

## READING GUIDE\*

### Mollisols

see Buol et al. (2011), Chapter 15, p. 331-347

**OBJECTIVE:** *To understand the nature and properties of soils classified as Mollisols, to know the potential uses and limitations of these soils, and to recognize the taxa associated with Mollisols in Soil Taxonomy.*

1. What is the central concept for soils classified as Mollisols?
2. What characteristics are common among soils classified as Mollisols?
3. In what soil forming environments are Mollisols most commonly found?
4. Explain why Mollisols are found in each of the following settings. Be sure to specify the pedogenic processes that occur (or do not occur) to promote the occurrence of Mollisols. (a) grasslands, (b) base-rich parent materials, (c) poorly drained hardwood forests, (d) depositional landscapes, (e) cold climates.
5. **How does climate interact with vegetation to influence the presence of soils classified as Mollisols?**
6. **What are the diagnostic properties of a mollic epipedon?**
7. How does the presence of clay influence the stability of organic compounds in the soil?
8. Why are argillic horizons relatively uncommon among Mollisols? Explain your answer. What conditions favor the development of an argillic horizon and what conditions inhibit the development of an argillic horizon?
9. How do various animals contribute to the formation and maintenance of soils classified as Mollisols?
10. What properties may be associated with Mollisols?
11. What types of land use problems may be associated with soils classified as Mollisols? Explain why land use practices may be limited. Be specific.
12. What land use practices are commonly supported by soils classified as Mollisols?
13. How has cultivation of Mollisols influence properties of these soils?
14. Which diagnostic horizons may be found in soils classified as Mollisols?
15. What suborders are identified for soils classified as Mollisols? What are the diagnostic properties of each?
16. What properties are used to distinguish the great groups of soils classified as Mollisols?

**SYNTHESIS:**

17. Where in West Virginia are soils classified as Mollisols likely to be found? What are the suitabilities and limitations of these soils for various land uses?

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\* Questions in plain type represent basic facts and concepts. Questions in **bold** type are those that are answered in the text but require more careful consideration. The Synthesis questions at the end help you apply the facts and concepts to a relevant issue.