

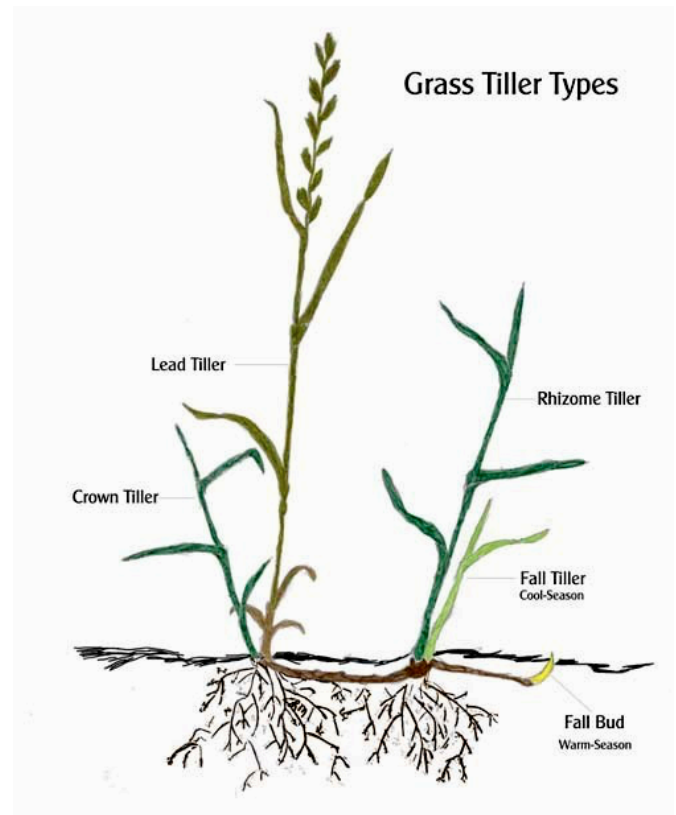
Planning for Winter

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Fall is one of the most critical periods of the forage cycle. Understanding the growth patterns of grasses and alfalfa at this time of year can reduce the risk of damage when grazing hay fields.

For grasses, two major plant activities occur during fall growth. One is root regeneration and the other is the formation of the shoots or growing points. Allowing the plants to store carbohydrates in the fall is essential for long-term forage production.

The lower stems (or crown) are the major storage unit of complex carbohydrates in perennial grasses. Growing points are developing in the fall to provide next spring's forage growth. These young grass shoots, or tillers, need a steady supply of nutrients and protection from stress. In the fall, nutrients are supplied from the previous season's tillers, which have stored carbohydrates in the bottom stem areas of the plant. Often these older tillers are dormant and brown at this time of year, but they aren't dead, and their storage function is critical. The older tillers also provide physical protection to the new tillers.



Reserves for regrowth in many cool-season grasses are stored in the stem just above the soil surface. By grazing too low, these reserves are reduced, and the new tillers are starved, as well as being exposed to weather extremes. Usually root formation will slow or stop, and in the following spring these tillers will grow slower and have fewer roots to support themselves.

Most hay fields shouldn't be grazed or mowed lower than a 3-4 inch stubble height in the fall (Table 1). These recommended minimum stubble heights allow the plants the ability to store carbohydrates for vigorous re-growth in the fall. Grazing below this height will decrease your fall feed and subsequent spring growth.

Alfalfa puts energy down into the crown and roots to survive winter. It must have time to recharge the root reserves as it needs to use those energy stores for regrowth in the spring; therefore it should not be cut until after growth has stopped for the year (Critical Harvest Period). Severe grazing can cause damage to the alfalfa plant crown and create lower hay yields the following year. Alfalfa can be grazed to two inches but at this time of year, you may want to leave more stubble to provide a good snow catch that will insulate the crown and reduce the risk of winterkill.

If you have a choice of alfalfa/grass or grass hay fields to graze, remember that a killing frost will cause alfalfa leaves to wither and fall off, reducing the grazing quality and tonnage. If possible, it's a good idea to save a grass pasture for late fall/winter or spring by grazing the alfalfa in the fall because there won't be many leaves left on the alfalfa by spring.

Table 1. Recommended residual heights for some grasses during dormant periods.

Grass	Minimum Stubble height
Orchard Grass	3-4 inches
Smooth Brome	3-4 inches
Meadow Brome	3-4 inches
Tall Fescue	3-4 inches
Bluegrass	3-4 inches
Perennial Ryegrass	2 inches
Timothy	4-6 inches