RESEARCH REGARDING THE INFLUENCE OF THE WORK METHOD ON THE SOIL MOISTURE AND THE WATER RESOURCE IN THE FORESTRY NURSERY OF IARAC

Nicuşor BOJA[1], Florinel BOJA[1]
E-mail: bojanicu@yahoo.com
[1] "Vasile Goldiş " Western University of Arad – Faculty of Engineering

Abstract
The present research has as a purpose the determination of the optimal work methods of the soil used in forestr y nurseries and which are meant to obtain h igh quality saplings by maintaining a possibly large quantity of water in the soil. The research was carried out in the Iarac forestry nursery in the O.S. Iuliu Moldovan during 2005-2009, on an alluvial soil - the vertical-gleiying subtype. The experiment is multi-factorial – the A X B type. The placement of the sample markets was carried out according to the "divided parcels method" in two repetitions, and the surface of the parcel was 80 m2. Soil moisture is an important characteristic for the development of the saplings in the forestry nurseries. It suffers big variances in time according to various factors, among which: water interception from rain, outflow, infiltration, retention, capillary ascension etc. A larger quantity of soil moisture can be also obtained through its mobilization by different means of mechanic work. Thus, this research presents the results obtained after the working of the soil through different methods on the physical properties (moisture and water resource), determined at the beginning of the vegetation season and at its middle for the scarified and non-scarifi ed soil. The work method of the soil adjusts the main hydro-physical properties for the determination of the soil fertility in order to assure the productive consumption of the saplings and the avoidance of the loss through evaporation. The usefulness of the present research consists in the research data collected, determined, analyzed and valorised in order to offer a pertinent study material which could indeed be used by specialists in envisaging the process of obtaining saplings in forestry nurseries and the choice of optimal tillage systems of the soil.

Key words: technical work, soil moisture, water resource