THE IMPACT OF LANDING PERIOD ON GROWTH AND DEVELOPMENT OF DOLICHOS PLANTS

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In the world, there are urgent questions about providing the population with protein-rich foods that are lacking in everyone's daily nutrition. Legumes have a high nutritional value. They are valued first of all for proteins and vitamins that are easily available to humans. Legumes accumulate all the essential amino acids for humans, calcium salts, phosphorus, iron. Protein deficiency has a very negative impact on health. Currently, only known sorts are cultivated in Ukrainian horticulture.

Among the less common legumes there is an interesting species - lobichos dolichos, or hyacinth beans (*Dalichos Lablab* L). Beans of beautiful beet red color. They have a parchment layer, so you can use only unripe (type of flask) and ripe black seeds, which is considered an important medicinal raw material for dissolving kidney stones.

The widespread introduction of this little-known culture into horticulture and horticulture is hampered by the lack of cultivation technology. Among the technological elements for which it is possible to obtain a high yield of dolichos blades to produce green peas are the optimal sowing time.

Purpose. The purpose of the research was to identify the adaptive properties of dolichos plants on the basis of the study of sowing time for conveyor production in the conditions of the Forest-Steppe of Ukraine. According to the purpose, it was envisaged to establish the features of the passage of phenological phases of growth

and development, to determine the morphological features of dolichos plants, depending on the sowing time.

Methods. Experiments on sowing time for growth and development of dolichos were laid in 2016-2018 at the collection sites of NL "Fruit and vegetable garden" of NULES of Ukraine in Kyiv region. The studies were performed in three replicates according to the method of one-factor experiments. The time of sowing was studied: the third decade of April - 27.04, the first decade of May - 10.05, the third decade of May - 25.05, and the first decade of June - 08.06. The control was taken in the third decade of April. The sowing scheme was the same for all variants of studies - 70 × 20 cm with a plant density of 71 thousand units / hectare, which was determined optimal by previous studies.

The size of the accounting area was 5 m^2. At each accounting area, 10 experimental plants were observed and monitored. Field, static and laboratory methods were used for the experimental work. In all experiments phenological observations, biometric measurements of plants, accounting for the crop were performed.

Dolichos were grown using technology that maximizes the productivity of the crop, subject to growing requirements at each stage of organogenesis.

Results. Phenological observations of the growth and development of dolichos plants at different sowing times were performed from seedling emergence to biological maturity of the beans. Research results show that sowing time affects the speed of the species. At the same time, dolichos are characterized as a late-matured species regardless of sowing time. This is due to the long flowering period and fruiting. However, in early spring sowing, the growing season is extended by 9 days compared to summer. The same trend was observed in other sowing periods.

Flowering and fruiting in dolichos took place throughout the growing season. The duration of the interphase periods of the species was different and depended on the sowing period. Thus, the duration of the period of "sowing-full-ladder" was the shortest in mind during the summer sowing period - 9 days. This is due to the increase in air and soil temperatures during this period, which affected the rapid

emergence of plant sprouts. A slightly longer duration of this phase is noted in the form of late sowing - 20 days.

For an average of three years, it was found that for different sowing periods the duration of the "full shoot-start flowering" period in the species ranged from 27 to 38 days. The most ripening is characterized by dolichos during summer sowing, the duration of which was 27 days, which is 7 days less control. However, mass flowering of plants began more quickly in plants during late sowing.

Thus, phenological observations revealed that the growth and development of dolichos plants were dependent on sowing time. The most early maturing plants were dolichos plants during the 3rd (25.05) and 4th (08.06) sowing periods with the shortest growing season duration of 41-45 days.

It is established that the timing of sowing of dolichos significantly influenced the growth and development and formation of aboveground mass. During summer sowing the plants reduced the length of the stem by 4.0 cm compared with the control. In the third term, this difference is 2.5 cm for plant height 145.0 cm. A similar trend was observed for other morphological indicators in dolichos plants. With each successive sowing period the number of shoots and the thickness of the stems near the root collar in the plants of the species decreased. Whereas during the first late sowing period (10.05), all biometric indicators were highest. At the same time, according to the results of the confidence interval, this difference was within the margin of error.

The thickness of the stem near the root cervix was greater during the 2nd sowing period and was 15.0 mm, which is 1.2 mm more than the control. A smaller difference in this indicator was found in plants during summer sowing - 13.5 mm, which is 0.3 mm less than the control. Early sowing significantly inhibited the optimal growth of dolichos plants. This is due to the heat demand of the crop, for which the optimum air temperature is 20-25 ° C.

Discussion. Dolichos plants reacted very sensitively to changing growing conditions. Early sowing significantly inhibited optimal plant growth. The more developed vegetative mass was characterized by plants in the late spring sowing

period (10.05), during which the length of the stalk and the number of shoots averaged 150 cm and 8.9, respectively. The early spring and summer sowing times were unsuitable for dolichos, in which the plants formed more depressed.

In the future, it is necessary to continue research on the effect of sowing periods for dolichos, which can produce high yields of blades for green peas.