TRIALS AND TRIBULATIONS IN THE DEVELOPMENT OF ORGANIC QUARANTINE TREATMENTS

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The organic fruit industry in the Unites States has grown dramatically over the past 10 years with no end in sight. Consumer demands, both domestically and internationally, for organically produced fruit has helped catalyze this expansion. Unfortunately, some of the more lucrative export markets are closed to organic fruits due to quarantine barriers. Although many countries will accept methyl bromide fumigated organically produced fruits, growers are not satisfied with the situation and are in need of quarantine treatments which would meet organic standards.

Non-chemical postharvest quarantine treatments for apples, pears, and sweet cherries have been developed. The treatment system employs a short-term hot forced air treatment in combination with a low oxygen, high carbon dioxide atmosphere. The treatment has primarily been developed to provide quarantine security against codling moth, but has proven to be effective against plum curculio, apple maggot, and western cherry fruit fly. Fruit quality is not compromised by the treatment, and is actually better than fruit subjected to methyl bromide fumigation. In spite of these findings, conventional growers are against the implementation of these treatments, especially since methyl bromide use for postharvest and quarantine purposes are still in place according to the Montreal Protocol. However, these treatments will provide an avenue for export of organically produced fruit.

The treatments have reached a stage where they can be used in fruit quality demonstrations to organic pome and stone fruit growers and packers. The development of these treatments and the process of demonstrating them to growers will be discussed.