GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ)
ISSN (E): 2347-6915
Vol. 10, Issue 6, June (2022)

PRACTICAL RESULTS OF THE INTRODUCTION OF A RARE VEGETABLE CROP IN THE SOUTH OF UZBEKISTAN

ПРАКТИЧЕСКИЕ РЕЗУЛЬТАТЫ ИНТРОДУКЦИИ РЕДКОЙ ОВОЩНОЙ КУЛЬТУРЫ НА ЮГЕ УЗБЕКИСТАНА

ЎЗБЕКИСТОН ЖАНУБИДА КАМ ТАРҚАЛГАН САБЗАВОТ ЭКИНИ-МАЙОРАН ИНТРОДУКЦИЯСИНИНГ АМАЛИЙ НАТИЖАЛАРИ

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ANNOTATION

The article describes the research conducted to introduce the rare vegetable crop in the southern conditions of Uzbekistan. The conclusions obtained have been substantiated as a result of practical studies.

Keywords: marjoram, selection, introduction, plant height, number of branches, leaf mass, variety, planting scheme, yield.

АННОТАЦИЯ

В статье описаны исследования, проведенные по интродукции редкой овощной культуры в южных условиях Узбекистана. Полученные выводы были обоснованы в результате практических исследований.

Ключевые слова: майоран, селекция, интродукция, высота растения, количество ветвей, листовая масса, сорт, схема посадки, урожайность.

АННОТАЦИЯ

Мақолада кам тарқалган сабзавот экини-майоранни Ўзбекистон жанубий шароитида интродукция қилиш мақсадида олиб борилган илмий тадқиқотлар ёритилган. Олинган хулосалар амалий ўрганишлар натижасида исботлаб берилган.

Калитсўзлар: майоран, селекция, интродукция, ўсимлик бўйи, новдалар сони, барг массаси, нав, экиш схемаси, ҳосилдорлик.

INTRODUCTION

Despite the fact that we live in an era of industrial and scientific-technological revolution of socio-economic development of mankind, there are a number of problems that have reached a

global level, and these problems are still unresolved. The reasons for the emergence and intensification of global problems are the rapid growth of the world's population in a short period of time, the negative consequences of the scientific and technological revolution and modern information and communication technologies, the growing conflict between states and political forces. Including the problem of food is one of the current problems of today. The global food problem is one of the oldest problems of mankind.

It is estimated that COVID-19 dramatically increased the number of people facing food problems in 2020-2021.

Satisfying the population's demand for food, however, is less common in the organization of healthy eating, a promising variety of vegetable crops, distinguished by the value of its composition and medicinal properties and the development of technology for the introduction and cultivation of varieties, as well as the organization of their breeding in our country is one of the most pressing issues today.

One such crop is marjoram. Majorana (syn. Majorana hortensis Moench., Origanum majorana L.Majorana (L.H. Karst.) - a perennial plant belonging to the family Lamiacea. It grows wild in Asia Minor, North and West Africa, Arabia and Egypt.

In ancient Egypt, Greece and Rome, marjoram was highly valued as a spice, medicinal and ornamental (for wreaths).

SIGNIFICANCE AND APPLICATION

It is known that the nutritional value of vegetables depends on their chemical composition. Their chemical composition includes carbohydrates, minerals, organic acids, vitamins, glycosides, phytoncides (for example, a special substance that has the ability to kill or slow down the growth of microorganisms), the presence of fragrant and coloring substances increases the importance of vegetables.

The leaves and flowers of the marjoram plant contain up to 0.4% of essential oil. The essential oil of marjoram contains terpinene, pinene, sabinen, α-terpineol, borneol, phenol. Young leaves contain 127% rutin, up to 44% ascorbic acid, up to 5.5% carotene. According to the data, 100 grams of marjoram leaves contain 270 kcal of energy.

In addition to essential oil, marjoram contains macro- and micronutrients, potassium, phosphorus, zinc, silicon, vitamins A, B and C, flavonoids, minerals and skin-enhancing substances. Marjoram contains phytoncides. [1;2;3].

The leaves, buds and flowers of this plant are used as a spice. In more southern areas, it is common to use freshly cut and shade-dried leaves and flower buds.

MEDICINAL PROPERTIES

Marjoram is a medicinal and ornamental plant. Dried leaves and oil are widely used in the national economy. Marjoram is used effectively in folk medicine and is a great help in the treatment of digestive, respiratory, cardiovascular and nervous diseases.

