Abstract:

A standard quality control test to estimate the rate of decay of harvested fruits of red raspberry (Rubus idaeus) was used to compare the shelf-life of fruits damaged by larvae of raspberry beetle (Byturus tomentosus) and those without visible evidence of larval damage. Samples of fruit of two cultivars, 'Glen Ample' and 'Glen Rosa', were picked from plots managed without insecticides or fungicides at the Scottish Crop Research Institute, and sorted into those with visible larval damage and those that showed no external damage. Harvested fruits were placed individually into separate wells of plastic minipots in sterile seed trays, kept at room temperature (c. 20oC) in subdued light and high humidity, and examined at daily intervals for 5 days. Each fruit was discarded when it showed surface mycelium of grey mould, caused by Botrytis cinerea. Records of the number of days until visible rotting occurred were used to estimate the time taken for 10% and 50% of the sample to rot. Fruits damaged by raspberry beetle larvae started to rot more rapidly than undamaged fruits. For both cultivars, 10% of the damaged fruits had started to rot in less than 2 days under the standard conditions, about half a day sooner than had undamaged fruits (P<0.01). Damaged fruits also took less time for 50% of the samples to decay (P<0.001).