



## ***CUSTOMIZED ASSESSMENT BLUEPRINT***

### **AGRIBUSINESS SYSTEMS**

**Test Code: 8998**

**Version: 01**

**Preliminary Blueprint - final version is subject to slight changes.**

#### **Specific competencies and skills tested in this assessment:**

##### **Foundations of Agriculture, Food, and Natural Resources**

Demonstrate understanding of agribusiness (e.g., SAE, expenses)  
Demonstrate understanding of animal systems (e.g., breeds of livestock, anatomy)  
Demonstrate understanding of agriculture innovation and technology  
Demonstrate understanding of food products and processing (e.g., protein sources, food preservation)  
Demonstrate understanding of natural resources (e.g., renewable resources)  
Demonstrate understanding of plant systems (e.g., plant parts, processes, soil)  
Demonstrate understanding of power, structural, and technical systems (e.g., measurement)  
Demonstrate knowledge of leadership development through FFA (e.g., motto, parliamentary procedure, official dress)

##### **Plant Science**

Identify plants (e.g., herbaceous plants, systematic classification, annual plants)  
Identify plant diseases (e.g., crop disease, crop rotation)  
Describe entomology (e.g., steps of metamorphosis, IPM)

##### **Soil Science**

Identify components of soil (e.g., soil texture, soil horizon)  
Demonstrate knowledge of soil nutrients (e.g., soil pH, calculate amounts of fertilizer, eutrophication)  
Describe land capability use (e.g., land capability class, soil management practices)

##### **Animal Nutrition**

Determine nutritional needs of livestock (e.g., essential nutrients, protein, calculate feed, Pearson Square)  
Differentiate forage production (e.g., carrying capacity)

##### **Small Gas Engine Maintenance and Repair**

Discuss cycles of a small engine (e.g., 2-cycle engines, cycles of 4-stroke engines)  
Identify small engine parts (e.g., seals, engine components)  
Demonstrate knowledge of small engine maintenance (e.g., service manuals, fluid levels)

## *Agribusiness Systems (continued)*

### **Welding**

Understand welding-related safety (e.g., welding ventilation, welding PPE)

Identify types of welding joints (e.g., types of weld joints)

Discuss welder set-up and process (e.g., electrodes)

### **Natural Resources**

Define natural resources and ecosystems (e.g., biomes in West Virginia, forest wetlands, ecology)

Recognize methods of identifying trees, wildlife, and aquatic species (e.g., macro invertebrate species, fish species, predators)

Demonstrate knowledge of forest and wildlife management (e.g., animal population)

### **Agribusiness Entrepreneurship**

Discuss elements of entrepreneurship (e.g., invoice calculation, fixed costs)

Interpret marketing principles (e.g., calculate product profit, supply and demand, value-added products, four P's of marketing)

*Agribusiness Systems (continued)*

**Knowledge-Based Assessment:**

Administration Time: 2 hours

Number of Questions: 107

***Areas covered:***

37%	Foundations of Agriculture, Food, and Natural Resources
11%	Plant Science
9%	Soil Science
7%	Animal Nutrition
9%	Small Gas Engine Maintenance and Repair
9%	Welding
9%	Natural Resources
9%	Agribusiness Entrepreneurship

***Sample Questions:***

Agricultural innovations have allowed farmers to

- A. eliminate the use of chemical fertilizers
- B. increase the use of chemical fertilizers
- C. produce more crops on less land
- D. produce fewer crops on more land

FFA business meetings are run using an established set of rules known as

- A. Business Rules
- B. Meeting Rules
- C. Parliamentary Procedures
- D. Business Procedures

Which of the following engines below is generally a 2-cycle engine?

- A. automobile
- B. tractor
- C. motorcycle
- D. chainsaw

A short weld used for temporarily holding metal in place is called a

- A. spacer weld
- B. temporary fusion weld
- C. tack weld
- D. temporary braze weld

Which of the following products is a value-added product?

- A. sweet corn
- B. cucumbers
- C. pickles
- D. strawberries