

Abstract:

A promising, nontoxic quarantine treatment for cut protea flowers is the use of hot air. Previous research demonstrated that hot air at 44° C, 60% relative humidity for 60 min significantly reduced western flower thrips (WFT), *Frankliniella occidentalis* (Pergande) (Thysanoptera: Thripidae) in chrysanthemum flowers without heat damage to flowers. Studies conducted on *Leucospermum* 'High Gold' and *L.* 'Pohaka La Hawaii' indicated that protea flowers were damaged by hot-air treatment at 44° C for 60 min. In another trial, *Leucadendron* 'Safari Sunset' and *Banksia* spp. (*B. baxteri*, *B. speciosa* and *B. prionotes*) that were first conditioned in hot air at 39 and 41° C for 15 min prior to hot-air treatment at 44° C for 60 min, were not heat damaged and suffered no significant reduction in vase life. Conditioning protea flowers will increase their tolerance to heat and allow the effective use of hot-air to disinfest flowers. Further research is needed to confirm thermo-tolerance of other cultivars and to verify the efficacy of heat treatments against quarantine pests of protea.