VAUGHN, K.M.*, and C.M. RUSH, Texas Agricultural Experiment Station, Bushland, TX 79012. - Integration of biocontrol agents with solid matrix priming of sugar beet seed to reduce seedling damping-off.

Seed treatment is an attractive delivery system for biocontrol agents. Biocontrol agents *Pseudomonas cepacia*, strain AMMD, and *Gliocladium virens*, strain Cr-4, were used to inoculate sugar beet seed before, during, and after solid matrix priming. Nonprimed seed was also inoculated with both biocontrol agents, and nonprimed and SMP seeds, not inoculated, were used as controls. These ten seed treatments were planted in soils infested with *Pythium aphanidermatum*, *Rhizoctonia solani*, or noninfested soil. The experiment was conducted in growth chambers. Nonprimed seed treated with Cr-4 caused some phytotoxicity in noninfested soil, but the problem was overcome when Cr-4 was combined with SMP. In *Pythium* infested soil, the addition of AMMD and Cr-4 with SMP reduced postemergence damping-off significantly better than SMP alone and all nonprimed seed treatments, with the exception of nonprimed seed treated with Cr-4. An interaction occurred between AMMD and time of adding the microorganism with SMP. Final stand was significantly increased when AMMD was added during SMP, but not when AMMD was added before of after SMP. In *Rhizoctonia* infested soil, the addition of AMMD and Cr-4 with SMP significantly reduced preemergence damping-off.