

HEAT AS A QUARANTINE TREATMENT AGAINST CODLING MOTH IN CHERRY

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Postharvest tests were conducted to determine efficacy of warm water treatments against larvae of the codling moth, *Cydia pomonella* L. (Lepidoptera: Tortricidae), in fresh sweet cherries, *Prunus avium* (L.). As condition of entry, Japan demands that cherries grown in the United States must be fumigated with methyl bromide to control codling moth. Two treatment methods were developed based on cherries were produced: California and Pacific Northwest (PNW). For California cherries, the efficacious treatment was a 5 min prebath at 43°C (109 °F), followed by warm water exposure, either for 8 min at 48°C (118°F), 6 min at 49°C (120°F) or 4 min at 50°C (122°F), then hydrocooled until fruit core temperature drops to about 4°C (39°F). The warm water exposure can be either a bath or a shower. For PNW cherries, the efficacious treatment was a direct warm water immersion for 6 min at 50° (122°F) or 4 min at 54°C (129°F), followed by hydrocooling until fruit core temperature drops to about 4°C (39°F). Initial tests indicated no significant adverse effect on fruit quality for both of these methods. Hydrocooling is for maintaining fruit quality and does not contribute to treatment efficacy.