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132. © Making a smoker to produce cellulose-based smoke for treating forest tree seeds. Roeder, K., West, J., and Smith, B. Native Plants Journal 12(1):27-29. 2011.

Figure 1. A modified steel trash can makes an ideal combustion chamber for producing smoke to treat seeds.

Making a smoker to produce cellulose-based smoke for treating forest tree seeds

Ken Roeder, James West, and Bobby Smith

ABSTRACT

We needed consistent quantities of cellulose-based smoke for testing the effects of smoke exposure on forest tree seed germination. We determined that burning pine straw would produce sufficient quantities of such smoke. Longleaf pine (*Pinus palustris* Mill. [Pinaceae]) straw is readily available in bale sizes and is a practical fuel source for repeated trials. A steel trash can was selected and converted into a pine straw bale burner to hold a safe, controlled smoldering fire producing adequate smoke. A few alterations to the trash can were required as noted. Total cost for the smoker and other supplies was less than US$ 150.

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KEY WORDS
germination, seed treatment, longleaf pine, pine straw

NOMENCLATURE
USDA NRCS (2010)

Photos by Ken Roeder