

BIG TREFOIL (Lotus pedunculatus) FOR FOREST USE

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Nitrogen-fixing plant systems, once confined to operational use in agricultural fields, are being developed by scientists in the Southern Forest Research Center at North Carolina State University for use in forests. The leguminous plants along with their nitrogen-fixing symbiote - Rhizobium have been demonstrated to benefit forest operations by not only adding nitrogen to the system, but also by providing needed organic matter, weed and erosion control, and wildlife habitat.

Michele Schoeneberger is currently investigating the potential of Big trefoil (Lotus pedunculatus Cav), for use in forests as part of her graduate research at NC State under the guidance of Dr. C.R. Davey. The first part of the project has focused on isolating and screening Big trefoil rhizobia isolates that are tolerant to the high acid and aluminum levels commonly encountered in forest soils. Selected strains will later be used to study the performance of Big trefoil in a variety of forest soil types of the Piedmont and Coastal Plain regions in North Carolina. Studies have been initiated to determine the occurrence and importance of vesicular-arbuscular mycorrhiza to trefoil performance in forest soils, in particular to the plant's tolerance to water stress.