

GALA LENTICEL MARKING (FEBRUARY 2003)

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Much of the problem of Gala lenticel marking seems to be related to the amount of natural wax the fruit has produced at the time it is harvested. The natural wax protects the fruit from desiccation as well as postharvest irritants such as salts from chlorine solutions (sodium hypochlorite), acidic cleaners, high concentrations of synthetic wax, etc.

Fruit grown in the shade or fruit with less exposed patches produce either less wax or wax of a different nature than fruit grown in the sun and therefore, may be more sensitive to injury. Natural wax as well as cuticle in the calyx bowl seems to be thinner than on other parts of the fruit. Maturity has a great deal to do with natural wax on fruit. Wax development when the fruit is held at 32 °F over a period of time will be different than when it is hanging on the tree exposed to higher temperatures. This often leads to the fruit feeling greasy after storage.

When fruit goes into CA storage respiration, ethylene production, and general metabolism slow to the point where there is less wax development. The lenticels that are open or cracked at the time fruit enter storage tend to remain opened. Therefore, the cells underlying these lenticels may be more prone to desiccation in low humidity.

When fruit is taken out of CA storage respiration increases and natural wax development resumes.

SOME SUGGESTIONS...

We know that certain lots of fruit are more susceptible than others. Thus there would be an orchard connection. So I suggest reviewing your calcium spray program. Growers of Gala in



other parts of the world spray calcium up to 12 times per season. Also is tree nutrition balanced? How about pruning?

After CA storage, susceptible fruit should remain in air storage for a couple of weeks before being packed so that wax synthesis resumes and fruit acquire additional resistance to possible chemical injury.

If the fruit is to go through a presize, consider eliminating the chlorine in the flumes. Certainly do not have an excessive amount of chlorine in the flume because the sodium salt concentration will increase as more sodium hypochlorite is added.

At packing, reduce the water temperature in the dump tank and remove the acid so that you have a neutral pH with water at ambient temperature. Do not use acid chemicals such as acidic soaps or waxes on this fruit.