



Morphobiological Features and Productivity of Essential Oil Plants of the Lamiaceae Family in the Conditions of the Southern Steppe of Ukraine

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Abstract: The relevance of growing essential oil plants of the Lamiaceae family is currently growing due to the growing demand for natural plant raw materials and essential oil, as well as the possibility of growing plants of this family on degraded, unproductive lands for the purpose of their phytoremediation under conditions of climate change and use for agritourism. The aim of the research was to study the morphobiological features and productivity of essential oil plants of the Lamiaceae family in the conditions of the Southern Steppe of Ukraine. To achieve this goal, methods of field and laboratory experiments, phenological observations, and statistical analysis were used. The material for the research work was varieties of *Lavandula angustifolia* Mill., *Lavandula hybrida* Rev., *Hyssopus officinalis* L., *Mentha x piperita* L., *Melissa officinalis* L., *Salvia sclarea* L. The viability of essential oil plants ranged from 85.0 to 100% depending on the type and variety of plants and the quality of planting material. Winter hardiness during three years of cultivation was 80.5-98.7%. During the growing seasons, the plants of all studied species went through all phases of vegetation and formed a crop of plant material, which increased dynamically from the first to the third year and depended on the genotype and agro-meteorological conditions of the growing year. The obtained results show the high adaptability of essential oil plants of the Lamiaceae family and allow us to recommend them for cultivation in the Southern Steppe of Ukraine.

Keywords: essential oil plants; survival; winter hardiness; adaptation; productivity