

ΓΕΩΡΓΙΚΗ ΜΗΧΑΝΙΚΗ

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Abstract

Agricultural Engineering is an integral part of Agricultural Science because it concerns the use of technology in agriculture. Consequently, this textbook is intended for undergraduate and graduate students of Agricultural Science and anyone involved in agriculture in general. This book studies, analyzes, explains, and selects the optimal support systems for the plant and animal environment, because Agricultural Engineering is the scientific discipline that implements the requirements set by Agricultural Science for the optimal growth and development of plants and animals. Consequently, the textbook contains an introduction to the methods and methodology for solving basic problems in Agricultural Engineering. The standard ways of presenting the results of a production process and the basic mathematical formulas that are repeatedly encountered in Agricultural Engineering are provided. Finally, attention

is drawn to all those who are going to be involved in agriculture in matters of saving available resources, because the goal in any process is to maximize the result. The topics covered in the book include: the transmission of motion in agricultural mechanisms and machinery and the most common methods of power generation in agriculture; the calibration of machinery; the efficiency and capabilities of equipment; energy consumption; sound and noise and their effects on human health; topographical data that should be known by those involved in agriculture; how to make use of climatic data and rainfall runoff in agriculture; the most common methods of irrigation and modern technology for water conservation; erosion and ways of combating it; the preservation of organic products, because any production process is automatically invalidated if the quality of the products is not ensured after harvesting.

