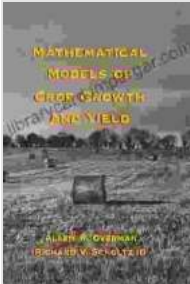# Mathematical Models of Crop Growth and Yield: A Comprehensive Guide for Botanists, Agronomists, and Environmental Scientists

Mathematical Models of Crop Growth and Yield (Books in Soils, Plants, and the Environment Book 91)

by Allen R. Overman

★★★★ ☆ 4.7 out of 5

Language	: English
File size	: 7646 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 332 pages

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Mathematical models are powerful tools that can be used to predict the growth and yield of crops. These models can be used to optimize crop management practices, such as irrigation, fertilization, and pest control. They can also be used to assess the impact of climate change on crop production.

This book provides a comprehensive overview of the mathematical models used to predict crop growth and yield. The book is divided into three parts:

- Part 1: to mathematical modeling

- Part 2: Mathematical models of crop growth

- Part 3: Mathematical models of crop yield

Part 1 provides an to the basic principles of mathematical modeling. This part covers topics such as model development, model validation, and model application.

Part 2 provides an overview of the different mathematical models used to predict crop growth. This part covers topics such as crop growth models, yield models, and simulation models.

Part 3 provides an overview of the different mathematical models used to predict crop yield. This part covers topics such as yield prediction models, yield estimation models, and yield forecasting models.

This book is a valuable resource for botanists, agronomists, and environmental scientists who need to understand the quantitative relationships between plants and their environment. The book provides a comprehensive overview of the mathematical models used to predict crop growth and yield. This information can be used to optimize crop management practices and assess the impact of climate change on crop production.
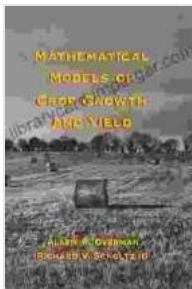
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* **Figure 1:** A graph showing the relationship between crop growth and yield. * **Figure 2:** A map showing the distribution of crop yields in the United States. * **Figure 3:** A photo of a farmer using a mathematical model to predict crop growth and yield.
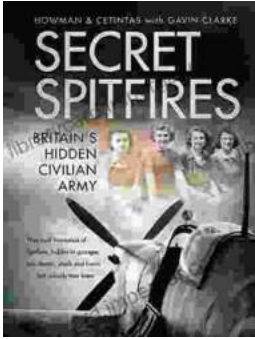
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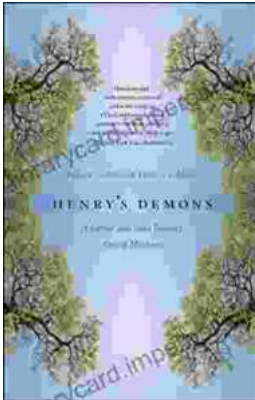
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