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EVALUATION OF VARIOUS ECOTYPES OF “STAMNAGATHI” (*CICHORIUM SPINOSUM* L.)

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Abstract

In the present study, the evaluation of chemical composition of various ecotypes of “stamnagathi” (*Cichorium spinosum* L.) was carried out. Seeds from selected ecotypes were collected *in situ* and sown in seed trays for plant propagation and consequent plant production. At the harvest stage, the dry matter, chlorophyll, sugars, fatty acids and organic acids content in leaves was measured. Regarding dry matter content, significant differences were observed among the ecotypes, with mean values ranging from 6.3 to 8.3%. Differences were also observed in chlorophyll a, b and total chlorophyll, with ecotypes B and D having the highest content comparing to ecotypes A and C. Sugars content differed among the ecotypes for all the detected sugars (glucose, fructose, sucrose) and the total sugars content. Ascorbic acid was detected only in the case of ecotypes B and C, whereas in the other two ecotypes only traces were detected. Finally, regarding tocopherols content, significant differences were observed for both α -tocopherol, with ecotype B having the highest content followed by ecotype C, and δ -tocopherol, where the highest content was observed for ecotype C. For total tocopherols, ecotype C had also the highest content comparing to the other ecotypes. Fatty acids content did not differ among the studied ecotypes, for both the content of the main fatty acids (α -linolenic, linoleic and palmitic acid) and the monounsaturated fatty acids (MUFA), polyunsaturated fatty acids (PUFA) and total fatty acids (TFA) content. In conclusion, genotype has an important effect on nutritional and chemical composition of ‘stamnagathi’ ecotypes, and special interest rises for detecting and evaluating ecotypes with high quality profile for commercial cultivation.