Marjoram is a painkiller and has a positive effect on improving gastric function, toothache and respiratory diseases. Salt-free diets are effective in prescribed diabetes, kidney, liver and gallbladder diseases.

RESEARCH MATERIAL AND STYLE

Thermos variety was selected from the variety samples as the object of study. The research was conducted on the basis of the following guidelines: "Methodology of field experience" (Dospekhov B.A., 1985), "Guidelines for the selection of green, straight-tasting and perennial vegetable crops" (M., 1987), "Guidelines for approbation of vegetable crops and fodder root crops" (M., 1982) and others [3;4;5].

Seeds were sown on January 25 in 100% peat by cassette method. The first germination of the marjoram planted during this period was observed on 6 February and the mass germination on 13 February. Mayoran seedlings were transplanted to an open field on March 14 in 2 rows, 4 rows, 70 x 25 cm scheme. When the height of the marjoram plant was 20-25 cm, that is, during the technical ripening, the harvesting of the green mass was carried out. During the growing season for the product, the green mass was collected 3 times from 20 plants in each crop.

RESULTS OF RESEARCH

The following results were determined in the annual harvests for the product (Table 1):

Table 1. Annual yield of marjoram crop

Plant number	Plant height, sm.	Total plant weight, g.	Weight, g		Leaf size, sm	
			branches	leaves	height	length
1	25	23	6,7	16,1	1,5	0,9
2	29	49,4	12,25	37,2	1,8	1
3	30	50,3	17,73	32,6	1,9	1
4	29	54	18,52	35,42	1,8	1,1
5	31	45,5	12,9	32,52	1,6	1
6	21	23,3	2,87	9,5	1,4	0,9
7	26	19,93	6,35	13,58	1,4	0,9
8	33	37,1	13,64	23,4	1,9	1
9	29	25,3	8,39	16,9	1,8	1
10	31	27,2	7,9	19,2	1,5	0,8
11	23	18,7	6,7	12,01	1,8	0,9
12	30	34,8	12,11	22,7	1,7	1
13	27	25,9	7,8	18,05	1,8	0,9
14	23	14,9	3,99	10,9	1,4	0,8
15	27	21,8	6,7	15,1	1,6	1
16	29	30,98	10,6	20,3	1,7	1,1
17	30	31,2	10,8	20,37	1,2	1
18	24	16,42	5,09	11,33	1,6	1
19	27	19,2	6,45	12,8	1,7	1
20	29	26,9	8,34	18,6	1,4	1
Average	**27**	**29,7**	**9,2**	**19,9**	**1,6**	**0,9**

According to the analysis, the height of the plants in the first harvested crop, the height of the leaf blade and if it is observed that the width is higher than the second and third harvested

crops, in the third harvest of marjoram, a large number of branches and twigs, as well as a large number of leaves, were observed.

In particular, it was studied that the yield of marjoram grown for the third time was superior to the first and second harvests in terms of the main indicator. The weight of one plant in the third harvest averaged 45 grams, which was 54.4% compared to the first crop and 40.4% compared to the second crop.

The weight of the leaf mass in the third crop was 31.8 grams, which is 48.2% higher than the first crop and 39.9% higher than the second crop.

In the first crop the number of large branches was 18, in the second crop 42, and in the third crop 93 which proved that the number of branches of the third crop was 75 (80.6%) more than the first crop and 51 (54.8%) more than the second crop.

In the Mayoran crop, the interval between the first and second harvests was 24 days, and the interval between the second and third harvests was 28 days. At the same time, it was observed that the formation of plant-producing organs for the product averaged 26 days.

The mass germination and flowering of the marjoram takes 105-110 days, and the vegetation period is 205-220 days.

According to research, marjoram can be grown year-round in the open field and in pots at home.

CONCLUSION

Fresh fruits and vegetables and their processed products are important for a healthy diet. They make up a significant portion of food production resources.

Marjoram is widely used in food, pharmaceutical, perfumery and cosmetics industries. Its extracts are used as one of the main sources of biologically active substances.

Krivenkov L.V. (2002) noted that the dry subtropical conditions of Uzbekistan are the most favorable for seed production, which guarantees the production of quality seeds from annual and biennial crops. (2)

Based on the literature reviewed and the analysis of the experiments conducted, it can be said that the marjoram plant grows well in light-loving, dry subtropical climates and gives high yields.

Due to its biological properties, it can be introduced and grown as a perennial and perennial plant in the south of Uzbekistan.

The introduction and cultivation of mayonnaise in Uzbekistan will play an important role in meeting the food needs of the population, as well as expanding the range of vegetables that are important for health.

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