

ABSTRACT

The thesis is presented on 50 pages. It contains 2 appendixes and bibliography of 12 references. Seven figures and six tables are shown in the thesis.

The goal of this work is to create a mathematical model for predicting self-seeding pine on empirical parameters using linear regression. The paper considers methods such as turn-based linear regression, linear regression based on the method of least squares linear regression based on the partial least squares method principal components. Based on the criteria set out to solve the task set by linear regression principal components.

A system that implements the chosen method was developed and tested. Input data for the system was provided by the Department of Radiology from Institute of Agroecology and Environmental Management of National Academy of Agricultural Sciences of Ukraine.

Keywords: linear regression, principal components method, Samos pine, mathematical model prediction..