EXAMINATION OF THE EFFECT OF SILICON AND SULPHUR FOLIAR FERTILIZATION ON SPAD AND NDVI VALUES IN TWO YEARS IN WINTER OATS

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Oats are valuable crops due to their excellent nutritional parameters for both human consumption and animal feed. Although they are not popular in domestic conditions. In our research, we studied 5 and 6 winter oat varieties over two years, treated with silicon-, and sulfur-containing foliar fertilizers at various phenological stages. SPAD and NDVI can provide a comprehensive picture of plant physiological status, from water and nutrient deficiency to various stress factors. Measurements were taken 5 times during the growing season. Due to weather conditions, we were able to compare an extremely dry year (2022) with a year to have favourable water availability (2023) in the course of the experiment. In the year of 2022, we measured significantly lower SPAD values for Mv Imperiál, and significantly higher values for Mv Kincsem compared to other varieties. Regarding treatments, plants in the control plots performed the best. There were no significant differences in NDVI values among varieties or treatments. In 2023, we also measured the lowest SPAD value for Mv Imperiál, while the sulfur-treated plots had significantly the highest values among treatments, but all treatments performed better than the control. Regarding NDVI values, we did not find strong correlations, although Mv Istráng and Mv Hóka had noticeably lower values. Comparing the two parameters, we found that in 2022 both SPAD and NDVI values were the highest for the Mv Kincsem variety, and the sulfur treatment had the lowest values. However, in 2023, there was no match between the extremely high or low values for the two parameters.