



## Module 4: Plant Growth, Management & Pest Control

### Lesson A Quiz

**Lesson A Quiz – How do plants balance the need to grow with the need to defend themselves against pests and pathogens?**

#### QUIZ LINKS:

**[Module 4 Lesson A Quiz - Responder Link](#)**

#### **Multiple choice**

Which is the correct order for the growth phase timeline?

- A. Vegetative → Germination → Senescence → Reproductive
- B. Germination → Reproductive → Vegetative → Senescence
- C. Reproductive → Vegetative → Germination → Senescence
- D. Germination → Vegetative → Reproductive → Senescence

When sunlight & nutrients are plenty, most energy goes to\_\_\_\_\_?

- A. Dormancy
- B. Reproduction
- C. Growth
- D. Seed dispersal

What is one way plants can deter pests?

- A. Toxins
- B. Increasing photosynthesis
- C. Transpiration
- D. Color change

Non-systemic pesticides:

- A. Spread through the plant's roots to boost nutrient uptake
- B. Targets the surrounding of plants, and do not enter the plant inside
- C. Alter plant DNA to create pest resistance
- D. Targets the plants body, acting like a vaccine

When would jasmonic acid be triggered?

- A. After caterpillar chewing, it induces protease inhibitors.
- B. During flower development, it stimulates petal expansion to attract pollinators.
- C. In low soil moisture, it triggers stomatal closure to reduce water loss.
- D. When seeds begin germinating, it promotes early root growth for nutrient uptake.

What are some consequences of pesticide use?

- A. Boosts pollinator populations by reducing harmful insects
- B. Improves plant flavor by altering chemical composition
- C. Environmental residue, easily transferred to everyone in contact
- D. Increases soil fertility by enriching microbial diversity

What are “defense sinks”?

- A. Storage tissues in roots that collect extra water during droughts.
- B. Form at infection sites; phloem redirects sugars to help make antimicrobials.
- C. Leaf zones where excess chlorophyll is broken down after stress.
- D. Specialized cells that absorb toxins to protect nearby tissues.

### **True or False**

The reason mint leaves taste different than ordinary leaves is because mint leaves absorb more sunlight, which alters its flavor.

### **Short Answer**

How do plants balance the need to grow quickly with the need to defend themselves against pests and pathogens?

Answer should:

- Explain how plants use sugars from photosynthesis for both growth and defense (e.g., producing defensive chemicals or building structural barriers)
- Describe the trade-off between growth and vulnerability to pests/pathogens
- Be 2–3 sentences long

### **Short Essay**

Explain each stage of the growth phase timeline in chronological order, starting from seed.

Requirements:

- Clearly state each stage of the growth phase timeline
- Explain what each stage represents
- Be approximately **1 paragraph (5-6 sentences)** long