

## Lecture 5 Study Guide (video: 33 minutes)

### Study Questions

1. Whereas viruses seldom induce symptoms of necrosis, they almost invariably induce stunting. Why?
2. Vegetative propagated plants are especially prone to persistent virus infections. Why? Which group (family) of plants are especially likely to carry virus in their seed?
3. The particles of most viruses are comprised of two types of chemicals. What are they, and what are their functions? In this respect, how do viruses differ from viroids?
4. As nonliving agents of disease, viruses are not taxonomically classified in the traditional Linnaean sense. How are they classified, and what virus characteristics are taken into account?
5. In terms of morphology, what do viruses look like? Can knowing the morphology of a given virus be helpful in assessing how it is transmitted?
6. Tobamoviruses are extremely stable and can survive outside the living host many months, if not years. What accounts for its unusual stability, and how is it transmitted? Also, from what specific virus is the group name "tobamovirus" derived?
7. Cucumoviruses, potyviruses, geminiviruses, closteroviruses, and tospoviruses are particularly troublesome in Florida. How are they transmitted? Be able to name one member of each group.

### Key Words

Aphids (as vectors of cucumoviruses, potyviruses, closteroviruses)  
Bacilliform morphology  
Closterovirus group (citrus tristeza virus and others)  
Cucumovirus group (cucumber mosaic virus and others)  
Geminate morphology  
Geminivirus group (tomato leaf curl virus and others)  
Humans (as vectors of tobamoviruses)  
Legumes (as being prone to seed-transmitted viruses)  
Necrotic symptoms (rare for viruses)  
Mosaic symptoms  
Mottle symptoms  
Potyvirus group (potato Y virus and many others)  
Rod-shaped morphology (rigid, flexuous)

Seed propagation  
Spherical morphology  
Stunting symptoms (universal for viruses)  
Thrips (as vectors of tospoviruses)  
Tobamovirus group (tobacco mosaic virus and others)  
Tospovirus group (tomato spotted wilt virus)  
Vegetative propagation  
Viroid component (small single-stranded RNA)  
Virus components (protein coat, infectious nucleic acid)  
Virus groups  
Virus nomenclature (common names)  
Virus nucleic acid (RNA, DNA and single or double stranded)  
Whiteflies (as vectors of geminiviruses)  
Yellowing symptoms