

Program Objectives and Specific Priority Areas for GSCSSA Research Proposals

(not listed in order of importance)

Develop sustainable grass seed cropping systems that optimize economic seed production with maximum energy and resource conservation and maintain or improve environmental quality.

- A) Crop management, e.g., planting practices/stand establishment, crop rotation, seed certification.
- B) Weed, insect, disease, slug, and mice control with special emphasis on effects of diuron on weed control/crop management and on slug control (biological and chemical).
- C) Plant nutrition, e.g., fertilizer management and nutrient cycling.
- D) Straw and stubble residue removal systems.
- E) Air quality and dust control.
- F) Methods to determine annual ryegrass contamination.

Develop economic utilization of grass seed production by-products in agriculture.

- A) Low-input composting for on-farm utilization of compost mulch.
- B) Economic analysis of residue handling methods on- and off-farm.
- C) Harvest methods to reduce residue.
- D) Residue utilization and disposal opportunities such as animal feed, fermentation processes, paper, insulation, electricity generation, etc.
- E) Endophyte relationships to alternative residue management.

Develop maximum genetic and biological potential.

- A) Cultivar variation in morphology, anatomy, specific plant developmental pathways, and floral processes in response to mechanical residue removal; identification of specific morphological-anatomical, biochemical, and genetic features associated with floral induction; and plant-growth models.
- B) Germplasm from specific genetic bases that can be used to optimize seed production efficiency and minimize environmental impact of the cropping system.
- C) Methods to determine germplasm diversity and determine cause of genetic drift.
- D) Varietal “fingerprinting” and genetic stability.