

Benefits of GA on sweet cherries

GA has been shown to:

- Improve fruit firmness
- Increase soluble solids
- Increase fruit weight
- delay fruit maturity by 3-5 days
- Greener stems
- Improved storage life
- results on reducing rain-induced fruit cracking are contradictory



[Drake et al, 1978, Facticeau, 1989, Looney and Lidster, 1980, Proebsting et al, 1973]

Mechanism by which GA affects cherries

- 🍒 Various (100+) isomers of GA naturally exist in plants
- 🍒 Commercially registered GA contains isomer **GA₃** that is very active in woody plant species including sweet cherries
- 🍒 Delays maturity and influence ripening enzyme activity and function
- 🍒 (GA₄ and GA₇ are used in apples)



Materials and Methods - 2004

Plant Material

- 🍒 19-Yr old Terhanivee, Vandalay
- 🍒 6.5 x 7.5m free standing
- 🍒 Sprays applied by handgun to drip

Treatments

1. Untreated
2. Activol (20 mg/L GA₃)
3. ProGibb (20 mg/L GA₃)
4. MaxCell (50 mg/L 6-BA) applied twice
5. Treatment 3 & 4



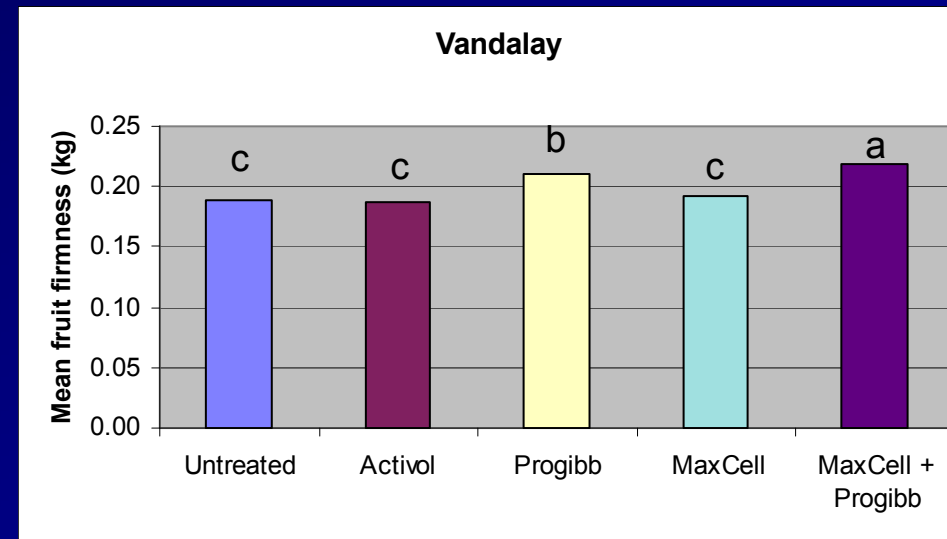
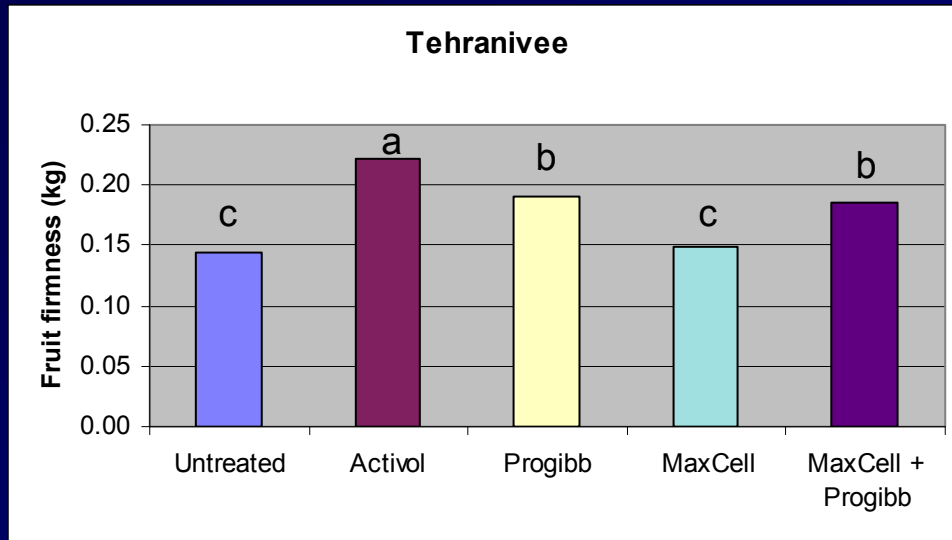


- ◆ Flesh firmness was measured on 25 fruit , 2 sides
- ◆ Fruit texture Analyzer Model GS-14, GÜSS, South Africa
- ◆ 3 mm probe, depth of 1mm (did not penetrate skin)

