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COMPARATIVE ANALYSIS OF OIL CONTENT IN ALTERNATIVE OIL SPECIES

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Abstract

The growing demand for vegetable oils used in human and animal nutrition or for the processing industry contributed to the evaluation of other, insufficiently used plant species for farming and commercial production. Alternative oil seeds represent good sources of nutrients but are also an important raw material for the various non-food products (biofuel, biopolymers, lubricants, etc.) In this study, oil contents in seeds of several alternative oil species were analysed and compared with those of two different genotypes of rapeseeds. Examined samples included white mustard (*Sinapis alba* L.), black mustard (*Brassica nigra*), two different genotypes of rapeseed (*Brassica napus*), and two genotypes of camelina (*Camelina sativa* Crtz.) and safflower (*Carthamus tinctorius* L.). All analysed samples were from the collection of the Institute of Field and Vegetable Crops (Novi Sad, Serbia). Oil contents determined by the conventional Soxhlet method ranged from 15.92 to 33.26% on dry matter. White mustard had the lowest oil content, while the highest oil content was determined in rapeseeds. Considering oil yields in alternative oilseeds, camelina with oil contents from 28.51 to 29.33%, besides for human consumption, could be considered as a potential alternative to conventional rapeseed as industrial raw material for different purposes.

Keywords: oilseeds, camelina, safflower, mustard, alternative.