

Goosegrass Emergence and Control in Pastures

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Identification and Growth

Goosegrass (*Eleusine indica*) is a problematic summer annual weed in grazed pastures. The species germinates in spring when soil temperatures reach 60 to 65 °F. In pastures, goosegrass seedlings are often mistaken for crabgrass (*Digitaria* spp.) during initial growth. Unlike crabgrass, goosegrass has a fringed, membranous ligule at the base of leaves with sparse, long hairs on the upper surface. Seedheads emerge from stem tips and the inflorescence is flattened with 3 to 7 terminal spikes. Mature plants develop a white color near the stem base that may also help distinguish the species from crabgrass and other grassy weeds.

Cultural Control Options

Goosegrass has a centralized tiller and root system with no lateral stems. This morphological characteristic makes mechanical control feasible if there are a limited number of plants in an area. Small goosegrass plants can be removed by hand or knife. Goosegrass tolerates mowing and mechanical removal is practically infeasible if the infestation is severe. Goosegrass exhibits significant competition with pasture grasses that are stressed from traffic or overgrazing. Goosegrass thrives in compacted and poorly drained soil, and is often found in heavily trafficked areas. Growers should consider redirecting traffic away from areas with heavy goosegrass pressure and promote recovery of grasses under stress. Implementing core aeration in trafficked areas can promote growth of desirable grasses and minimize goosegrass competition. Fertilization is critical in maintaining active growth of pasture grasses and forms a closed canopy. Fertilizer type and rate should be selected according to soil tests and growth requirements.

Chemical Control Options

Prowl H₂O (pendimethalin) is a pre-emergence herbicide labeled for permanent bermudagrass pastures with potential

to control goosegrass. Application timing of Prowl treatments prior to goosegrass germination is critical for successful control. In Georgia, initial application timings will vary from the coast to the northern region, depending on when soil temperatures consistently range 55° F to 60° F. The initial preemergence herbicide application timing for coastal Georgia could range from January 1 to March 20 depending on temperature and rainfall. Growers in central and northern Georgia should consider applying Prowl before March 15 and April 1, respectively. Applications timed before a rainfall in spring have greater potential for controlling goosegrass because of enhanced soil incorporation and herbicide activation. These calendar dates should be considered as a general reference for application timings. Practitioners must consider environmental factors such as soil temperature, rainfall and germination cycles from previous years to determine optimal applications of residual herbicides. Growers should contact their local county extension agents for advice on initiating pre-emergence herbicide programs.

Post-emergence control of goosegrass is difficult with herbicides available for use in pastures. Pastora (nicosulfuron + metsulfuron) has potential to control goosegrass prior to tillering, but applications are ineffective once plants have reached a multi-tiller growth stage. Sethoxydim (Poast, others) has potential to control goosegrass in certain forage species. However, sethoxydim is highly injurious to pasture grasses and applications provide erratic control of mature goosegrass plants. Spot treatments of glyphosate are often the most economical means for postemergence goosegrass control in pastures. The limited herbicides available for postemergence grassy weed control in pastures should emphasize the importance of preemergence control in long-term management programs. 