

TOTAL SAPONIN CONTENT OF DIFFERENT ALFALFA (MEDICAGO SATIVA L.) CULTIVARS CULTIVATED IN FIELD EXPERIMENT

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Saponins are secondary metabolites produced by various plants. These compounds have important role in the defence system. The word saponin refers to a group of different chemical compounds. Basically, sugar conjugates of triterpenoids or steroids are called saponins. Triterpene-type saponins are more specific among dicotyledonous plants, while steroid-type saponins are more characteristic of plants belonging to the monocotyledonous taxonomic group. Alfalfa is a large-scale cultivated and foraged fodder plant in Hungary. In the defence mechanism of alfalfa, saponins also play an important role. However, large amount of saponins can be toxic in animal fodder, especially in the poultry farming and piggery. As a dicotyledonous plant, the alfalfa saponins are mainly triterpenoid type. In our study we measure the total triterpenoid saponin content and leaf stem ratio of field cultivated alfalfa cultivars. Samples were collected from a randomized block design experiment, planted in the Demonstration Garden and Arboretum of Institutes of Agricultural Research and Educational Farm, in Debrecen, in 2018. Three different cultivar were investigated, and the samples were collected three different times of the growing season at growing stage of early flowering, for three years (2018-2020.). Differences were measured in the examined parameters between cultivars and sample collecting time too. These results are useful for the right cultivar selection for fodder production.