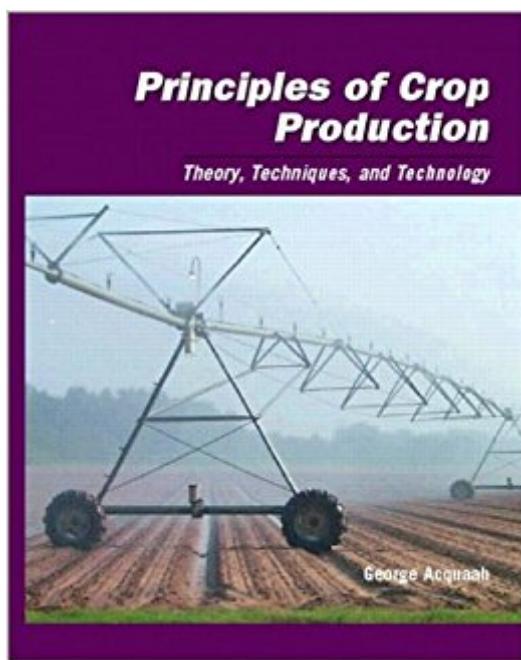


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# Principles Of Crop Production: Theory, Techniques, And Technology



## **Synopsis**

This comprehensive text emphasizes the general principles of crop production as a science, an art, and a business whose impact on society is inestimable. The book is suitable for use in courses covering crop production at either the introductory or intermediate levels of study and is an invaluable reference for students and professionals alike. In a writing style that is clear, to-the-point, and easy to understand, this text provides the necessary background for a solid understanding of all topics related to this exciting field--in addition to offering information on the latest technologies used and addressing the current trends and issues. The scientific principles presented are applicable globally, while special reference is made to the North American experience. The coverage of topics in *Principles of Crop Production: Theory, Techniques, and Technology* is organized as follows:

- Crop Production and Society
- Plant Structure and Function
- Plant Metabolism and Growth
- Crop Improvement
- Climate and Weather
- Soil and Land
- Plant and Soil Water
- Pests in Crop Production
- Agricultural Production Systems
- Land Preparation and Farm Energy
- Seed and Seeding
- Harvesting and Storage of Crops
- Marketing and Handling
- Grain Crops

## **Book Information**

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## **Customer Reviews**

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understanding of all topics related to this exciting field; in addition to offering information on the latest technologies used and addressing the current trends and issues. The scientific principles presented are applicable globally, while special reference is made to the North American experience. The coverage of topics in Principles of Crop Production: Theory, Techniques, and Technology is organized as follows:

Crop Production and Society	Plant Structure and Function			
Plant Metabolism and Growth	Crop Improvement	Climate and Weather	Soil and Land	Plant and Soil
Water	Pests in Crop Production	Agricultural Production Systems	Land Preparation and Farm	
Energy	Seed and Seeding	Harvesting and Storage of Crops	Marketing and Handling	Grain Crops

In many agricultural instructional programs, students are required to take at least an introductory course in each of the major areas of the field of agriculture, irrespective of their areas of concentration or major. The major areas are crop science, animal science, soil science, and economics or business. Introductory courses in crop science may have titles such as "Elements of Crops," "Introduction to Plant Science," "Introduction to Agronomy," and others. This text, Principles of Crop Production: Theory, Techniques, and Technology, was designed for use at the introductory and intermediate levels of study. The specific objectives of the author in designing this text were: To develop a comprehensive text on crop production. To emphasize the general principles of crop production, with less emphasis on regional information. To present crop production as a science, an art, and a business. To introduce and emphasize some of the new concepts and trends in crop production. To engage the student and facilitate the learning of the principles of crop production. To provide a good reference on the subject of crop production. In terms of the audience, the author's experience is that the backgrounds of students who enroll in this course vary from one institution to another, and even within the same institution. Some programs attract students with farm backgrounds, while others attract urban dwellers to whom a good example of cereal is Kellogg's cornflakes, and soil is dirt! In some programs, students would normally enroll in this course after completing their general education requirements in basic sciences. Further, instructors vary greatly in their opinions concerning depth of coverage needed for certain topics. The author is of the opinion that it is better to have a little more than a little less. The instructor can choose to deemphasize a topic or even leave it out all together, rather than want it and not have it. Normally, agricultural programs have courses such as "Field Crop Production," "Oil Crops," "Fiber Crops," and others, in which the production practices for specific crops are discussed in detail. An introductory crop science course is therefore restricted to discussing general principles rather than the production of specific crops. Thus, this textbook focuses mainly on the general principles of crop

production. In this textbook, emphasis is placed on the underlying science of how and why things are the way they are, or why certain things are done in a certain fashion. These scientific principles are applicable anywhere in the world, and for that matter the textbook can be used anywhere in the world. However, special reference is made to the North American experience, and as such most examples are from that region. Further, in discussing North America, regionalizing is deemphasized, unless where unique cases are being presented. The underlying science is discussed in the earlier chapters of the text. It may serve as a review section for some programs, and new material for others. The instructor has flexibility in using the material provided. Crop production is also a business. From this perspective, the text devotes some time to the role of the crop producer as a manager of resources. Agriculture is risky business and production is tied to marketing. As such, risk management and produce marketing are discussed in detail. Modern agriculture is technology driven. The text discusses the evolution of crop production, the key technological advances, and their impact on crop production. New and emerging concepts are also mentioned to some extent. Current trends in general agriculture and society that directly impact crop production are discussed. For example, the strong environmental safety consciousness of society cannot be overlooked. There is a strong move to deemphasize agrochemicals and to use them more responsibly so as not to endanger the environment. Thus, sustainable agricultural concepts are emphasized in the text. Crop production is presented as a managed ecosystem or an agroecosystem. Production practices such as organic farming that exclude or deemphasize the use of inorganic inputs into crop production are presented. The material is presented in a deliberately straight-to-the-point fashion. The student is directly engaged in a personal way, starting with a direct introduction of the subject of the chapter to the student, and followed by expected outcomes. The sections are introduced with statements that reflect some of the key messages in the chapters. Questions are also posed throughout the text to get the reader more involved in the material being presented. At the end of the chapter, the student is invited to participate in an outcomes assessment, which includes multi-structured questions to test the understanding of the material just studied. Whereas most questions can be answered by using materials directly in the text, section D usually contains general questions that may need additional material to answer completely. There are boxed readings that present additional information to enhance the topics presented in the chapter. In this information age, students have access to a tremendous volume and variety of information via the Internet. At the end of each chapter, the author has provided Web addresses for a selected number of relevant sites with additional information that would enhance the understanding of the materials presented in the chapter. Certain Websites update their information regularly, thus enabling the

reader who needs to have the most current data, beyond what is practical in a textbook situation, to continually update the textbook information. The author is also of the opinion that a text should be a good source of reference for the student after completion of the course. To this end, additional information such as a glossary, conversion tables, and other general information has been included.

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George Acquaah

Good

Much of the book is botany and biochemistry. The actual sections on crop management are very general and sparse..This is more a review of basic science of botany than farm related information

I found this very cheap because it is an older edition, but it pretty much has all of the same stuff as the new.

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