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## WAYS TO ELIMINATION OF THE APICAL DOMINATION OF BROAD BEANS IN THE CONDITIONS OF WESTERN FORESTRY OF UKRAINE

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**Formulation of the problem.** The phenomenon of an apical domination is universal for the plant world and consists in the domination of the apical bud over the lateral.

The accompanying negative phenomenon of apical domination in broad beans is falling (abortion) of flowers and fruits. So according to Rubin B., the percentage of mature fruits from the number of inlaid flowers varies depending on the variety from 5,0 to 19,2. According to Kobak S., in conditions of the Right-bank Forest-steppe of Ukraine, depending on the method of the sowing, plant density and doses of nitrogen fertilizers (on average in 1998–2001), the percentage of the ripening beans from the number of flowers was 16,0–18,0, and the percentage of the ripening beans from the formed beans ranged from 62,5 to 73,4.

In order to overcome the apical domination, the agrotechnical method of chasing (pinching) is used, which consists in the mechanical cutting of the stem's apex in the range of 15–20 cm.

**Presenting main material.** The research was conducted in the experimental field of the technology department in plant growing at the Lviv National Agrarian University in 2013–2015 in accordance with generally accepted methods. The soil is dark gray podzolized light-sand. The content of hummus (by Tyurin) is 2,7%, of lightly hydrogenated nitrogen (by Cornfield) – 110 mg/kg, pH of saline solution – 6,2, the soil is medium-rich in mobile forms of phosphorus (95 mg/kg) and exchangeable potassium (127 mg/kg). The accounting area of sites is 50 m<sup>2</sup>. Repeating of options is three-times, the placement is consecutive.

The variety of broad beans – Vizier. The sowing was conducted by a sowing machine "Klen" in a standard manner of 600 pc/m<sup>2</sup> of similar seed. They put the HMA (Hydrazide of maleic acid) with a backpack spraying, pinching by manually using a sickle at the end of the flowering phase about 25 days before the onset of physiological maturation. The cultivation technology is generally accepted for the Western forest-steppe zone of Ukraine.

In the conditions of research, we noted the positive influence of the introduction of HMA in a concentration of 0,4% (option 4) and chasing (option 6) on the indicators of the structure of the crop. The negative influence was made by introducing HMA in concentration – 0,6% (option 5).

The largest number of beans and seeds per plant was obtained in variants 4 and 6 and in accordance are 10,9 and 29,4 and 10,8 and 29,1 pcs. In these variants, the largest mass of seeds from one plant was obtained, namely 11,0–11,1 g, which is 1,1–1,2 g more compared with the control variant. The increase of the number of seeds has led to a decrease in the  $M_{1000}$  seed rate by 31–45 g compared with the control.

With regard to the assessment of the impact of the introduction of HMA in a concentration of 0,4% and conduct of the chasing, it is necessary first of all to note their positive impact on the yield of plants of broad bean.

**Conclusions.** The highest yield indicators of the grain of broad beans were provided by inputting HMA at a concentration of 0,4% and the chasing was carried out (variants 4 and 6) and it becomes 4,50 and 4,55 t/ha. But the recommended way to regulate the apical growth has advantages in the practical use.

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