From Forest Nursery Notes, Winter 2008

© 49. Temperature and light affects germination ecology of commercially produced seeds of Leavenworth's *Coreopsis*. Kabat, S. M., Norcini, J. G., and Dehgan, B. Native Plants Journal 8(3):236-247. 2007.

TEMPERATURE AND LIGHT AFFECTS GERMINATION ECOLOGY OF COMMERCIALLY PRODUCED SEEDS OF

Leavenworth's Coreopsis

ABSTRACT

Commercially produced, source identified, natural track seeds of Leavenworth's tickseed (Coreopsis leavenworthii Torr. & Gray [Asteraceae]) harvested in late June expressed a type of physiological dormancy in which seeds became nondormant first at cooler temperatures and then at warmer temperatures. In 2 studies, fresh seeds were buried about 7 cm (3 in) deep in sand in 3.8-l (1-gal) containers, irrigated once per week, and exposed to ambient temperatures. Seeds were excavated monthly during 10 mo in the 2001–2002 study and 9 mo in the 2002–2003 study. Seeds became nondormant in late fall to early winter, approximately 5 to 6 mo after they were buried. Coreopsis leavenworthii showed that it was well-adapted to Florida's climate because its seeds germinated under a wide variety of temperatures typical in Florida during late fall and early winter at shallow seeding depth (light enhanced germination) in sites typical of C. leavenworthii's moist habitat. While C. leavenworthii most closely resembled a facultative winter annual, it also showed the potential to germinate to some degree under temperatures typical of Florida's subtropical summer. No buried seeds germinated, indicating that C. leavenworthii has the potential to form at least a short-term seedbank.

Kabat SM, Norcini JG, Dehgan B. 2007. Temperature and light affects germination ecology of commercially produced seeds of Leavenworth's coreopsis (Coreopsis leavenworthii). Native Plants Journal 8(3):236–247.

KEY WORDS

native wildflower, seed biology, seed dormancy

NOMENCLATURE

USDA NRCS (2005b)

236 Photo by Jeffrey G Norcini, University of Florida/IFAS