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Grazing Management

Managing when and where livestock graze can have lasting positive effects on pasture productivity.

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Continuous grazing

refers to the allowance of a group of grazing livestock to selectively choose what forage they eat in a large pasture for the entirety of the growing season. This method of grazing has low input costs, low labor requirements, and

allows for livestock to choose what plants they wish to consume. However, less product is produced per acre in terms of animal production - whether that be daily animal gains or milk production - as the carrying capacity of the land is decreased, and the competitive advantage of desirable forage species is reduced due to overgrazing of certain areas. Forage utilization and consumption is dramatically decreased in continuous grazing systems to approximately 30 to 40 percent of available forages, as the majority of the desirable forages is either trampled or destroyed from being bedded down or selected against during grazing, causing them to become mature and unpalatable. Manure distribution is also very poor in continuous systems.

Managed grazing

controlling where and when livestock species graze an area of land - has numerous advantages over continuous grazing. **Rotational, or deferred grazing** involves moving animals through a series of three or more pastures, in an effort to match the forage availability to the animals' production needs. The rotation schedule will depend on herd size, paddock size, and paddock number. Managers can rotate livestock through a series of paddocks as forage availability allows, moving them from an area where the animals have completely utilized the available forages and have achieved a desirable residue height - the amount of forage left that has not been grazed.

The desirable residue height for each paddock depends on the fertility of the pasture along with the species of forage within each area. For example, cool-season perennial legumes can generally be grazed to a lower height than cool-season perennial grasses; however, if they are in a paddock mixed together, the residue height should be maintained to suit the least competitive forage species in the grazing area. As a general rule-of-thumb, a cool-season perennial pasture (most common in Pennsylvania) should be grazed **No Lower than 3 inches** before removing animals and moving them to a new pasture with at least 6 inches of forage growth. It is important to remember that what you see above the soil in terms of plant productivity is mirrored below the soil as the plants root mass and structure. The healthier your forages look in the pasture, the healthier their root systems are, leading to plant hardiness, drought resistance, and longevity. Grazing pastures to a stubble height lower than 3 inches does not increase the utilization of the pasture in the long run. It only depletes the root system, causing stress to the plants, and reducing the overall productivity of those plants throughout the grazing season. Plants acquire energy through photosynthesis, which occurs primarily in the leaf of the plant. If there is no leaf area for the plant to photosynthesize, regrowth will be slower and total productivity will decline.

Warm-season annuals will likely have a greater residue height in a managed grazing system. Because these plants generally have a stalkier composition, a higher residue height is necessary for leaf components to remain, photosynthesize, and regrow.

One of the major advantages of a deferred grazing system is the allowance of the land and forages to rest and accumulate growth after they have been defoliated through grazing, without the risk of animals coming back and grazing them again before they have had the opportunity to regrow and replenish nutrient stores.

Because animals are in a smaller area of concentration than in a continuously grazed system, manure is distributed more evenly across the grazing area and carrying capacity is increased as the animals are forced to utilize more of the available forage in a paddock and waste less. As carrying capacity increases, so does productivity per unit land area.

Switchback grazing

If land availability, labor, or resources are limited, switchback grazing might be the option. It is dividing one large pasture into two separate sections - is a way of managing grazing while still affording the land and forages some time to rest and regrow after being grazed. Switchback grazing is when a group of animals is moved back-and-forth from one paddock to another, and then back again, as forage resources permit, usually on one- to two-month intervals.

Another way of encouraging animals to graze parts of the pasture where they normally shy away from is by moving targeted objects - such as waterers, feed troughs (if supplementation is being fed), and mineral feeders - to less-grazed areas of the pasture. This will encourage movement of the livestock to areas where they would normally not go without enticement, and enable areas of the pasture that normally become overgrown and lose their nutritive value to remain grazed and productive.