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The Study of the Chemical Composition of Essential Oils *Mentha Piperita* L. are Grown in Non-Chernozem Zone of Russia

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By gas-liquid chromatography and mass spectrometry has been investigated the composition of essential oils and the change in the ontogenesis and exogenous effects on the plant *Mentha piperita* L. drugs retardant type. With the introduction of oil crops from the southern regions to the more northern regions of the component composition of the essential oil practically does not change. There are only minor variations in the content of some terpenoids oils. Exogenous preharvest treatment plant growth regulators can in some cases deliberately influence the activity of various terpenoid biosynthesis and increase the content of the most valuable components of the essential oil.

Content and composition of EM is largely determined by factors such as age and leaves of plants, as well as different climatic cal, soil and agronomic conditions. Processing plants different phytoregulators also affects the content and composition of oil. Biosynthesis of terpenoids polyenzyme performed in centers, the activity and the nature of which is determined primarily genetic characteristics of plants, in addition, the activity of certain enzymes of these centers is under the control of hormonal balance and changes in ontogeny, as well as under the influence of exogenous factors.

It is shown that the formation of the maximum bioefficiency in ontogeny of aromatic plants, it is advisable to use a two-stage technology to grow them. Plants producing terpenoids of essential oils, the initial step is to create the conditions for the formation of the maximum yield of aboveground mass of plants, including the use of synthetic plant growth regulators. In the second stage "biosynthetic" upon the occurrence of the reproductive phase before harvesting plants, we recommend that inhibit the growth of phytoregulators retardant type. In this case, we observe stimulation accumulation in aboveground mass of secondary metabolites. Inhibition of growth in the preharvest period, aromatic plants determines the strategy of production process management and the formation of bio-productivity as an integral function of productivity and high levels of concentration in the feed terpenoids.

Exogenous preharvest treatment plant growth regulators allows purposefully influence the activity of the biosynthesis of various terpenoids, increasing the most valuable components of essential oils.

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