# Seasonal Effects on Ammonia Volatilization from Urea Applied to Pine Plantations. (S08-cabrera180814-Oral)

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## Abstract:

Fertilization of mid-rotation pine plantations with urea is increasing in the southeastern USA. Urea application to pines is exclusively made from October to April because forest manager suspect large ammonia losses can occur from May through September. This work is being conducted to study the effect of environmental conditions on ammonia losses from urea applied to pines. For that purpose, we devised a chamber system that matches the speed at which air is withdrawn from the chambers to the external wind speed in the pine forest. The ammonia volatilized is collected in acid traps and determined colorimetrically. From January 2001 through August 2002 we conducted fourteen 29-d studies in which urea at 200 kg N/ha was applied directly to the forest floor. Ammonia losses ranged from 1 to 47 % of the applied N and were related to air temperature and water content of the forest floor.

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