

POISON HEMLOCK (*Conium maculatum* L.): BIOLOGY, IMPLICATIONS FOR  
PASTURES AND RESPONSE TO HERBICIDES

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ABSTRACT

Poison hemlock is a biennial, toxic and invasive weed that grows along roadsides, pastures and low-disturbed areas. Research was conducted to determine seed ecology, growth characteristics and response to herbicides. Seed production, viability and germination of poison hemlock seed were measured. Dry biomass of poison hemlock was measured through time in the early spring in relation to plant density. Herbicide efficacy experiments were conducted in the spring using amino acid biosynthesis inhibitors, acetolactate synthase (ALS) inhibitors and growth regulator herbicides.

Results indicate poison hemlock is a prolific and viable seed producer (between 1,700 to 39,000 seed per plant), and portions of seed were capable of germination upon maturity, having no dormancy restriction. Poison hemlock plants were actively growing in mid-March, and growth increased exponentially through mid-May. Biomass produced between mid-March and mid-May, considering all plant densities studied, range from 13 to 3,464 kg/ha. Most herbicides were effective for poison hemlock control, but ALS herbicides seemed to be the most consistent (>84%).