

Calculating Stocking Rate for Rangeland Principles

Reference: Guidelines for Setting a Proper Stocking Rate. by Karen Launchbaugh.

Complete the following practice problems. Be sure to show your work and label your answer with the correct units on all math problems.

1. What does AUM stand for? What does this mean?
2. What is an AUE?
3. Are the definitions for AUM's and AUE's universally agreed upon? Explain.
4. How many AUE's are represented by one cow/calf pair?
5. How many AUE's are represented by five cow/calf pairs?
6. How many AUE's is one sheep, according to the reference above?
7. How many sheep does it take to equal one AUE?
8. If it takes 5 acres to support one AUE for a year,
 - a. How many AUE's can be stocked on 850 acres?
 - b. How many cow/calf pairs would this be?
 - c. How many sheep would this be?
 - d. How many horses would this be?
9. About how much of its body weight does a ruminant eat in one day?
10. How many pounds of forage is one AUM?
11. About how many pounds of forage would one cow/calf pair consume in:
 - a. One month?
 - b. Four months?
 - c. One year?
12. How many AUE's are 6 bison?

13. How much forage would 6 bison consume in a year?
14. A person owns 1280 acres of land that produces on average 500 lbs/acre of available forage per year.
 - a. What is the total amount of available forage produced per year?
 - b. If the stocking rate is to be set at 30% utilization for proper use, how much usable forage is there per acre (lbs/ac)?
 - c. Using the table in the reference above, how much forage would one horse consume per day?
 - d. How much forage would one horse consume per year?
 - e. How many horses could be stocked on this range for a year at 30% utilization?
15. A certain rangeland area produces 650 pounds of forage per acre (150 lbs/acre).
 - a. If the proper use factor is set at 35%, how many acres would it take to produce one AUM?
 - b. How many cow/calf pairs could be stocked on 950 acres of this area for a year (assuming AUE=1.0, there is adequate water, and no terrain limitations)?
 - c. How many sheep could be stocked on 950 acres of this area for a year (assuming AUE=0.2, there is adequate water, and no terrain limitations)?