

Carl E. Sams<sup>1</sup>, Dennis E. Deyton<sup>1</sup>, John C. Cummins<sup>1</sup>, and Mark T. Windham<sup>2</sup>. 2001.

**Comparison of Petroleum and Vegetable Oil Formulations for Management of Powdery Mildew on Dogwood.** *HortScience* 36:530 (Abstr.)

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**Abstract:** Greenhouse-grown seedling dogwood (*Cornus florida* 'Rubra') trees were sprayed on 13 Sept. with 1.5% (V/V) of the following: 1) PF1025 soybean oil (Panmark Co.), 2) Golden Natural soybean oil (Stoller Enterprises), 3) Eco-oil (vegetable oil formulation from Organic Crop Protectants PTY LTD), 4) Sunspray petroleum oil (Sun Co.), 5) soybean oil/Latron B-1956, 6) TNsoy2, 7) TNsoy3, 8) TNsoy4, 9) TNSoy5, or 10) sprayed with water. The trees were exposed to powdery mildew inoculum starting the next day and continually for the next 5 weeks. Another block of trees were sprayed with the same treatments on 20 Sept., 6 days after the trees were initially exposed to powdery mildew inoculum. Disease severity of powdery mildew was estimated using the scale: 0 = healthy; 1 = 1% to 2%; 2 = 3% to 10%; 3 = 11% to 25%; 4 = 26% to 50%; 5 = 51% to 99%; 6 = 100% of tree's foliage surface with symptoms or signs of powdery mildew. The trees were rated prior to treatment

and on 4, 17, and 26 Oct. Treatments were randomized in a split plot arrangement with ten replications. All soybean sprays applied before powdery mildew inoculation reduced the occurrence of the disease on dogwood foliage. At  $\approx$ 1 month after treatment, those trees sprayed before infection with TNsoy5 or TNsoy6 had less than 2% of foliar surface infected while trees sprayed with water had more than 25% infected. All soybean oil sprays applied after inoculation reduced occurrence of powdery mildew on dogwood. Most soybean oil treatments resulted in less than 10% leaf foliar surface infected after a month, compared to more than 50% surface infection on water sprayed plants.