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## STUDY OF GROWTH AND PRODUCTIVITY OF WALNUT TREES IN THE ECOLOGICAL SYSTEM OF AGROTECHNICS

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In recent years, both in the EU countries and in the Republic of Moldova fruit consumers increasingly demand organic production in their dietary requirements. The experience is located on the Chandler walnut variety, „Pomul Regal” Ltd., Inesti village, Telenesti district. Planting distance 7.0 X 8.0 m. The variant no. 1 (control) - traditional agrotechnical system. The soil in the intervals between the rows and on the rows of trees is maintained as black field. Mineral fertilizers are applied annually in autumn in the grooves on both sides of the trees at a depth of 20-22 cm. The variant no. 2 - ecological agrotechnical system. The soil in the intervals between the rows was maintained by sowing sideral crops and natural grassing, and the strips along the rows of trees are maintained as black field. Organic fertilizers –the Orgazot was applied to the soil in early spring, and the Eutrofitfoliar fertilizer was applied at 10-14 days intervals during intensive shoot and fruit growth. Disease and pest protection were carried out with ecological products (bioinsecticides: Pelecol – 10.0 l/ha, BioStar – 2.5 l/ha, MatrinBio, SL – 1.5 l/ha; biofungicides: Serenade ASO – 8.0 l/ha, BioBacter – 8.0 l/ha). The treatments were performed with an interval of 7-10 days. The number of repetitions in each variant is 3. The number of trees in repetition is between 8-10. Placement of repetitions is randomized. The research takes place in field and laboratory conditions. The biological efficiency of the biofungicides complex used against brown spot of walnut is –in 2020 - 92.5% leaves, 93.1% fruits; in 2021 – 88.8% leaves, 88.4% fruits and in 2022 – 90.4% leaves, 88.8% fruits, respectively. The biological efficiency of the biological products against the apple worm and the oriental worm that attacks the walnut reached the limit of 89.5% - 89.1% - 89.6%, in the traditional version corresponding to 93.1% - 91.5% - 92.7 %. The average weight of a fruit in the control variant is 11.71 g and, in the variants, Sideral Crops and Orgazot 120 kg/ha – 13.07-13.86 g. When applying the fertilizer Orgazot 150 kg/ha and Orgazot 120 kg/ha + Eutrofit 5.0 l/ha the mass of a fruit is 14.00-14.05 g.

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