then more often.

Radish is fed twice during the growing season. The first one is given two weeks after germination. In this case, manure (mixed with water in a ratio of 1:6) is added with 10 l of a solution of 15 g of superphosphate and 10 g of potassium salt. The second fertilization is carried out one week after the first. In this case, 40 g of ammonium nitrate, 20 g of superphosphate, 15 g of potassium salt are dissolved in 10 l of water. 6-7 l of solution is placed on 1 m2 area. In winter, the crop is harvested 32-35 days after seed germination, and in early spring, 25-28 days later. The rhizome is sorted and collected three to four times when its diameter is at least 2 cm. The crop is harvested in 10-12 days. When it is collected, it is pulled out with its leaves and packed in bundles of 10 pieces.

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