Preface

Understanding Agribusiness: Navigating the Modern Agricultural Industry is designed for agriculture students enrolled in agribusiness courses. This text introduces students to the important business and applied concepts within global and domestic markets. It approaches agribusiness from both industry and entrepreneurial perspectives to prepare students for higher education or careers in the field.

The author team is motivated by a vision to create a resource that addresses the needs of the twenty-first-century learner. They have developed a learner-centered curriculum, including a textbook and supporting materials that are readable, engaging, and deliver a meaningful learning experience. The authors share a strong desire to provide students with a curriculum that serves as an in-depth and hands-on companion for agribusiness courses.

Understanding Agribusiness is designed to involve the student in active learning experiences. The text includes activities for students to participate in, such as conducting online research, interviewing industry professionals, and working in teams to develop graphic and oral presentations that explain the challenges and opportunities in modern agricultural business.

The text meets the needs of today's learner and the modern agricultural industry by:

- Integrating STEM (Science, Technology, Engineering, and Mathematics) education topics
- Aligning learning outcomes to state and national standards (including the National AFNR Standards)
- Connecting agribusiness and everyday living
- Scaffolding instruction to reach all students, whether or not they have prior agribusiness exposure
- Integrating the Three-Circle Model of agricultural education, with explicit ties to both FFA and SAE components of an agricultural education program
- Including project-based activities designed to engage students in the learning process
- Exposing students to a broad range of careers, including many that are not farm-based
- Writing with learning level-appropriate content and verbiage

The present generation of learners has more information to process than any generation that came before it. They also have more tools and resources to use to process that information and convert it into knowledge. The authors combine modern technology with the most recent advancements in pedagogy to engage learners.

The most important resource for learning, and the one with the most influence over a student's academic success, is the teacher. The author team is committed to teacher success in the classroom. As teachers themselves, the authors have designed the learning package to supply tools and resources that make good teaching easy. The instructor resources will help in conducting class activities, providing high-quality questions for classroom discussion, and including many practical tips and hints for classroom management and lesson delivery.

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About the Authors

D. Barry Croom is a professor of agricultural leadership, education, and communication at the University of Georgia. He has more than thirty-nine years of experience in agricultural and extension education. His career interest developed as a high school junior when he coached his first dairy judging team for the local junior high school FFA program. Dr. Croom began his professional career as a high school agricultural education teacher. While teaching full-time, he earned a master's degree in agricultural education. While a high school teacher, Dr. Croom was selected by the National FFA Organization to develop and present in-service workshops to teachers across the United States. His students earned state and national recognition for academic achievement. He was recognized as the Sampson County Schools Teacher of the Year and received the Honorary American FFA Degree from the National FFA Organization.

In 1996, Dr. Croom became an extension associate, responsible for the statewide FFA Program at North Carolina State University. After completing his doctoral degree in 1999, he became an assistant professor in the same department. Croom worked through the ranks to become an alumni distinguished undergraduate professor at North Carolina State University. In 2017, he moved to the University of Georgia Tifton Campus to continue his work in agricultural education. He has served as an agriculture teacher, teacher educator, extension associate, state education staff member, professor, and department head in agricultural education and agricultural sciences.

Dr. Croom is a seasoned G-W author, with *Principles of Agriculture, Food, and Natural Resources,* 3rd edition, and *Exploring Agriculture, Food, and Natural Resources* to his credit.

Dr. M'Randa Sandlin is an academic professional in the Department of Agricultural Leadership, Education and Communication at the University of Georgia. She teaches courses related to leadership in teams and organizational development, extension education and programming, and communication, and leads departmental distance learning initiatives. She is also a UGA cooperative extension specialist for digital learning and delivery. She has 20 years of combined experience in agricultural and extension education and horticulture/garden center management.

Dr. Sandlin is a native Texan and was raised in agriculture. She credits her time in FFA for sparking her interest in pursuing a career in agriculture. She earned her bachelor's degree in horticulture from Texas Tech University and worked in garden center management before earning her master's and doctoral degrees in agricultural leadership, education, and communication from Texas A&M University. After completing her doctoral degree in 2013, Dr. Sandlin worked at the University of Hawaii–Mānoa, where she investigated public opinions on issues surrounding agriculture and natural resources and worked to expand the capacities of the agriculture and natural resources industries via organizational and leadership development training. She served as an adjunct instructor at Auburn University in agriscience education before joining the University of Georgia in 2022.

