

THE EFFECT OF ABIOTIC STRESS ON WHITE LUPIN (*Lupinus albus* L.) cv. “MIHAI” PLANTS IN DIFFERENT DENSITY CONDITIONS

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Abstract

Lupinus albus (white lupin) is a crop well adapted to marginal lands and has a large potential for enhanced bio economy use. In general, lupins have the ability to fix atmospheric nitrogen, mobilise soil phosphate and are suitable for low nutritional cultivation. Modern varieties should be selected for high yield of green silage or high yield of seeds which contain more than 20% oil, more than 40% protein and the remaining materials are carbohydrates, mainly oligosaccharides characterized as “prebiotics”. In this experiment, three new white lupin sorts were tested in experimental fields. Breeding activities were compensated by optimized cultivation technology for these cultivars. One of the biggest problems in the white lupin cultivation this year was caused by the extreme draught and high temperatures registered during the vegetation period. Results present the observations obtained in 2022 season at the Ezăreni Farm. Comparison of the selected cultivars was performed using two different density conditions. Results indicated that white lupins could be an interesting alternative for farmers and can contribute to new optimised crop rotation systems.

Key words: *Lupinus albus*, plants density, abiotic stress
