

EVALUATION OF NUTRIENT CONTENT IN PEA CROP FROM MUNTENI ORGANIC FARM – GALAȚI COUNTY, ROMANIA

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Abstract

Organic farming is less environmentally damaging agriculture that seeks strategies to avoid the use of hazardous chemicals that have a negative impact on soil micro-organisms, crops, animals and humans. The aim of this work is to find ways of capturing and fixing biological nitrogen, acquiring P and Fe as well as other essential elements. Leguminous plants play an important role in soil fertilization, high solubilization capacity for phosphates enrich the soil in nitrogen, high organic matter content and high uptake capacity for nutrients from heavy soluble compounds. The organic farm in Munteni commune, Galati county, cultivated autumn and spring peas to fix atmospheric nitrogen in the soil (pH 5.9-6.5) with the help of specific bacteria. The pH value favors the accumulation of nitrates in the soil but the results obtained do not exceed the maximum admissible concentration (130 mg/Kg). The total nitrogen content is between 0.162% and 0.042%, a medium content but which decreases on the soil profile (medium texture) by leaching. The forms of nitrogen assimilable by green plants nitrate and ammonium nitrogen in the soil solution were within normal limits (maximum 20 mg/kg). The use of cover crops can become an alternative to chemical fertilizers, but the supply of phosphorus and microelements remains low in the soil.

Key words: ecological, total nitrogen, nitrates, legumes