

Annotation

Ulyanych E.I., Slobodianyuk H. Ya. , Ternavskiy A.G., Voysechovskiy V. I. Efficiency of seedling and nonseedling methods of growing leek varieties under conditions of the Right-Bank Forest-Steppe of Ukraine

The factors that prevent leek spreading in Ukraine are low yields of some varieties and hybrids, and relatively high cost of the production. For leek harvest and profitability at the level of the world indicators it is advisable to introduce varieties providing high productivity in a zone of unstable moisture. Recently, vegetable growers have also practiced to grow leeks by sowing seeds in the field to avoid cost of obtaining and planting its seedlings.

In research fields of Uman National University of Horticulture for 2013–2014 such leek varieties as Matsek (control), Holias, Karetka and Columbus were grown by seedling (control) and nonseedling ways. Allocation scheme of plants is 70×10 cm. They were harvested in the second week of October and yield of false leek stems were taken into account.

Due to shorter growing season before harvesting plants of nonseedling way of growing were considerably inferior to seedling leek on indicators of biometrics. Variety Matsek had the total weight of a plant 84.5g and 198.7g respectively, height was 43cm and 73cm, number of leaves was 7.9 and 9.8pc. The nonseedling technology for varieties Holias and Columbus provided plant weight of 117.2–132.1g and height of 49–57cm. When planting by seedlings the total weight of the plants increased by 147.5–155.8g and they were higher by 26–31cm. On average for two years the total weight of plants of Columbus and Holias varieties by seedling growing method has the advantage over the control by 38–41% and comparing with Karetka variety by 19%. Regardless of the variety and growing method, less developed leek plants were in 2013, when the amount of rainfall during the growing season was 352mm that was 98mm less than in 2014.

Leek production quality is weight and length of the bleached part of false stalks which essentially depend on the total weight and height of plants during the growing season (correlation coefficient respectively $r = 0.95 \pm 0.01$ and 0.92 ± 0.03). Against the background of implementing nonseedling technology of leek growing its false stalks of the harvest had a length of 8–10cm of Matsek and Karetka varieties and 12–14cm of Holias and Columbus varieties. By the seedling method of growing the length of bleached false stalks was 17–19cm and 22–23cm respectively. On average for two years the largest weight of false stems was obtained by the seedling way of growing Columbus variety – 213.3g that is twice as large the standard. The weight of false stems of Holias and Karetka varieties by seedling way was 156–184.5g and by nonseedling one was less by 2.0–2.3 times.

For all varieties there is one pattern – high yields by the seedling method of growing. For example, the leek crop harvest of Matsek variety an average for two years by the nonseedling way is 45 % less than seedling one. The seedling growing of Columbus and Holias varieties provides significantly high yield – 26.4–30.4t/ha. By the nonseedling way the maximum yield was formed by Columbus variety – 12.9–14.0t/ha.

As a result of this work a conclusion on the expediency of implementing nonseedling way of growing Columbus variety and much higher efficiency of seedling way of growing Columbus and Holias varieties compared Matsek variety was formed.

Key words: leek, variety, cultivar, seedling way, nonseedling way, yield, false stem.