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Research Article

CHARACTERISTICS OF SPRING GROWTH OF KIWI (ACTINIDIA DELICIOSA) PLANT

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ABSTRACT

In the article, kiwi (A.deliciosa) is a biologically resorbed fruit of the plant. The biochemical composition of the fruit contains the enzyme actinidine. This enzyme is needed to break down proteins and facilitate digestion. Kiwi fruit is one of the richest berries in terms of vitamin C content. Kiwi is a new type of fruit in Uzbekistan, and the exact area of plantations has not been statistically analyzed, but it is grown in the backyards of amateur gardeners who grow it.

Scan grafting of the Hayward variety of kiwi plant was carried out in 3 periods. The second period was observed on March 15, when the retention rate of grafted buds was 82% or 13% higher than the period of the first grafting. The coefficient of variation in terms of welding times was low (V = 6.9%) and the coefficient of mean square deviation was X = 62.7 ± 3.1. The Hayward variety of kiwi plant has been created by means of grafting.

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KEYWORDS

Kiwi, Actinidia deliciosa, Hayward variety, iskana graft, botanical, term.

INTRODUCTION

In today's globalized world economy, the issue of food security is becoming more and more important. This is one of the problems inherent in the Republic of Uzbekistan.

Kiwi (A.deliciosa) is a biologically resorbed fruit of the plant. The economic value of kiwi is that it is less susceptible to plant diseases, making it possible to grow ecological or organic crops due to low demand for mineral fertilizers. [1; 2;].

Kiwi fruit is known for its richness in vitamins. The main part of the fruit is 84% water. Kiwi is rich in vitamin C, which is equivalent to 92 mg per 100 grams of fruit.

Kiwi is a new type of fruit for the people of Uzbekistan, and the exact area of plantations has not been statistically analyzed, but it can be found in the gardens of amateur gardeners who grow it.

The soil and climatic conditions are very favorable for the growth and development of the kiwi plant in the territory of the Republic. Therefore, when planting seedlings of kiwi plant and establishing a plantation, it is necessary to select promising varieties with high yields and high economic efficiency.

Although grafted varieties do not have a genetic character (modification variability), young grafts also produce significant changes. The graft can change the yield of grafted plants, the beginning and end of the growing season, their resistance to cold, drought, salinity, and their morphological and biological properties. It can also increase and decrease the resistance of grafted fruit crops to local natural conditions. [3; 4; 5]

It is impossible to develop horticulture without creating exemplary nurseries. Fruit nursery determines the state of fruit growing, the species and varietal composition of plants in regional, district, farm gardens. In order to establish a garden in orchards, it is necessary to grow seedlings of species and varieties that meet the standard requirements, meet the local conditions, as well as meet the needs of the population for wet and dry fruits, and the food industry for raw materials.

Positive results are obtained if grafted kiwi plant in the spring. In this case, the plant grows well and increases its resistance to winter and cold. [3; 4; 5]

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There is a need to establish a modular plantation of the Hayward variety of kiwi, in order to scientifically substantiate the study of the timing of the introduction of the Hayward variety of introduced kiwi and the cultivation of quality seedlings for kiwi plantations. The following research was conducted to select healthy tubers from the Modular Plantation and to prepare cuttings for grafting from them and to determine the welding times.

RESEARCH METHODOLOGY

Scientific research experiments were carried out in the field and laboratory at the Scientific Research Institute of Horticulture, Viticulture and Enology named after Academician M. Mirzaev. The experimental field is located at an altitude of 486 m above sea level, the soil is irrigated technical gray, gray soil, heavy in mechanical composition.

The reaction of the soil solution has an average pH of 7.7-7.8 and is weakly alkaline. The amount of humus in the soil is 0.86 -1.20%, the amount of nitrate nitrogen in the tillage layer is 13.9-15.9 mg / kg, this figure is very low with the amount of nitrogen in the soil, mobile phosphorus is 24.7-26.1 mg / kg. kg, on average 201-300 mg / kg with potassium. Groundwater is located at a depth of 2.5-3.5 meters.

In the scientific experiment, phenological observations, biometric measurements and static analysis of the results were performed. The results were presented in the "Method and Program for the Study of Varieties of Fruits, Berries and Nuts" and B.A. Statistical analysis of Dospekhov's experimental results was carried out on the basis of methodological recommendations and requirements. Vaccination of the Hayward variety of kiwi, introduced in the experiment, was carried out in three terms, four repetitions, and observations were made on 10 seedlings in each variant.

