

# Future Farmers of America (FFA) Agronomy Career Development Events (CDE) Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

**This is a sample study guide. To access the full version with hundreds of questions,**

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**SAMPLE**

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# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

**Remember:** successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

**This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:**

## **1. Start with a Diagnostic Review**

**Skim through the questions to get a sense of what you know and what you need to focus on. Don't worry about getting everything right, your goal is to identify knowledge gaps early.**

## **2. Study in Short, Focused Sessions**

**Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations, and take breaks to retain information better.**

## **3. Learn from the Explanations**

**After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.**

## **4. Track Your Progress**

**Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.**

## **5. Simulate the Real Exam**

**Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.**

## **6. Repeat and Review**

**Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning.**

## **7. Use Other Tools**

**Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.**

**There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly — adapt the tips above to fit your pace and learning style. You've got this!**

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## **Questions**

- 1. For each 1% of organic matter in the soil, approximately how many pounds of nitrogen per acre may be available for wheat or small grain?**
  - A. 2 to 5 pounds**
  - B. 8 to 12 pounds**
  - C. 15 to 20 pounds**
  - D. 25 to 30 pounds**
- 2. What is the guaranteed analysis for disammonium phosphate?**
  - A. 20-10-10**
  - B. 0-0-60**
  - C. 18-46-0**
  - D. 10-30-10**
- 3. What management practice can increase lodging potential in crops?**
  - A. Waterlogging**
  - B. Improper spacing**
  - C. Applying high rates of nitrogen in the spring**
  - D. Using drought-resistant varieties**
- 4. Which primary plant nutrients are known to promote rapid vegetative growth?**
  - A. Nitrogen**
  - B. Phosphorus**
  - C. Potassium**
  - D. Calcium**
- 5. What visual characteristic is associated with root rot?**
  - A. Plants growing excessively**
  - B. Dead and decayed roots**
  - C. Bright green foliage**
  - D. Large flower blooms**



- 6. Iron chlorosis in plants is characterized by what visible symptom?**
- A. Leaf curling**
  - B. Yellowing of plant leaves**
  - C. Root decay**
  - D. Excessive leaf growth**
- 7. Soybean varieties are frequently identified by which characteristic?**
- A. Seed Size**
  - B. Seed Shape**
  - C. Hilum Color**
  - D. Growth Habit**
- 8. What is the term for dividing your yearly application of fertilizer into two or more applications?**
- A. Split application**
  - B. Sequential application**
  - C. Batch application**
  - D. Phased application**
- 9. What is the purpose of a peanut digger?**
- A. To plant peanut seeds**
  - B. To harvest peanut-vines with pods attached**
  - C. To prepare soil for peanuts**
  - D. To separate peanuts from their shells**
- 10. How does overgrazing primarily affect pasture health?**
- A. Increases soil fertility**
  - B. Enhances biodiversity**
  - C. Reduces plant vigor and density**
  - D. Improves water retention**

## **Answers**

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- 1. B**
- 2. C**
- 3. C**
- 4. A**
- 5. B**
- 6. B**
- 7. C**
- 8. A**
- 9. B**
- 10. C**

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## **Explanations**

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**1. For each 1% of organic matter in the soil, approximately how many pounds of nitrogen per acre may be available for wheat or small grain?**

**A. 2 to 5 pounds**

**B. 8 to 12 pounds**

**C. 15 to 20 pounds**

**D. 25 to 30 pounds**

The availability of nitrogen in soil relative to organic matter is a crucial concept in agronomy, particularly when growing crops like wheat or small grains. When we consider how organic matter influences nitrogen levels, research indicates that for each 1% increase in organic matter, around 8 to 12 pounds of nitrogen can be made available per acre for crops. This is primarily due to the decomposition of organic matter, which releases nitrogen that plants can utilize. The range of 8 to 12 pounds reflects typical estimates from agronomic studies and soil science, emphasizing that organic matter serves as a reservoir for nutrients. As organic matter breaks down, nitrogen is released in a form that is accessible to plants, contributing to their growth and development. The other options tend to provide estimates that are outside the commonly accepted range for nitrogen release from organic matter. This makes the specific number provided in option B the most applicable and reflective of agronomic practices related to cultivating wheat and similar crops. Understanding this aspect of soil health is essential for effective crop management and can significantly impact yields.

