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Functional State of Mandarin Plants under the Influence of Exogenous Plant Growth Regulators

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The objects of research are mandarin plants (*Citrus reticulata* var. unshiu Tan.) dwarf varieties "Miyagawa Vase". The research was carried out in the field and laboratory conditions: mandarin plantations in the experimental and technological Department of the fruit crops sector of the Institute and the laboratory of plant physiology and biochemistry, using classical and modern methods of plant physiology and biochemistry, as well as STATGRAPHICS Centurion XV programs. The goal is to study the effectiveness of using new-generation exogenous growth regulators on mandarin plants to increase productivity, product quality, and crop resistance to environmental factors. The expediency of using exogenous phyto regulators to increase the productivity of plants and the quality of fruits of dwarf mandarin in specific weather conditions of the summer period: under the influence of high temperatures and drought. The features of the influence of exogenous growth regulators of regulatory action on the growth and development of mandarin plants are revealed. The prospects of various physiologically active substances (obstactin, nanoelisor, siliplant) for increasing the resistance of mandarin plants to adverse factors of the spring and summer period, increasing their

productivity and fruit quality have been proved. Treatment of plants with growth regulators did not affect the content of green pigments in the leaves. An active growth of shoots was established and an increase in the number of remaining fruits on the tree was noted when treated with growth regulators. Under the influence of exogenous phyto regulators, there was a significant increase in the amount of ascorbic acid in the fruit.

Biography

Oksana Belous is a professor, head of Plants Biochemistry and Physiology Laboratory of Russian Institute of Floriculture and Subtropical Crops (Sochi, Russia). She researches concern is studying of physiology of mineral nutrition, water status of plants, physiology-and-biochemistry adaptation mechanisms to abiotic and biotic factors, accumulation of biological activity substances into plants. She has over 200 publications, and has been serving as an editorial board member of reputed Journals from Russian and other countries. She is the head of sciences school of Institute: "Physiology of adaptability of subtropical, southern fruit and flower-and-decorative crops" and read courses of lectures for graduate students in the disciplines physiology of stress, physiology of mineral nutrition, water regime of plants, physiology of cells in vitro, physiology and biochemistry of plants.

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