

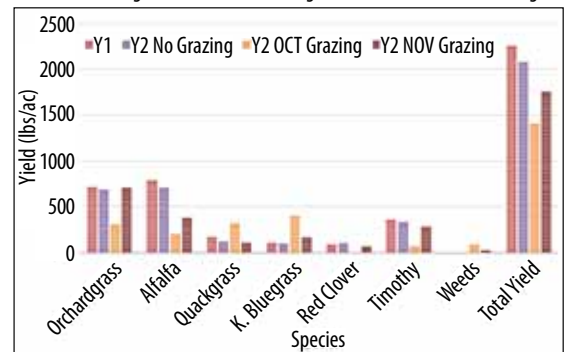
When is Late-Season Grazing Too Late?

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To extend the grazing season and cut production costs, many beef cattle producers love to graze alfalfa and alfalfa/grass residue in late fall following harvest. There are many questions concerning the cost:benefit of doing this. Often alfalfa/grass residue pastures are grazed prior to frost. A more pure alfalfa stand is generally grazed after a killing frost to avoid bloat issues and the perception that grazing post-freeze will reduce damage to the stand. The University of Minnesota, with funding from the Midwest Forage Association, conducted a trial to evaluate late-season grazing effects on subsequent year yield of an alfalfa/grass mix in southern Itasca County, MN, on 20 acres of silty clay loam. Prior to treatment application, the field was sampled for total yield and yield by species using the clip and weigh method. In mid-June, 30 one-m² quadrats were clipped, dried, and weighed to determine total yield. An additional 30 quadrats were clipped, sorted by species, dried, and weighed to determine yield of each species. After sampling, the field was cut and baled in two cuttings in mid-June and late August. Following hay harvest, the field was fenced into paddocks with temporary electric fencing to apply grazing treatments: no fall grazing, a mid-October grazing, and a mid-November grazing. There were three replications of each treatment applied using dry, bred cows weighing 1,315 lbs. The following year, total yield and total yield by species were measured at the end of June to determine the effect of the treatments on total yield and yield of each species.

Results indicated grazing alfalfa/grass fields following hay harvest is detrimental to stand short-term health and yield potential. Mid-October grazing reduced total stand yield 32% compared to no fall grazing; mid-November grazing reduced yield 16% (Figure 1). Alfalfa appears to be greatly affected by fall grazing, with yields reduced 71% following mid-October and 45% following mid-November compared to no fall grazing. Timothy was also adversely affected by fall grazing with yields reduced 79% following mid-October and 16% following mid-November compared to no fall grazing. Conversely, yields of species such as Quackgrass and Kentucky bluegrass increased 61% and 77%, respectively, following mid-October compared to no fall grazing. Quackgrass yields did not increase following mid-November, but Kentucky bluegrass yields increased 42% compared to no fall grazing.

Figure 1. Mean yield (lbs/ac) for each species and total yield for Year 1 and Year 2 No Grazing, Year 2 October Grazing, and Year 2 November Grazing.



Typically, in northeast Minnesota, a killing frost and subsequent freeze-up generally occur late October or early November. However, in the study year, several frosts occurred by mid-October followed by several warm days. Light frosts followed by warm days continued into December. Thus, the mid-November grazing was not after a typical killing frost. Heavy stand damage observed following mid-October was less severe following mid-November grazing, likely mitigated since some level of dormancy had been attained. Stand damage occurred following mid-November grazing due to extended time to achieve a killing frost and subsequent dormancy. Thus, extended time in the fall to achieve dormancy in perennial forage crops may make fall grazing of alfalfa/grass stands risky. Risk of extensive stand damage and lower yield potential following fall grazing may outweigh lower winter feed cost benefits.