ZXT-coated strawberry punnets: What did QDPI trial show?

Practical insights for strawberry growers

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The trial compared ZXT-coated and standard 250g flat punnets using Albion and Cabrillo strawberries grown in Stanthorpe. Fruit was harvested at early-to-mid and late season and stored at 4°C for up to 15 days.

What is ZXT?

ZXT-724 ('ZXT') supplied by OSY Group is a water-based packaging coating compliant with application food contact material (FCM) regulations.

Applied to packaging, it forms a durable non-visible layer that does not transfer to fruit and physically disrupts microbes on contact, helping reduce decay.

The question

Can ZXT-coated punnets reduce disease and extend strawberry shelf life?

What worked well?

- ✓ Decay started 2–3 days later in ZXT-coated compared with non-coated punnets
- ✓ Package coating reduced disease incidence early in storage, especially for late-harvested Cabrillo fruit
- ✓ Cabrillo fruit showed slower disease development compared to Albion

What to watch out for?

- ✗ Postharvest results depended on the combination of package coating, harvest time, variety and storage conditions
- ✗ Effects changed over time in storage
- ✗ Quality loss was mainly from physical damage and, secondarily, dehydration, so the coating effect on shelf life was not clear
- ✗ More testing is needed, results are limited to one farm, two harvests, two varieties and one storage temperature

What does that mean for growers?

- ZXT may help delay disease onset
- Good handling is the most critical factor:
  - minimise bruising and damage at harvest and packing
  - cool fruit quickly to 1–4°C
  - keep humidity high (90–95%)
  - maintain the cold chain
- ZXT may be a useful additional tool, not a replacement for best practice

Figure 1. Example of physical damage progression on Albion fruit held at 4°C for 1, 6, and 10 days after harvest

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Further information

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