



**RegenPGC Graduate
Education Community**

Prathyusha Cheguri

Breeding & Genetics

Iowa State University / Dr. Shui-Zhang Fei

Characterization of Morphological Traits and Summer Dormancy in *Poa Bulbosa**

Abstract

Abstract *Poa bulbosa* is a summer-dormant, bulb-forming perennial grass with significant potential as a perennial groundcover (PGC) species in sustainable agricultural systems.

While much of the genetic diversity in this species has historically been studied in Eurasian populations, its naturalized and possibly adapted populations across the northwestern United States remain largely unexplored. This study evaluates the morphological and physiological diversity among 55 *Poa bulbosa* accessions collected from diverse agroecological zones across Idaho, Washington, Oregon, and Montana.

Key traits assessed include reproductive mode (bulbil vs. seed production), inflorescence development under photothermal treatments, flowering time, vegetative dormancy onset, and propagule dormancy (bulbils and basal bulbs). By combining field and controlled-environment studies, we aim to understand the regional variation in dormancy behavior, reproductive capacity, and potential for hybridization.

Initial results indicate substantial variation in flowering response and dormancy traits across accessions, suggesting that U.S. populations harbor useful genetic diversity for breeding regionally adapted groundcover types.

These findings will contribute to ongoing efforts to develop *Poa bulbosa* as a climate-resilient, non-competitive PGC species compatible with summer annual crops like maize.

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