**2. What is the guaranteed analysis for disammonium phosphate?**

**A. 20-10-10**

**B. 0-0-60**

**C. 18-46-0**

**D. 10-30-10**

Disammonium phosphate (DAP) is recognized for its high phosphorus and nitrogen content, making it a popular fertilizer in agriculture. The guaranteed analysis refers to the concentration of primary nutrients within the fertilizer, typically expressed in the N-P-K format, where N stands for nitrogen, P for phosphorus (in the form of P<sub>2</sub>O<sub>5</sub>), and K for potassium (in the form of K<sub>2</sub>O). In the case of disammonium phosphate, the composition includes about 18% nitrogen and 46% phosphorus, with no potassium content. This is reflected in the analysis of 18-46-0. The nitrogen component is essential for plant growth, contributing to vegetative growth and could be particularly beneficial during the early growth stages of crops. The phosphorus component promotes root development and flowering, thus supporting overall plant health and productivity. The other options provided do not correctly characterize disammonium phosphate. Safe to say, option C accurately captures the nitrogen and phosphorus proportions indicative of this fertilizer type, confirming its position as a vital resource for agronomic practices.

### **3. What management practice can increase lodging potential in crops?**

- A. Waterlogging**
- B. Improper spacing**
- C. Applying high rates of nitrogen in the spring**
- D. Using drought-resistant varieties**

Applying high rates of nitrogen in the spring can significantly increase lodging potential in crops due to the effects of excessive vegetative growth. When nitrogen is applied in high quantities, it typically stimulates robust leaf and stem growth, resulting in taller plants with wider canopies. While this vigorous growth makes the crop more competitive and can potentially lead to higher yields, it also makes the plants heavier and more susceptible to bending or breaking. This condition, referred to as lodging, is more likely to occur when the plants are unable to support their own weight, especially during periods of wind or rain. In contrast, waterlogging can also lead to lodging but is primarily a result of poor drainage and saturated soil conditions that weaken plant roots. Improper spacing can limit air circulation and light penetration but is not as directly related to increased lodging potential compared to high nitrogen levels. Using drought-resistant varieties is aimed at improving resilience against water scarcity, not on factors that lead to increased lodging. Thus, high rates of nitrogen application stand out as the most significant management practice that can lead to an increase in lodging potential within crops.

### **4. Which primary plant nutrients are known to promote rapid vegetative growth?**

- A. Nitrogen**
- B. Phosphorus**
- C. Potassium**
- D. Calcium**

Nitrogen is vital for promoting rapid vegetative growth because it is a key component of amino acids, which are the building blocks of proteins. These proteins are essential for the development of new tissues, including leaves and stems. Nitrogen is also a significant part of chlorophyll, the molecule responsible for photosynthesis. In this process, plants convert sunlight into energy, which is crucial for growth. High levels of nitrogen in the soil can lead to lush, green foliage and abundant plant growth. This is particularly important in the early stages of plant development when a strong vegetative structure is needed to support future flowering and fruiting. In contrast, other nutrients like phosphorus and potassium play different roles; phosphorus is more associated with root development and flowering, while potassium helps regulate water use and overall plant health. Calcium, on the other hand, plays a structural role in cell walls and aids in overall plant stability but does not directly promote rapid vegetative growth like nitrogen does.

**5. What visual characteristic is associated with root rot?**

- A. Plants growing excessively**
- B. Dead and decayed roots**
- C. Bright green foliage**
- D. Large flower blooms**

The presence of dead and decayed roots is a key visual characteristic associated with root rot. Root rot is primarily caused by pathogens such as fungi or bacteria that thrive in overly wet or poorly drained soil conditions. These pathogens attack the plant's root system, leading to tissue breakdown and decay. As a result, affected roots often appear black, mushy, or discolored, signaling that they are no longer able to effectively transport water and nutrients to the plant. Consequently, the health of the entire plant deteriorates, which may also manifest as stunted growth or yellowing of the leaves due to inadequate nutrient uptake. Recognizing these signs is crucial for identifying and addressing root rot early to save the plant. In contrast, options like plants growing excessively, bright green foliage, or large flower blooms do not align with the symptoms of root rot and indicate robust plant health rather than decay. Excessively growing plants typically exhibit healthy roots, while vibrant foliage and abundant blooms suggest that the roots are functioning effectively and the plant is well-nourished.

