American Journal of Interdisciplinary Research and Development
ISSN Online: 2771-8948
Website: www.ajird.journalspark.org
Volume 39, April - 2025

ORGANIZATION OF THE PRIMARY SEED BREEDING OF THE LARGE SEED "ZABARDAST" VARIETY OF PEAS FOR EXPORT

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Abstract
This article presents information on the morphological characteristics of ridges in the fields of annual generations of the chickpea variety "Iftikhor".

Keywords: Chickpea, generation, morphological features, nursery, seed productivity, annual generation, family.

Introduction

Most varieties of food peas included in the State Register of Agricultural Crops Recommended for Sowing in the Lalmikor Regions of the Republic of Uzbekistan ("Yulduz", "Lazzat", "Uzbekistan-32") have had a 1000-grain weight in the range of 180-330 grams in recent years, which does not meet the export requirements for grain size. As a result, these varieties lead to a low market price and an increase in the amount of economic damage. As a solution to these problems, the "Zabardast" variety, which has a large 1000-grain weight (around 450-550 grams), a curved grain shape, and a white grain color, and meets export requirements, was created and submitted to the State Variety Testing Commission in 2020.

Currently, work is underway to organize the primary seed production of the "Zabardast" variety of peas at the Lalmikor Agricultural Research Institute.

The main problem of seed production is the rapid introduction of high-yielding 1st-class seeds of intensive varieties into production (Gulyaev G.V., Belyakov I.I., 1984).

It has already been shown that it is possible to improve the quality of seeds in the process of seed production of new varieties (Gulyaev G.V., 1962; Yakubtsiner M.M., 1963).

At the next stage of the primary seed production system, rows with a yield index of more than 5.0% above the standard are transferred. Rows with average and low indicators are discarded (Kuleshov K.R., 1975).

In the process of variety replacement, it is necessary to focus on the rapid introduction of seeds of new zoned promising varieties into production (Volkova E.A., Tyukov V.V., 1974).

In the process of selecting primary ears, attention is paid to the typicality of the variety, grain weight, and kernel shedding (Zelensky M.A., Dvornik V.Ya., 1974).

In the practice of grain selection and seed production, the selection of elite plants is carried out by visually assessing the productive stem, typicality, resistance to lodging, disease, and other characteristics in the fields planted in rows (Nikitenko G.D., Gorkov V.P., 1976).

The expected goal is to establish primary seed production of the "Zabardast" variety of peas. To achieve this goal, the following tasks are planned:

- Select 500 elite plants typical of the variety from the "Zabardast" variety of peas with high varietal yield and place them in the first-year trial nursery.
- Selection of morphologically typical families planted in the first-year generation in the experimental nursery, and transfer of the second-year generation to the experimental nursery, discarding families that are not typical of the variety.
- Selection of morphologically typical families planted in the second-year generation in the experimental nursery, and transfer their seeds to the first-year propagation area, discarding families that are not typical of the variety.
- Bringing the variety diversity of the generations in the first-year propagation area to 100%.

Research Methods

The primary seed production scheme of the "Zabardast" variety, such as preparation of experimental fields for planting, planting, and feeding, was carried out using the methodological manual developed at the Gallaorol Scientific and Experimental Station of the State Agricultural Research Institute of the Republic of Uzbekistan (2004) [1].

Evaluation and monitoring of experimental work were analyzed according to the data of the classifier of the former All-Union Scientific Research Institute of Plant Science (RODA CICER L.1980) [2].

In the first year, seeds of 500 plants selected from the elite nursery were sown in the nursery for the first year of the trial of generations, each of which was separately sown in plots of 1 m² at a depth of 5-7 cm (March 30). Full germination of seeds occurred on April 13-14, full flowering on May 19-22, and full ripening on June 20-22.

When selecting for the nursery and isolating plants typical of the variety, the State Patent Office's Manual on Testing the Criteria for Differentiation and Stability of Pea Crops (1993) was used [3].

It differs from the Zabardast variety in the following characteristics: plant height (tall), flowering time (medium), plant: bulb type (erect), leaves: green color intensity (bright), leaf: size (large), pod ripening time (medium), seed: color (white), seed: shape (round-rough, bumpy), seed edge (strong).

In the first field inspection to select the families specific to the variety, the following were taken into account: flowering time (when 80% of the plants bloomed at least once), plant bulb type (after flowering), leaf green color intensity, leaf size; in the second field survey - the plant height (when the pods are fully formed), the time of full ripening of the pods (the

seeds are dry), and in the laboratory survey - the differences in morphological characters such as seed color (1 month after harvesting), and shape were evaluated (Table 1).

Results and their Analysis

The first and second field trials also included a study of chickpea disease, but this year, due to the fact that during the chickpea vegetation period (March-June), rainfall and relative humidity were significantly lower than the average for many years, as well as high air temperatures, diseases caused by phytopathogenic fungi (ascochyta, fusarium) were not observed.

1-Table. Evaluation of the first-year generations of the Zabardast variety in the nursery by morphological characteristics. (Gallaorol 2024)

№	Name of the contestants	Morphological signs															
		19. Flowering time (80 percent when plants have at least 1 flower)		2. The type of plant bush (after full bloom)		6. The intensity of the green color of the leaves		7. Leaf size		1. Plant height (pods when fully formed)		20. Dukkak full ripening time (seeds dry)		14. Seed color		17. Seed shape	
		i	f	i	f	i	f	i	f	i	f	i	f	i	f	i	f
1	1st field survey	29	471	14	457	36	421	23	398								
2	2nd field survey									31	367	34	333				
3	Laboratory examination													4	329	5	**324**

Comment: i-invalid, f- fragrant.

According to the results of the competition, in the first field test, a total of 471 varieties were selected for the Zabardast variety according to the flowering time, 29 were selected for the plant stem type, a total of 457 varieties were selected for the plant stem type, 14 were selected for the intensity of the green color of the leaves, a total of 421 varieties were selected for the leaf size, a total of 398 varieties were selected for the leaf size, 23 were selected for the plant height, a total of 367 varieties were selected for the plant height, 31 were selected for the pod maturity, a total of 333 varieties were selected for the pod maturity, and 34 were selected for the seed color. The third test was a laboratory test, and

4 varieties were selected for the seed color of the cleaned varieties and 329 varieties were selected for the variety. 5 lines that were not characteristic of the grain shape were found to be unsuitable.

324 lines that were characteristic of the morphological characteristics of the variety were selected for transfer to the second-year generation nursery.

Conclusion

During the vegetation period of the chickpea variety “Zabardast”, by observing, analyzing, and selecting the characteristics, properties, and morphobiological characteristics characteristic of the variety in field and laboratory conditions, it is possible to isolate typical families characteristic of the variety and conduct a primary seed production system.

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