Dr. Roger Hanagriff is an associate professor of animal science and rodeo coach at Texas A&M University, where he combines academic leadership, applied research, student development, and innovation to advance agricultural education and the livestock industry. With more than 25 years of experience in higher education, Dr. Hanagriff has established a distinguished career spanning teaching, research, extension, entrepreneurship, and workforce development. As rodeo coach at Texas A&M University,

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Dr. Hanagriff is committed to mentoring student–athletes and developing future leaders within the agricultural industry. Through experiential learning, competitive excellence, and leadership development, he helps students build the skills necessary for successful careers in agriculture and related fields.

A recognized leader in agricultural education and technology, Dr. Hanagriff is the co-developer of *The Agricultural Experience Tracker (AET)*, the nation's leading experiential learning and agricultural education management platform. Today, AET supports more than 800,000 students annually, providing educators and learners with tools to document experiences, measure outcomes, and strengthen career readiness across agricultural education programs.

Dr. Hanagriff's academic research and scholarly contributions have resulted in the publication of more than 30 peer-reviewed journal articles, advancing knowledge in animal science, agricultural economics, agricultural education, livestock production systems, and workforce development. His work emphasizes practical, data-driven solutions that connect academic research with industry needs. An accomplished researcher and grant leader, Dr. Hanagriff has secured more than $4 million in competitive grant funding to support innovative research initiatives, educational programs, technology development, and strategic partnerships. His efforts have helped drive advancements in agricultural education, student engagement, and industry collaboration at the regional and national levels.

Known for his collaborative leadership style and entrepreneurial mindset, Dr. Hanagriff continues to work alongside educators, industry leaders, researchers, and policymakers to advance innovation, expand opportunities for students, and strengthen the future of agriculture through education, technology, and applied research.

Amanda R. Smith is a senior public service associate in the Department of Agricultural and Applied Economics at the University of Georgia. She has over two decades of experience working in university cooperative extension. She currently serves as an extension agricultural economist in the area of farm and risk management for row crops in Georgia and as an agribusiness instructor for undergraduates.

Her interests have evolved from animal science to agribusiness to agricultural economics, but her love for the agricultural industry began as a youth through 4-H and FFA in Wyoming. She showed pigs for eleven years and was a livestock judging team member in 4-H and FFA. She judged livestock at the collegiate levels at Casper College and later Colorado State University and was named a member of the 2001 All-American Livestock Judging Team. While working on her master's degree, she helped coach the 2002–03 livestock judging team at Colorado State University.

Smith began her professional career in 2004 after obtaining a master's degree in agricultural and resource economics from Colorado State University. Her first job was as an extension marketing specialist at the University of Tennessee Center for Profitable Agriculture. There, she helped agricultural entrepreneurs conduct market research and create marketing plans for their value-added agricultural products and business ideas. Examples of projects she was involved with include direct marketing of freezer beef, selling dried cob corn for squirrel feed, on-farm agritourism, and a local produce auction.

Smith has been in her current role as an extension agricultural economist at the University of Georgia since 2006. She has created a successful program educating row crop producers about their costs of production and conducting applied research on agricultural production systems. She has taught four courses and received recognition for her teaching, including the University of Georgia Tifton Campus Teaching Award and recognition from the UGA Career Center for positively impacting students' lives.

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Reviewers

The author and publisher wish to thank the following industry and teaching professionals for their valuable input into the development of *Understanding Agribusiness: Navigating the Modern Agricultural Industry.*

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Guided Tour

The instructional design includes student-focused learning tools to help students succeed. This visual guide highlights the features designed for the textbook.

SAE for ALL Profiles open every unit and provide students with relevant examples and insight into where their SAEs can take them

Before You Read literacy integration activities at the beginning of each lesson encourage the development of confidence and skill in literacy and learning

Essential Questions provoke deep thought, lively discussion, and new understanding

Learning Outcomes clearly identify the knowledge and skills to be obtained when study of the chapter is completed; these outcomes are labeled and correlated to related assessment elements to facilitate reporting and remediation

Words to Know lists the key terms to be learned in the lesson

Introduction provides an overview and preview of the lesson content

Technology Connections integrate all four components of STEM education

History Connections provide context for the development of modern agribusiness practices

Career Connections provide a path for career success

Building Career Skills emphasizes the importance of soft skills and how they are used in career development and advancement