**6. Iron chlorosis in plants is characterized by what visible symptom?**

- A. Leaf curling**
- B. Yellowing of plant leaves**
- C. Root decay**
- D. Excessive leaf growth**

Iron chlorosis is a condition that occurs when plants are unable to uptake sufficient iron from the soil, often due to high pH levels or other environmental factors. The most prominent visible symptom of this issue is the yellowing of plant leaves, particularly the younger leaves, while the veins tend to remain green. This phenomenon is a result of chlorophyll production being inhibited due to the lack of iron, which is crucial for this process. The yellowing is often referred to as interveinal chlorosis, where the areas between the veins turn yellow while the veins themselves remain unaffected. This symptom is critical for identifying iron deficiency in plants and understanding its impact on overall plant health and growth.

**7. Soybean varieties are frequently identified by which characteristic?**

- A. Seed Size**
- B. Seed Shape**
- C. Hilum Color**
- D. Growth Habit**

Soybean varieties are often identified by hilum color because this characteristic can vary significantly among different cultivars and can help in categorizing them. The hilum is the small scar on a seed where it was attached to the pod, and its color can range from yellow, green, brown, to black, depending on the variety. This trait is especially useful for breeders and farmers in distinguishing varieties and has implications for agronomic practices and market preferences. While seed size, seed shape, and growth habit are also important characteristics to consider when discussing soybeans, they are not as universally reliable for the precise identification of varieties as hilum color. Seed size can vary due to environmental factors and cultural practices, seed shape has less variability, and growth habit is a broader classification that can include multiple varieties. Thus, hilum color serves as a more definitive and consistent marker for identifying different soybean varieties.

**8. What is the term for dividing your yearly application of fertilizer into two or more applications?**

- A. Split application**
- B. Sequential application**
- C. Batch application**
- D. Phased application**

The term for dividing your yearly application of fertilizer into two or more applications is referred to as a split application. This practice allows for more efficient use of fertilizers, as nutrients can be applied at the optimal time for plant uptake, reducing the risk of nutrient loss to the environment. By spreading the applications throughout the growing season, farmers can ensure that crops receive the necessary nutrients when they need them most, improving overall crop yield and health. This technique is beneficial in managing soil nutrient levels and enhances the effectiveness of fertilization practices.



**9. What is the purpose of a peanut digger?**

- A. To plant peanut seeds**
- B. To harvest peanut-vines with pods attached**
- C. To prepare soil for peanuts**
- D. To separate peanuts from their shells**

A peanut digger is specifically designed for harvesting peanuts, and its primary function is to uproot the peanut plants from the soil while ensuring that the pods remain attached to the vines. This process is crucial for efficient peanut harvesting because it allows for a thorough retrieval of the plants along with the peanuts, which are typically found in the soil underneath. If we consider the other options: the purpose of planting peanut seeds is aligned with planting equipment rather than a digger, soil preparation involves tools such as plows and cultivators, and separating peanuts from their shells is handled by processing equipment like peanut shellers. The distinguishing characteristic of a peanut digger lies in its ability to collect the entire plant, making option B the appropriate choice.

**10. How does overgrazing primarily affect pasture health?**

- A. Increases soil fertility**
- B. Enhances biodiversity**
- C. Reduces plant vigor and density**
- D. Improves water retention**

Overgrazing primarily affects pasture health by reducing plant vigor and density. When livestock graze excessively on a particular area, it can lead to a significant depletion of grasses and other plant species. This over-utilization prevents plants from growing back effectively, as they do not get the opportunity to recover or regenerate. Over time, the repeated stress can weaken the plants and decrease their density, leading to bare patches in the pasture. This decline in plant health can also lead to increased soil erosion, as the soil becomes less stable without adequate plant cover to hold it in place. Additionally, the lack of diverse plant species can harm the overall health of the ecosystem, affecting its resilience and ability to recover from disturbances. Therefore, while options related to soil fertility, biodiversity, and water retention seem beneficial, overgrazing tends to disrupt these processes rather than enhance them, making reduced plant vigor and density the most accurate portrayal of its primary effect on pasture health.

## Next Steps

**Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.**

**As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.**

**If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://ffa-agronomy-cde.examzify.com>**

**We wish you the very best on your exam journey. You've got this!**