

Title High-temperature continuous-flow curing of sweet onions
Author Bryan W. Maw, Christopher L. Butts, Albert C. Purvis, Kenneth Seebold and Benjamin G. Mullinix
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Abstract

A study was undertaken to investigate the feasibility of heat treating sweet onions under controlled commercial conditions. Three test runs were conducted whereby approximately 4 m³ of onions for each test were passed through a continuous-flow drier. Set-point temperatures of 43, 43, and 46 °C and durations of heat treatment of 17, 24 and 24 h were used respectively during the three tests. Samples of heat treated onions were taken from the dryer at regular intervals and, after prescribed storage intervals, were inspected for the presence of *Botrytis allii* with the aid of a dye. The increase in disease was calculated. There was a significantly ($P<0.01$) less increase in disease during storage for those onions having received heat treatment compared with onions conventionally cured. In comparing the least square means, 24 h of heat treatment resulted in a lower incidence of disease than 17 h. Similarly, a set-point temperature of 46 °C resulted in a lower incidence of disease than 43 °C. Based upon the results of the study, a combination of heat treatment and conventional curing was recommended.