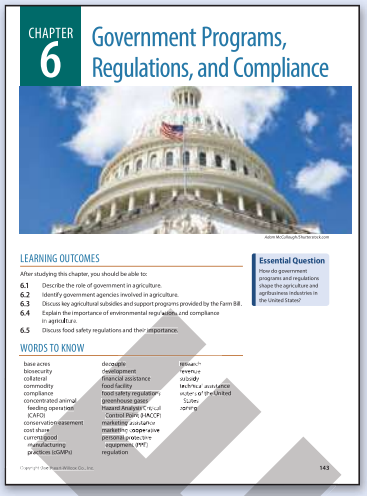
Case Studies allow students to demonstrate understanding of chapter contents

Did You Know? features point out interesting facts about the agricultural industry

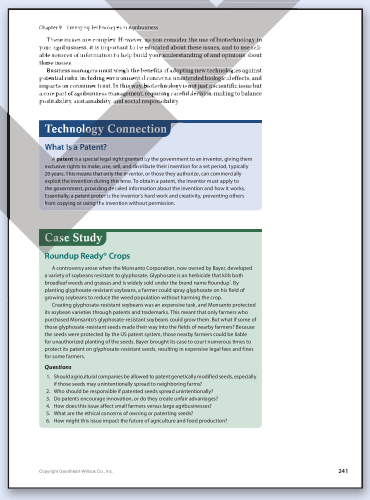
Project-Based Learning activities are included throughout the textbook to provide opportunities for deeper learning

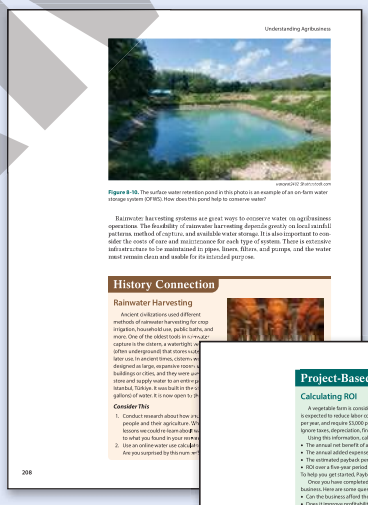
Let's Check In! questions are included throughout the narrative to reinforce learning and key concepts along the way

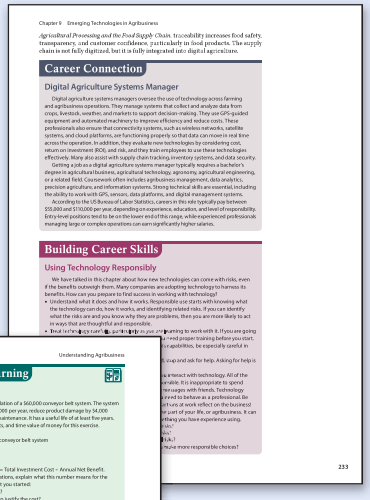

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Agribusiness Management
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Madelene Pollard, Diversified Crop Production—Entrepreneurship

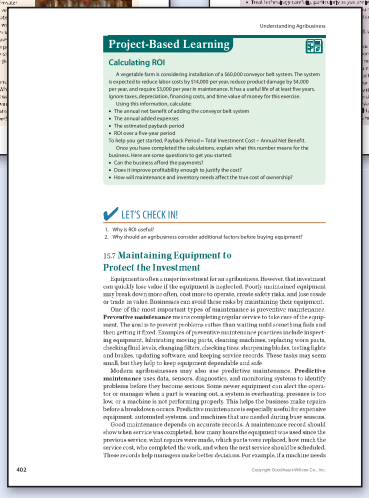

CHAPTER 6
Government Programs, Regulations, and Compliance
LEARNING OUTCOMES
Essential Question
WORDS TO KNOW


Before You Read
Introduction
6.1 The Role of the US Government in Agriculture
Support Programs
Direct Support Programs
Research and Development

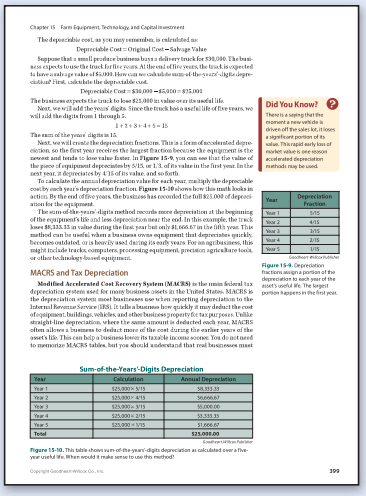

Technology Connection
What Is a Patent?
Case Study
Roundup Ready® Crops
Questions

