HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

BIOLOGICAL AND ECONOMIC INDICATORS OF FODDER PEA VARIETIES AND LINES

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Abstract: The pea is a leguminous plant and is of great importance in solving the problem of nutrition, protein, and soil fertility. To create high-yielding, drought-resistant pea varieties in the context of modern global climate change, imported varieties were hybridized with local varieties and compared with the standard Malhotra variety.

Keywords: pea, stem height, growing season, weight of 1000 grains, yield, variety, lines.

Today, in more than 50 countries around the world, peas (Cicer arietinum) are planted annually

Аннотация: Горох является бобовым растением и имеет большое значение в решении проблемы питания, белка и повышения плодородия почвы.С целью создания высокоурожайных сортов гороха, устойчивых к засухе в условиях современного глобального изменения климата, были гибридизированы импортные сорта с местными сортами и сопоставлены со стандартным сортом Малхотра.

Ключевые слова: горох, высота стебля, вегетационный период, вес 1000 зерен, урожайность, сорт, линии.

on an area of about 21 million hectares, yielding a total of 15-18 million tons of grain. Russia, Canada, China, India, and the USA are the world leaders in pea cultivation, producing 77 percent of the total world harvest. According to "Tridge" international open statistical information, "global pea production in 2022 amounted to 14.2 million tons, and this figure is growing by 3-4% year-on-year." The annual increase in the world's population leads to an increase in the demand for protein-rich legumes. In this regard, it is necessary to strengthen the breeding of chickpeas, introduce new varieties created in the context of regions, and conduct scientific research to develop agrotechnical measures in accordance with this in order to meet the population's needs for protein-rich food products throughout the year.

Andijan Institute of Agriculture and Agrotechnologies, scientific research continues throughout 2023 based on the placement of fodder pea varieties and lines grown in early spring in demonstration nurseries under irrigated soil conditions.

The fodder pea is of great importance in the national economy and is widely used in food, livestock, and industrial sectors. Today, the cultivation of chickpeas is one of the most pressing issues, as it is not only economically beneficial but also ecologically and socially important.Food chickpeas are long-day plants with a growing season of 80–110 days. Autumn varieties of the fodder pea plant are frost-resistant, self-pollinating, and their flowers are formed at 16-20°C. At an air temperature of 20-25°C, the growth organs of the pea grow and develop well.

This plant is drought-resistant and accumulates nitrogen well in the soil.

In the experimental nurseries, 8 varieties and lines of green peas for fodder were placed according to the methodology, each variety and line in separate sheds with an area of 25 m2.

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Field experiments were conducted on cultivated irrigated meadow soils with a medium loamy texture and groundwater depth of 0.7-1.5 meters.

Field experiments were conducted according to the methodology of UzPITI published in 2007.

When studying the varieties and lines of the pea plant studied in the experiment, special attention should be paid to the requirements imposed on them. That is, the height of the plant's main stem, the number of pods, the number of productive branches, the total number of grains, the ripening of pods on the stem almost simultaneously, and their timely harvesting are required.

The average height of the main stem of early-maturing lines in the experimental chickpea nursery was 90.9 cm for the "Line-2002" line and 89.3 cm for the "Line-2102" line, 81.6 cm for the "Line-22-03" line, 78.8 cm for the imported "CW-129" variety, and 76.6 cm for the "CW-201" variety.

Economic and biological characteristics of varieties and lines grown in demonstration chickpea nurseries. 2023

Table 1

	Name of varieties and lines	Main stem height	Number of pods, units	Total number of grains in pods	1000 tons of grain weight, g	Vegetation period, days
.	Molxo‘tra	60,8	56,8	38,7	310	110
	“CW-129	78,8	80,9	42,1	346	97
	“CW-201	76,6	98,6	68,9	319	98
	“CW-134	68,7	59,9	56,7,6	220	86
	Line-2102	89,3	79,7	42,7	345	91
	Uneven	101	90,2	86,9	323	86
	Line-2002	90,9	85,3	68,8	332	97
	Line--22-03	81,6	87,6	61,2	310	90

From the data in Table 1, it can be seen that the late-ripening pea variety "Molkhotra" reached 90.8 cm, and the average late-ripening line "Notekis" reached 101 cm. When studying the number of pods per plant of medium-ripening varieties and lines grown in demonstration chickpea nurseries, it was noted that the "Molkhotra" variety produced 58.6 pods, the "CW-129" variety 80.9 pods, and the "CW-209" variety 98.6 pods; similarly, when studying the number of pods per plant of early-ripening varieties and lines, it was noted that the "CW-134" variety produced 59.9 pods, and the "Notekis" variety produced 86.9 pods.

During the observation of the growing season of the varieties and lines in the nurseries, it was established that the early-maturing lines reached full maturity in 86 days for the "CW-134" line and in 85 days for the "Notekis" line.

When studying the growing season of mid-season pea varieties and lines in the experimental field, it was 110 days for the "Molkhotra" variety, 97 days for the "CW-129" variety, and 98 days for the "CW-209" variety.

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In the experiment, when studying the weight of 1000 seeds of the fodder pea plant, it was 310 g for the "Molkhotra" variety, 346 g for the "CW-129" variety, and 319 g for the "CW-201" variety, while for early-maturing varieties, it was 220 g for the "CW-134" variety and 323 g for the "Notekis" line.

In conclusion, the standard varieties and lines of the "Malkhotra" medium-ripening variety grown in the demonstration experimental nursery were high in height, 1000-grain weight, days of the growing season, and yield indicators.

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