RESEARCH RESULTS AND ANALYSIS

The choice of kiwi should be resistant to certain environmental conditions. Vaccines are grown under certain environmental conditions, which affect the formation of their genetic traits.Therefore, in the cultivation of seedlings should be selected species and varieties grafts that correspond to the specific soil and climatic conditions and cross-section of the territory. The welds should be placed in separate natural areas. If these are not followed, the seedlings in the nursery will become thick or sparse and cause different development of seedlings in the garden.

The good adhesion of grafted grafts to grafts depends on their affinity and botanical proximity. It is believed that the biochemical and physiological differences of the protoplasm of the cells of the grafted components (symbiotics), the anatomical and morphological structure of the tissues, different growths depending on the thickness of the grafted and grafted body,

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welding durations, barrier of tube systems. As a result, the incompatibility of the graft with the graft leads to poor quality of seedlings, a decrease in seedlings in the area, as well as a decrease in yield.

It is known that a number of environmental factors influence the retention of buds of grafted kiwi varieties. It is necessary to choose the timing of grafting to ensure early entry of the kiwi plant and high quality and continuous harvest. We therefore set a goal to study the welding duration. The timing of grafting the first marathon kiwi plant is being studied.

When grafting a kiwi plant, it is advisable to do it using the scalpel welding method. In this method, the weld is cut crosswise relative to its axis. When inserting the cutter into the weld seam, the hole is cut on both sides with the tip of a garden knife or a piece of hardwood so that the cutter can easily fit between it and the cambium layers of the weld and the weld must be aligned.

Influence of Kiwi scanning method on quality seedling performance indicators

Welding time	Hold graft,%	Head height		Leaf level, dm2
		cm	In relation to control,%	
15\II	81	91	100,0	40,2
15\III	93	82	90,1	37,8
15\IV	76	51	56,1	28,3

Scanning of Kiwi Haywart variety was carried out in 3 terms. On the first 15 February, the weld rate during the weld period was 69%. The second term was observed on March 15, when the retention rate of grafted buds was 82% or 13% higher than the first grafting period. The third term was the lowest in the welded specimen on 15 April. This figure was observed to be 18% lower than the first welding time. The coefficient of variation in terms of welding time was low (V = 6.9%), and the mean square deviation was X = 62.7 ± 3.1.

During the first welding, the height of the weld was 91 cm. It was observed that the second welding time was 15 cm less than the first welding time. It was observed that the timing of grafting, in turn, had an effect on the leaf surface of the seedling.

In the first period, the average leaf area of grafted seedlings was 40.2 dm2, which was the highest. When welded in the second variant, the leaf surface was 2.4 dm2 lower than in the first variant. The lowest value was determined in the welded variant in the third term.

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CONCLUSION

Kiwi is a rezovor fruit from the biological point of view of the plant.

Kiwi fruit is one of the richest berries in terms of vitamin C content.

Kiwi is a new type of fruit in Uzbekistan, and the exact area of plantations has not been statistically analyzed, but it can be found in the gardens of amateur gardeners who grow it.

Scan grafting of the Hayward variety of kiwi plant was carried out in 3 periods. The second term was observed on March 15, when the retention rate of grafted buds was 82% or 13% higher than the first grafting period.

The coefficient of variation for welding times was low (V = 6.9%) and the coefficient of mean square deviation was X = 62.7 ± 3.1.

The Hayward variety of kiwi plant has an opportunity to grow high-quality seedlings by the method of grafting on March 15.

REFERENCES

1. Aiba L.Ya. scientific substantiation of the technology for the production of Chinese actinidia fruits (kiwi) in Abkhazia. Abstract 2005. 25 p.
2. Ostanakulov T.E., Narzieva S.Kh. Meva ekinlari er ostki vaer ustki kismlarining ўsish konuniyatlari. Mevachilik asoslari. Tashkent, 2010. B. 25-39.
3. "Program and methodology for the study of fruit, berry and nut crops" Orel6 Publishing House of the All-Russian Scientific Research Institute of Fruit Crop Breeding. 1999. S.267-269.
4. Here E.A. acceleration of vegetative propagation of healthy planting material of actinidia and magnolia vine Abstract 2005. 23 p.
5. Tutberidze Ts.V. biological properties and economic evaluation of introduced kiwi varieties in the subtropics Abstract 2004. 23 p.
6. https://yard.hozvo.ru/Korrektsiyapolaaktinidii-22382
7. https://www.actinidia.ru/razmnoszenie.html