

**IMPACT OF NEONICOTINOID INSECTICIDE SEED TREATMENTS  
ON HONEYBEES IN THE MID-SOUTH**

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**Abstract**

Studies were conducted in Arkansas, Mississippi and Tennessee to assess carry-over of neonicotinoids in crop soil; determine residue of neonicotinoids in flowers, nectar and soil from insecticide seed treatment trials in cotton, corn and soybeans; to survey residue in wild flowers around corn, cotton and soybean fields; and, to evaluate apiaries around these fields for any neonicotinoid residue in bees and pollen from returning foragers. Our study showed that neonicotinoid insecticides are present during crop production in preplant and post-plant soil; cotton pollen and nectar were basically free of neonicotinoid residue as was soybean flowers. Slight amounts were found in corn pollen but may have been contaminated from adjoining cotton fields receiving neonicotinoid applications for plant bug control. We observed movement of neonicotinoid dust to adjoining wildflowers on field edges at planting. The determination of the potential of this movement to wildflowers and the risk to pollinators has not been determined.