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DURATION OF THE VEGETATION PERIOD OF PEA (P. SATIVUM) VARIETIES

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Abstract : This article presents the results of a study on the duration of the vegetation period and the sequence of phenophases in the plant of blue pea varieties (P.sativum, P.arvense) intended for planting in irrigated areas.

Keywords : Flowering , vegetation , phenophase , early ripening , late ripening , farming ripening , biological ripening

Annotation :V dannoy state predstavleny resultaty izucheniya prodolzhitelnosti vegetatsionnogo perioda obraztsov sortov zelenogo pea (P. sativum , P. arvense), prednaznachennyx dlya poseva na oroshaemyx zemlyakh, posledovatelnosti fenofaz u rasteniya.

Key words . Flowering, vegetation, phenophase , early spelt, late spelt, economic spelt, biological spelt

Annotation . This article presents the results of the study on the duration of the vegetation period of samples of varieties of green peas (P. sativum , P. arvense) intended for planting in irrigated lands, the sequence of phenophases in the plant.

Keywords . Flowering, vegetation, phenophase , early ripening, late ripening, economic ripening, biological ripening

Login. Blue pea is distinguished by its excellent suitability for planting as a repeat crop . The growth cycle of the blue pea plant consists of the phases of germination, branching, tillering, flowering, pod formation, economic maturity, and full maturity. According to the ripening period, green peas are divided into groups: - early ripening (growing period - 45-60 days), - mid-ripening (60-80 days), - late ripening (more than 80 days).

The purpose and objectives of the research . To create primary sources of edible blue pea with high yield, high grain quality, and a short vegetation period. The task was set to create primary sources from the best valuable economic and morphological traits, selected for their high grain quality, varietal samples and hybrid lines of blue pea collection, having determined their resistance to diseases, protein-rich, early ripening, simultaneous ripening, turgidity, yield, and suitability for mechanized cultivation of seeds.

Research methodology and methods . In the conducted research work, the State Methodology for Variety Testing of Agricultural Crops of Russia (2015) and the State Methodology for Variety Testing of Agricultural Crops of Russia (2019) were used to identify and assess the main periods (germination, flowering, technical ripeness, harvesting) in phenological observations.

Results and discussion . The duration of the vegetation period of edible green peas was studied. It was observed that the line and variety samples differed from each other in terms of the vegetation period during the study year. The studied samples were divided into groups based on the period from germination to the period of economic (technical) ripening : - early ripening (growth period - 45-60 days), - mid-ripening (60-80 days), - late ripening (more than 80 days) .

The period from germination to technical ripeness of the Asian 2001 variety of edible green peas was 81 days. Out of 60 samples, 53 entered the technical ripeness phase 1-35 days earlier than the standard variety, 4 samples entered the technical ripeness phase 5-7 days earlier than this variety, and 3 samples did not differ significantly. The average period from germination to technological ripeness of the samples was 60.3 days. The period from germination to biological ripeness of the standard variety was 93 days. When analyzing the germination-biological ripeness phase of edible green peas, it was found that 53 samples ripened 13-36 days earlier than the standard variety, and 7 samples ripened 5-7 days later than the standard variety. The average time from germination to biological maturity of the samples was 69.6 days.

53 samples from this indicator were selected for valuable economic characteristics and planted for testing in the second year. This nursery was fully harvested in the second decade of March. The cool spring in 2022 delayed the technical maturity of the samples by a significant margin.

X- shaped blue pea took 84 days from germination to technical ripeness. Of the 53 samples, 49 entered the technical ripening phase 4-35 days earlier than the reference variety, while 4 samples entered the technical ripening phase 4-7 days later than this variety. The average period from germination to technological ripening of the samples was 62 days. The average period from germination to biological ripening of the reference variety was 95 days. It was found that 49 samples ripened 5-36 days later than the reference variety, and 2 samples ripened 4-7 days later than the reference variety. It was observed that 2 samples did not differ from the reference variety in terms of the duration of the vegetation period. The average period from germination to biological ripening of the samples was 71.6 days.

Samples of edible green peas were planted and studied. When studying the duration of the growth period of the samples, the average period from germination to technological ripeness was 59 days, while the standard Asia-2001 variety had a technological ripeness period of 81 days. It was found that 27 lines and varieties of green peas were 5-35 days earlier than the standard variety from germination to technical ripeness, and 3 samples did not differ significantly from the standard in the period from germination to technological ripeness. The average period from germination to technological ripeness of the samples was 59 days. The period from germination to biological ripeness of the standard variety was 91 days. It was found that 27 samples did not differ significantly from the standard variety. The average time from germination to biological maturity of the samples was 68.9 days.

Conclusion. Although it was observed that most of the samples of edible blue pea varieties had a shorter vegetation period compared to the standard Asian 2001 variety, the most optimal vegetation period was observed in the samples of varieties Khomyachok, Vkusniy struchok, Kelvedonsky chuda, KP-18-2014/01, PK-2020/44, Kyrol nyakhat. These samples of varieties were selected as starting material due to the short duration of the full germination-technical ripening phase.

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