

## Selecting an Appropriate Cattle Turn-out Date is Critical Any Year

Pasture production can only be sustained at relatively high levels if grass plants retain adequate leaf area and are given suitable recovery time. Heavy grazing that repeatedly removes a great proportion of the leaf area reduces production. Late summer and fall grazing of short regrowth affects grass tillers ability to overwinter and become next springs early growth. Also, early spring grazing before the plants are ready deprives grass plants of needed leaf area and results in reduced production and economic returns.

Levels of production and economic returns vary with grazing starting date and season long grazing strategies. The amount of growth decreases when plants are defoliated before the third-leaf stage. The earlier defoliation is started, the greater the decrease in production. Starting grazing after the third-leaf stage results in minimal damage to plants and can improve annual production of forage.

Early spring growth depends both on carbohydrate reserves and on photosynthetic products produced from the active leaf area of the tiller. Before the third-leaf stage, the plant has little leaf area and low carbohydrate levels. Defoliation of the plant at this time results in reduced rates of production. The plant with very small leaf areas left produces little photosynthetic product. It must depend upon stored carbohydrates which are already depleted from overwinter survival.

In continuous grazing, starting grazing before or after the third-leaf stage causes a 45% reduction in production which causes reductions of 29% in stocking rate, 14% in calf average daily gain and 40% calf gain per acre compared to starting after the third-leaf stage. This reduction in pasture and animal performance causes a decrease in net returns both per cow-calf pair and per acre compared to starting after the third-leaf stage.

Twice-over rotational grazing starting after the third-leaf stage can have grazing periods designed to coordinate with the biological requirements of growing plants and grazing animals and offers increased stocking rates, calf average daily gain, calf gain per acre, net returns per cow-calf pair and net returns per acre compared to season long grazing starting before and after the third-leaf stage.

In order to protect grasslands before the plants have reached the 3.0 or 3.5-leaf stage, it is important to feed another type of forage. Specifically planning for this by selecting a paddock with an early growing perennial species mix (eg. crested wheatgrass mix), using winter annuals, or planning to winter feed longer pays dividends on any year. This type of grazing management is absolutely crucial for pastures that have been stressed from previous grazing. The more stressed they are the less carbohydrate reserves they contain. They may green up but do not grow or are very slow to grow in spring. The future yields of these pastures are harmed greatly by grazing before the 3.5 leaf stage.

Paddocks that contain carry-over forage that was grazed after freeze up will be slightly slower to grow in spring. Stockpiled paddocks specifically held over from the previous year for early spring grazing will have their early shoots grazed off before the plants have any chance of recovering from winter dormancy. Both these paddocks need extra recovery time before being grazed again during the growing season.

These points have been taken from "Grazing Before Grass Is Ready" by Llewellyn Manske PhD, Dickinson Research Extension Center, North Dakota, USA

The information shared in this article is based on well managed rotational grazing systems. If continuous grazing is used grazing turn out should start later so that more pasture leaf area is present. Greater leaf area is needed to allow for more leaf residual to be left after being grazed. Since continuous grazing will have repeated removal of leaf area over the grazing season, this helps better balance plants photosynthetic production and carbohydrate needs.

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