

THE INFLUENCE OF VARIETIES OF WINTER LENTILS ON THE DENSITY OF PLANTINGS AND THE TIMING OF SOWING ON THE COMPOSITION OF THE GRAIN YIELD OF PLANTS

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DOI: 10.5958/2249-7137.2022.00146.X

ABSTRACT

In our field experiments carried out for this purpose, it was revealed that when growing varieties of winter lentils Darvon and Sibron with a planting density of 850, 1100 and 1300 thousand grows / ha. at two different planting dates, the formation of crop components in plants varied.

KEYWORDS: *winter lentils, variety, Darvon, Sibron, variant, term*

INTRODUCTION

In the republic, the cultivation of winter lentils is expected to open the way for the development of this important food crop. For this purpose, a lot of scientific research is being carried out in our country. Experiments to determine the optimal planting dates, the norms of plant density of mineral fertilizers, the optimal water and nutritional regimes for soil and climatic conditions, on the basis of this, making recommendations ensures a wide distribution of this variety for any newly created variety. [1]

Object and research methods. In our field experiments carried out for this purpose, it was revealed that when growing varieties of winter lentils Darvon and Sibron with a planting density of 850, 1100 and 1300 thousand grows / ha. at two different planting dates, the formation of crop components in plants varied. The height of the main stem of the autumn lentil variety Sibron was higher in the variant with a plant density of 1100 thousand plants / ha, in the 1st planting period it was 44.2 44.1 cm. In the other two variants, the height of the main stem was 4.1 and 1 , 5 cm below. In the Darvon variety, the height of the main stem is observed in the variant with a planting density of 1300 thousand hectares / ha, by 45.4 and 45.9 cm, respectively, or 3.6–1.9 and 3.1–1.3 cm higher, than in other options. [2]

Research results and their discussion. The number of beans formed in each bush is 37.1-41.4, for Sibron and Darvon varieties - 39.2-43.1 in variants with 850,000-1100,000 bushes, and with a variant with 1300 thousand plant / ha the number of beans in plants it decreased by 1.8-8.7, on each bush - to 34.4-35.3. A similar situation was observed in the second planting period (table 1.)

One of the main criteria in analyzing the results of research aimed at improving the technology of growing crops is yield. In field experiments carried out this year, the highest yield of both varieties was observed in variants with a planting density of 1,100,000 bushes per hectare (table 2.)

In the first sowing period, the yield of the Sibron variety in the first variant was 16.3 c / ha, the Darvon variety - 20.3 c / ha. In the variant with a planting density of 850 thousand plants / ha, the lowest yield was 15.7 and 15.6 c / ha, respectively, for the Sibron and Darvon varieties. With a planting density of 1,300,000 plants / ha, the yield decreased by 0.2 c / ha for the Sibron variety and by 1.2 c / ha for the Darvon variety. [3]

The same results were obtained in the second term of sowing winter lentils. The Sibron variety gave a yield of 16.4 kg / ha with a planting density of 1,100,000 shoots, which is 1.4 centers / ha more than the variant with a planting density of 850,000 bushes and 1,300,000 bushes. For the Darvon variety, these readings were 17.2 and 0.1.0.6 c / ha, respectively. Based on this, this year high yields were achieved in the bushes of the winter lentil varieties Sibron and Darvon with a planting density of 1,100,000 bushes for both planting periods. [4]

When comparing the yield by sowing dates, the sowing on October 20, the yield was higher. When sown on November 5, the yield of winter lentils was 1.1 - 1.8-0.2 c / ha for the Sibron variety and 0.7 - 3.1-0.8 c / ha for the Darvon variety, compared to October 20. Therefore, it is advisable to plan the optimal planting date for winter lentil varieties Sibron and Darvon on October 20.

Based on the results of field experiments and laboratory analyzes carried out in 2012-2013, we present the following conclusions and recommendations based on the characteristics of the cultivation of winter lentils. [5]

