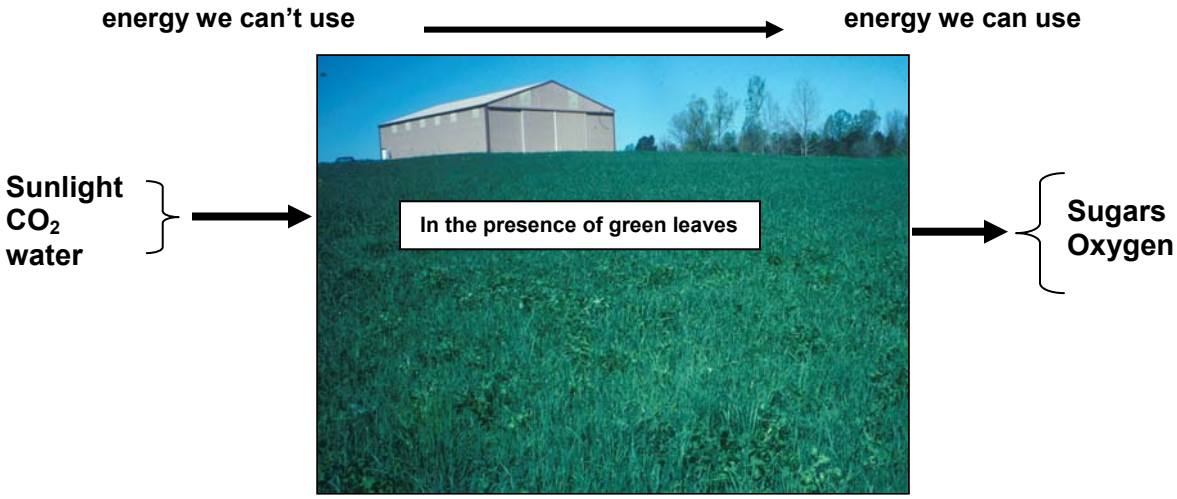
United States Department of Agriculture
NRCS Natural Resources Conservation Service

Forage Growth and Management Effects

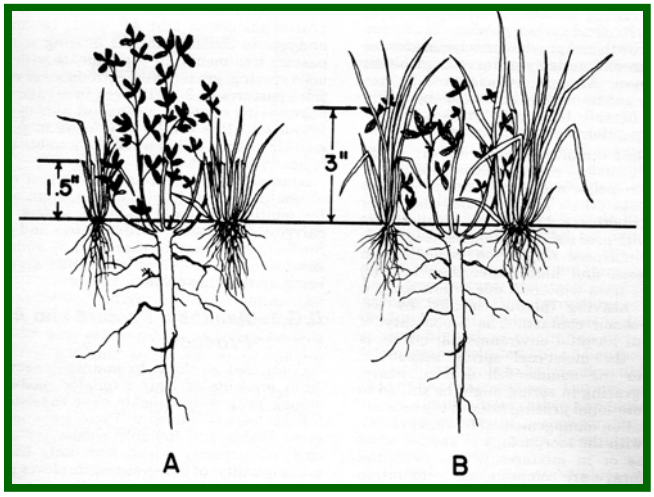
Livestock producers rely on green leaves to collect sunlight, water, and CO_2 through a process called photosynthesis which converts light energy into chemical energy. Maintain green leaves for growth and quality by rotating at proper forage heights.



Guidelines for Beginning and Ending Grazing Heights

Forage Crop	Maximum height To begin grazing (inches)	Minimum height to end grazing (inches)	comments/remarks
Fescue (EI)*	8-10	2-4	ending heights vary w/season; fast growth=fast rotation slow growth=slow rotation
Fescue (EF)*	8-10	3-4	more sensitive to grazing pressure
Orchardgrass	8-10	3-4	less competitive than EI fescue
Bluegrass	4-6	1-2	tolerates close grazing
Reed Canarygrass	10	3-4	choose low alkaloid varieties
Alfalfa	bud to 10% flower	3-4	must rotationally graze
Hybrid bermudagrass	4-6	1-2	observe grazing heights for acceptable quality; no seed heads
Switchgrass	24-30	10-12	must rotationally graze; allow higher ending height (>12") at end of grazing season
Eastern gamagrass	24-30	10-12	must rotationally graze; do not graze/hay after September 15.

*EI = endophyte infected, EF = endophyte free

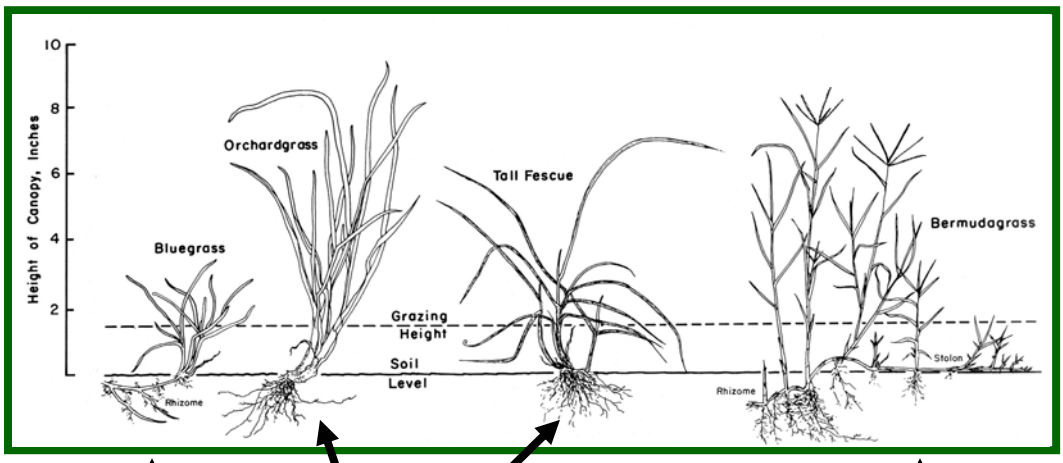


Source: *Forage-Animal Management Systems*, Virginia Tech Bulletin, 86-7, pp. 18, 29

Ending grazing heights affect pasture composition

A. Lower ending height favors alfalfa

B. Higher ending height favors grass



Rhizomes

Reserves stored on stem base

Stolons

Bluegrass and bermudagrass tolerate lower grazing due to rhizomes, stolons, and lower growing leaves. Orchardgrass and tall fescue must be grazed higher due to carbohydrate storage in stem bases and higher growing leaves.

Tall Fescue

Ending grazing height at 3-4" decreases recovery time, means less reduction in root volume, more drought tolerance

Lower ending heights increases recovery time, reduces root volume, lowers drought resistance

Tillers

Carbohydrate reserve storage