

## Controlling scale on 'Globosa' arborvitae shrubs

Research was conducted to determine if soybean oil sprays may substitute for petroleum oil for control of insects on nursery crops. Dormant field-grown 'Globosa' arborvitae shrubs infested with Fletcher scale (*Parthenolexanium fletcheri*, Cockerell) were sprayed on 9 Mar. 1997 with 0, 2, 3, or 4% soybean oil. One hundred scales per plant were evaluated on 4 Apr. 1997. Spraying 2% to 4% soybean oil on dormant arborvitae caused  $\geq 97\%$  mortality of Fletcher scale compared to only 7% mortality on untreated plants. Container plants of white pine, viburnum, 'Anthony Waterer' spirea, 'Green Beauty' boxwood, western red cedar, 'Blue Star' juniper, 'Blue Pacific' juniper, 'Japanese Garden' juniper, pyramidal arborvitae, '*Densiformus*' yew, and dwarf Alberta spruce were sprayed with 0 (water control), 1, or 2% soybean oil (emulsified with Latron B-1956), 0.2% Latron B-1956, or 2% SunSpray Ultra-Fine Spray oil on 26 Aug. 1997 for phytotoxicity evaluation. No phytotoxicity occurred on western cedar, spirea, boxwood, yew, arborvitae, or viburnum. Spraying SunSpray or soybean oil caused initial loss of blue color on blue junipers and white pine. Spraying 1 or 2% soybean oil or 2% SunSpray caused phytotoxicity to 'Blue Star' juniper. 'Blue Pacific' juniper, 'Japanese Garden' juniper, and Alberta spruce were slightly damaged by 2% but not by 1% soybean oil.