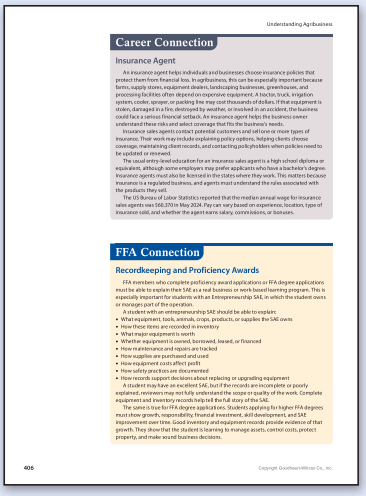

Figure 8-10. The surface water retention pond in this photo is an example of an on-farm water storage system (OFWS). How does this pond help to conserve water?
History Connection
Rainwater Harvesting
Consider This

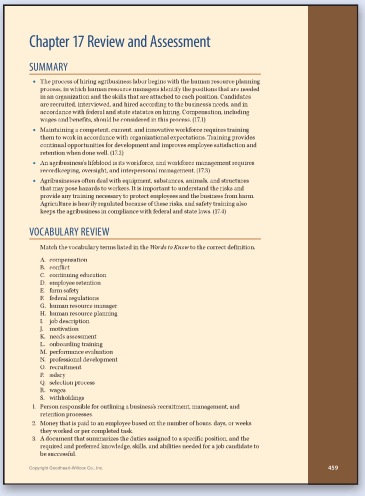

Career Connection
Digital Agriculture Systems Manager
Building Career Skills
Using Technology Responsibly

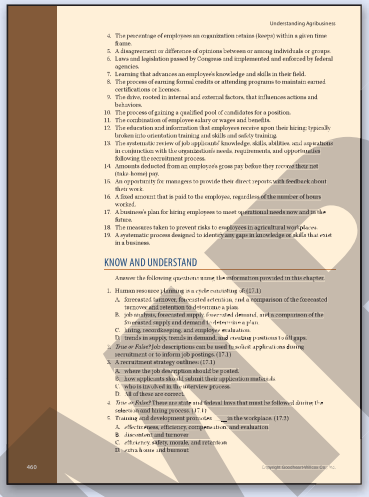

Project-Based Learning
Calculating ROI
LET'S CHECK IN!
6.7 Maintaining Equipment to Protect the Investment

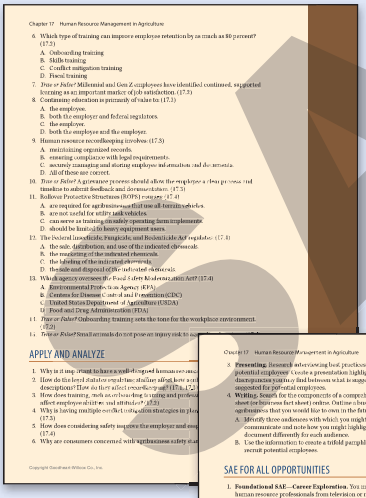
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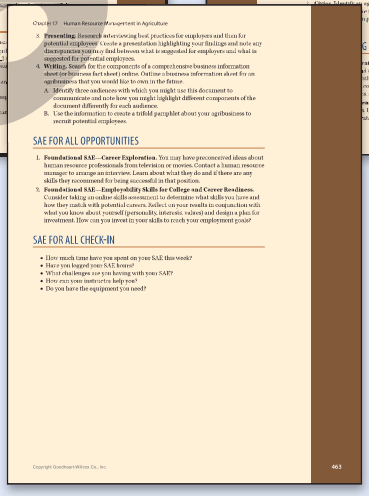












FFA Connections introduce students to the exciting world of FFA opportunities, including Career Development Events in a variety of agricultural areas

Summaries provide an additional review tool for students and reinforce key learning outcomes

Vocabulary Review matching activities reinforce vocabulary development and retention

Know and Understand questions enable students to demonstrate knowledge, identification, and comprehension of chapter material

Apply and Analyze questions extend learning and develop students' abilities to use learned material in new situations and to break down material into its components

Critical Thinking questions develop higher-order thinking and problem-solving abilities

Academic Activities are provided to extend student learning and help students analyze and apply knowledge in other academic areas

Communicating About Agribusiness questions and activities help integrate reading, writing, listening, and speaking skills

SAE for ALL Opportunities help students make real-life connections between chapter content and SAE opportunities

SAE for ALL Check-In reminds students to review and record their progress with their SAEs

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Grow
Ongoing Support and Sharing of Best Practices

Succeed
Strong Outcomes and a True Partnership

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