

Alfalfa Growth Stages

Guide A-330

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Harvesting alfalfa at an appropriate growth stage is important to maximize forage quality and ensure adequate root reserves for regrowth. Most research shows that the best balance between yield and quality occurs at the 10% bloom stage.

Defined below are the stages of alfalfa growth (adapted from *Alfalfa Management / Diagnostic Guide*, 1990, Pioneer Hi-Breed International).

Early vegetative. Stem length measures 0–6 inches. No buds, flowers, or seed pods are present.

Mid-vegetative. Stem length measures 6–12 inches. No buds, flowers, or seed pods are present.

Late vegetative. Stem length is greater than 12 inches, depending on the variety or current growing conditions. No buds, flowers, or seed pods are present.

Early-bud. One node (where branches extend from main stems) per stem will have a small, tight bud. Buds appear as irregularly shaped vegetative masses found at the tip of stems and branches. At this stage, the plant is all green with no flower color showing. It will take approximately 3 to 6 days to reach the next stage, mid-bud.

Mid-bud. Stems average 2 nodes with visible buds. The most mature buds begin to open so individual flowers may be easily distinguished, appearing as tiny, green fingers. However, no flower color is visible. It will take approximately 3 to 6 days to reach the next stage, late-bud.

Late-bud. Stems will average 3 or more nodes with visible buds. Although no flowers are open, a tinge of purple color can be spotted at the tips of the most mature buds. It will take approximately 2 to 4 days to reach the next stage, first flower.

First flower. An occasional open flower, less than 10 per 100 stems, can be found. It will take approximately 1 to 2 days to reach the next stage, 10% bloom.

10% bloom. Flowers can be found on 10 of 100 stems.

Full bloom. Stems will average 2 or more nodes with open flowers. No seed pods are present.

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