

## **GENOTYPES OF *SALVIA SCLAREA* ESTABLISHMENT OF ESSENTIAL OIL**

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Special attention has recently been paid to the species *Salvia sclarea* L., due to the multiple uses of the essential oil, which is contained in inflorescences and is used in medicine, the perfumery industry, the brewing industry, etc. At the Institute of Genetics, Physiology and Plant Protection, a series of amelioration researches are carried out, by genetic methods, in order to create new genotypes, which would synthesize and accumulate the highest possible content of high-quality essential oil.

The aim of the research is to evaluate and select hybrids of *Salvia sclarea* L., with high and very high content of essential oil.

The biological material used is represented by 84 F<sub>1</sub>-F<sub>2</sub> of different types of *Salvia sclarea* L., in the second year of vegetation.

Phenological, biomorphological evaluations were performed according to the methods in force. The essential oil content was determined by hidrodistillation in Ginsberg apparatus.

Research has shown that the hybrids created, evaluated, are resistant to sect, frost, wintering and disease. They are valuable through a string, which ensures increased productivity and high essential oil content. In extreme conditions, the genotypes of *Salvia sclarea* have developed plants with a height of over 91 cm, in some hybrids reaching up to 133.2 cm. Large inflorescences, 42-72 cm long. The number of first-degree branches of the inflorescence ranged from 12.0 to 18.4. Second-degree ramifications - ranged from

18.0 to 44.4 at different genotypes. All these characters facilitated the synthesis and accumulation of a fairly large amount of essential oil. The determination of the essential oil content in the inflorescences, recalculated to dry matter, showed that some hybrids due to drought synthesized and accumulated a relatively low amount of oil - 0.620-0.800%. We specify that 57% are hybrids with a high essential oil content of over 1.0%, and 21.4% are hybrid genotypes with a very high content of essential oil 1,301-1,906% (dry matter).

As a result of the evaluations, 18 exceptional hybrids of the most important character were selected, identified, they synthesize and accumulate 1,301-1,906% (dry matter) essential oil.

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