TABLE 1. INFLUENCE OF VARIETIES OF WINTER LENTILS ON THE DENSITY OF PLANTINGS AND THE TIMING OF SOWING ON THE COMPOSITION OF THE GRAIN YIELD OF PLANTS 1-sowing date

| № | planting density | Sowing time | Number of plants before harvest | The height of the main stem | Place of the first beans, so | On average 1 bush | | | Weight of 1000 grains, g. |
|---|------------------|-------------|---------------------------------|-----------------------------|------------------------------|-------------------|----------------|------------------|---------------------------|
| | | | | | | Number of beans | Quantity grain | Grain weight, g. | |
| 1 | 850000 | 20.10.11 | 831000 | 40,3 | 11,5 | 37,1 | 43 | 2,9 | 75 |
| 2 | 1100000 | 20.10.11 | 1085000 | 44,2 | 13,3 | 41,4 | 53 | 3,0 | 80 |
| 3 | 1300000 | 20.10.11 | 1235000 | 43,1 | 12,9 | 35,3 | 41 | 3,0 | 80 |
| 4 | 850000 | 20.10.11 | 839000 | 41,6 | 10,9 | 39,2 | 47 | 2,8 | 77 |
| 5 | 1100000 | 20.10.11 | 1075000 | 43,3 | 13,1 | 43,1 | 50 | 3,1 | 80 |
| 6 | 1300000 | 20.10.11 | 1253000 | 45,2 | 14,1 | 34,4 | 42 | 3,1 | 80 |

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2-SOWING DATE

| № | planting density | Sowing timee | Number of plants before harvest | The height of the main stem | Place of the first beans, so | On average 1 bush | | | Weight of 1000 grains, g. |
|---|------------------|--------------|---------------------------------|-----------------------------|------------------------------|-------------------|-----------------|------------------|---------------------------|
| | | | | | | Number of beans | Quantity grainn | Grain weight, g. | |
| 1 | 850000 | 5.11.11 | 732000 | 39,3 | 9,4 | 36,1 | 40 | 2,8 | 75 |
| 2 | 1100000 | 5.11.11 | 1065000 | 44,1 | 13,1 | 39,3 | 45 | 3,1 | 79 |
| 3 | 1300000 | 5.11.11 | 1269000 | 42,7 | 14,6 | 35,2 | 39 | 3,0 | 80 |
| 4 | 850000 | 5.11.11 | 817000 | 41,2 | 10,3 | 36,3 | 40 | 2,7 | 75 |
| 5 | 1100000 | 5.11.11 | 1071000 | 44,8 | 11,7 | 40,9 | 44 | 2,9 | 80 |
| 6 | 1300000 | 5.11.11 | 1229000 | 45,9 | 13,9 | 35,1 | 39 | 2,9 | 80 |

Productivity of winter lentils, kg / ha (1 sowing period) Table 2

| Variants | Repetition | | | | Average yield |
|-----------------|------------|------|------|------|---------------|
| | I | II | III | IV | |
| Sibron 850000 | 15.2 | 15.7 | 16.1 | 16.1 | 15,7 |
| Sibron 1100 000 | 19.6 | 19.3 | 18.8 | 18,9 | 19,1 |
| Sibron 1300 000 | 16.2 | 16.3 | 16.9 | 15,8 | 16,1 |
| Darvon850000 | 17.2 | 16.8 | 16.2 | 16,3 | 16,6 |
| Darvon 1100 000 | 19.2 | 20.5 | 20.6 | 20,3 | 20,3 |
| Darvon 1300 000 | 17.4 | 17.1 | 17.5 | 17,5 | 17,1 |

Productivity of winter lentils, kg / ha (2 sowing period)

| Variants | Repetition | | | | Average yield |
|-----------------|------------|------|------|------|---------------|
| | I | II | III | IV | |
| Sibron 850000 | 15.1 | 14.3 | 14.1 | 15,2 | 14,7 |
| Sibron 1100 000 | 16.2 | 16.4 | 16.9 | 16,9 | 16,3 |
| Sibron 1300 000 | 15.8 | 16.3 | 15.6 | 15,9 | 15,9 |
| Darvon850000 | 15.1 | 15.4 | 15.7 | 16,0 | 15,9 |
| Darvon 1100 000 | 17.7 | 17.4 | 17.1 | 16,7 | 17,2 |

| | | | | | |
|--------------------|------|------|------|------|------|
| Darvon 1300 000 | 16.2 | 16.1 | 16.9 | 15,9 | 16,3 |
|--------------------|------|------|------|------|------|

Consolidated suggestions and recommendations

As the development of the farming movement in our country, as a result of ongoing reforms in agriculture, ensuring the implementation of the decree of the President of the country to replenish the domestic market, paying attention to growing non-traditional agricultural crops like winter lentils, growing imported winter lentil seeds since 2000 and actions taken on the basis of the project on the development of scientifically grounded agricultural technology for the corresponding varieties Darvon and Sibron, winter lentils are relevant and meet the requirements of today. [6]

In our opinion, taking into account the development of lentil cultivation in our country, a change in the attitude towards this culture will improve the material and technical base of the industry, maximize the specialization of the industry, and improve the quality of scientific research. [7]

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