

Pasture Establishment Primer

Brush up on tactics to create grade-A pasture.

by Barb Baylor Anderson

Whether you need to establish new pasture or upgrade existing pasture, Keith Johnson, Purdue University forage specialist, advises producers to establish a plan and follow through on details to create a grade-A pasture. Proper site, soil, forage choice, seeding and weed control considerations are the keys to maximizing pasture opportunities.

“There is more to successful establishment of a pasture than tilling the soil and broadcasting a forage seed mixture on top of the soil surface,” he stresses.

Choice of a site should include consideration for both the physical location and soils at the location. Johnson suggests producers consider whether a need exists to have the pasture located next to the farmstead to handle wintertime feeding or newborn care issues, water and electricity availability. Soils prone to erosion can be better protected from loss if the ground is in permanent vegetative cover, he adds, and soils with good internal drainage are better choices for pasture when stocking density is high.

Preparation

“You also have to consider the plant-back restrictions of previous herbicides. Residual carryover can kill desired forage seedlings,” he says.

Dennis Epplin, University of Illinois Extension crop systems educator, agrees that proper weed management is essential for high-quality pasture and forage production because healthy, vigorous pastures minimize the need for herbicide applications.

“The year before pasture establishment is critical. The process should start at least six to 12 months prior to the physical seeding operation,” Epplin says. “Scout the site and identify weed species and life cycles. Make a weed distribution map, and control tough perennials. Pasture seedings are much more competitive with weeds if they can emerge and establish quickly. The establishment window continues at least 30

to 60 days after seeding until the pasture plants are established and competitive.”

Proper soil pH is also fundamental to productive forages. “Increasing soil pH takes time. If limestone is needed, it should be applied at least six months prior to seeding,” Johnson says. “Another mismanagement practice is annual application of a fertilizer blend without knowing what is needed. Test the soil. Seedbed preparation depends on whether or not there is a need to incorporate limestone and fertilizer, the presence of weeds, and if good seed-to-soil contact is possible without an additional tillage pass.”

Planting

Once a proper site is identified and preliminary preparation begun, Johnson says producers can choose a forage based on soil types and the livestock to be fed. He recommends a mixture such as cool-season grasses and legumes rather than a pure stand.

“A cool-season grass and legume mix is advantageous over pure cool-season grass or a legume. You may eliminate the need for nitrogen [fertilization], lengthen pasture life, reduce problems with legumes heaving and soil erosion and improve livestock performance,” he says.

On the other hand, if you choose a pure stand, Johnson says, it is generally easier to keep the crop competitive, and you may have more herbicide options for weed control. A pure legume stand is usually higher in forage quality than a pure grass or grass-legume stand, he adds, while a pre-blended mixture may be more convenient but not always best to match specific grasses and legumes with soil types on the farm.

One to six months prior to seeding the pasture, Epplin suggests fine-tuning your weed control program. This is about the same time frame a nurse crop might be planted.

“The forage pasture can be overseeded into the nurse crop, but avoid seeding rates and fertility practices that encourage the nurse crop to be overly competitive,” he says.

“Mechanical tillage may be an option at some sites for good seedbed and weed control at this time, and any no-till burndown herbicides should also be used.”

Preplant herbicides can be used at planting time, if necessary, while postemergence herbicides should be used at emergence to two months after planting. Epplin says most “post” products should not be applied to grass seedings until they are well-established.

Once you have a firm seedbed free of weeds, Johnson says you are ready to plant. “Consider recommendations for depth of seeding, date of seeding and inoculation. Timely seeding and good stands can reduce weed problems,” he says. “Perennials should be under control before seeding permanent grass-legume pastures. There are limited herbicide options when cool-season grasses and legume mixtures are used. In the spring, a low seeding rate of spring oats can reduce weed composition and provide a source of hay. You can also clip weeds before they cause excessive competition.”

Harvesting

Once established, producers must consider harvest options. Epplin adds that alfalfa and other forages should reach the one-half bloom stage prior to the first harvest. Grazing and haying preharvest herbicide restrictions should also be observed.

“You should preferably harvest the first growth of the seeding as hay or silage,” Johnson says. “Before a newly sown pasture is grazed, the plants should be fully established and the footing solid. Do not graze new stands the first time when the soil is moist from recent rainfall, and do not overgraze the stand. Leave at least 4 inches of ungrazed growth, and rotate the livestock to another pasture so the stand can fully recover.”

Both Epplin and Johnson recommend producers consult their county Extension office or state land-grant university for information specific to their area.

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