
Thesis summary

**A COMPARISON OF PASTURE RECOVERY
FOLLOWING DIFFERENT GRAZING
INTENSITIES WITH AND WITHOUT NITROGEN
APPLICATION**

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Ryegrass-dominant pasture was differentially grazed in May 1975, and recovery of heavily and laxly defoliated swards compared over a 6-week growth period.

Harvests were taken on May 19, 22, 26 and 29 and June 9 and 23. Leaf and secondary tiller numbers of tiller units tagged following defoliation were recorded on the same dates.

Over the full regrowth period, laxly defoliated plots produced 44% more dry matter than those heavily defoliated. Dry matter yields of heavily defoliated plots fell during the first 4 days of recovery (May 22-26) and increased slowly for laxly defoliated plots over the same period. Growth rates were rapid between May 26 and 29, and subsequently declined again for both intensities.

Results suggested a sequential recovery (leaf followed by non-leaf), and dead material accumulation as regrowth progressed. Regrowth efficiency was similar for both treatments.

Leaf area accumulation remained faster than overall growth rate to the June 9 harvest following heavy defoliation, while the laxly defoliated sward reached photosynthetic entity before this point. Data for the tagged tillers show an initial priority for leaf growth and appearance, with tillering becoming more rapid beyond a leaf ceiling of approximately 3.5/tiller.

Application of 50 units of N 21 days prior to defoliation stimulated growth rate by 22 kg/ha/day to base harvest. The continued response beyond defoliation, however, was small.

The magnitude, pattern and components of regrowth according to defoliation intensity and N application are discussed.