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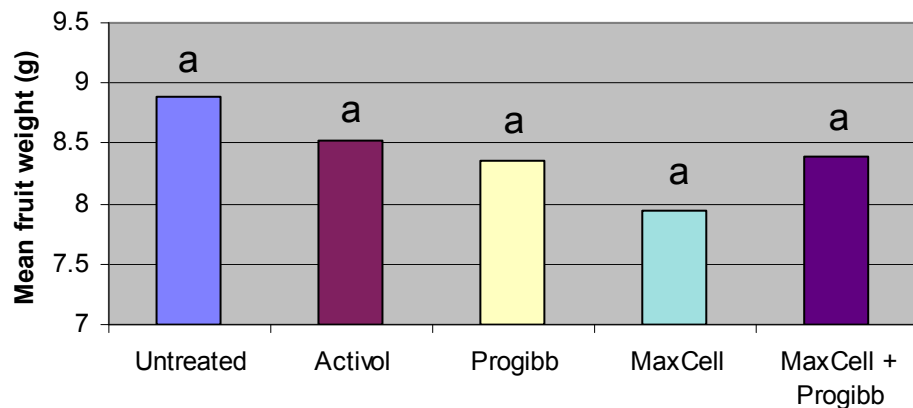
Firmness Results



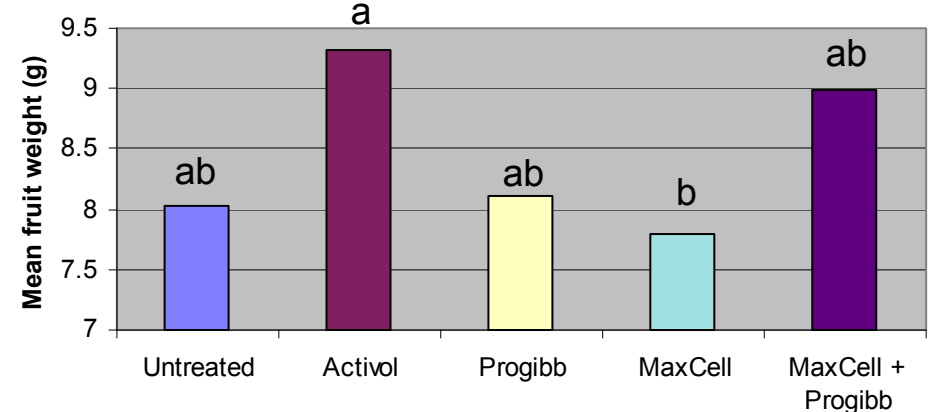
- ◆ Activol increased firmness of Terhanivee, but not Vanadalay
- ◆ Progibb increased firmness of both cultivars
- ◆ Fruit firmness was unaffected by Maxcel
- ◆ Combination of Progibb and Maxcel similar to Progibb alone

Fruit Weight Results

Tehranivee

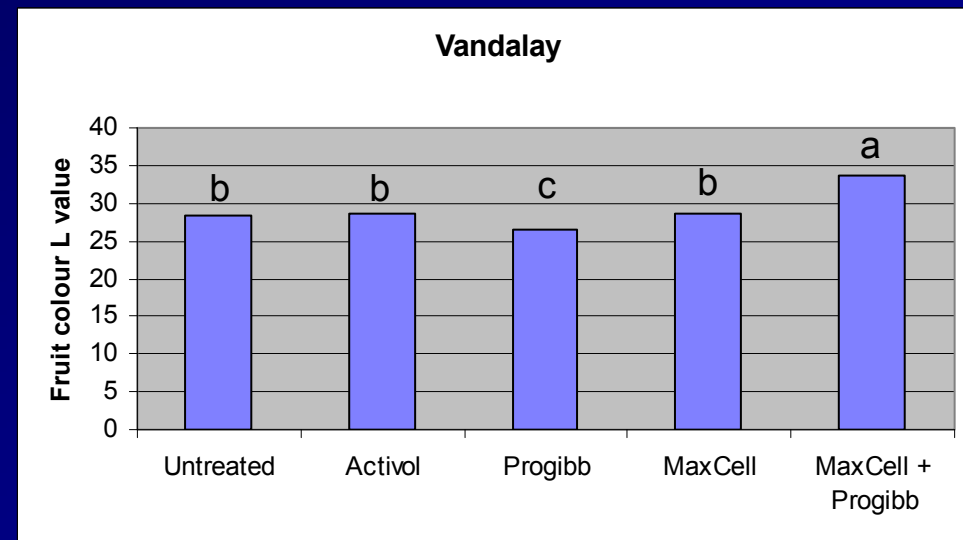
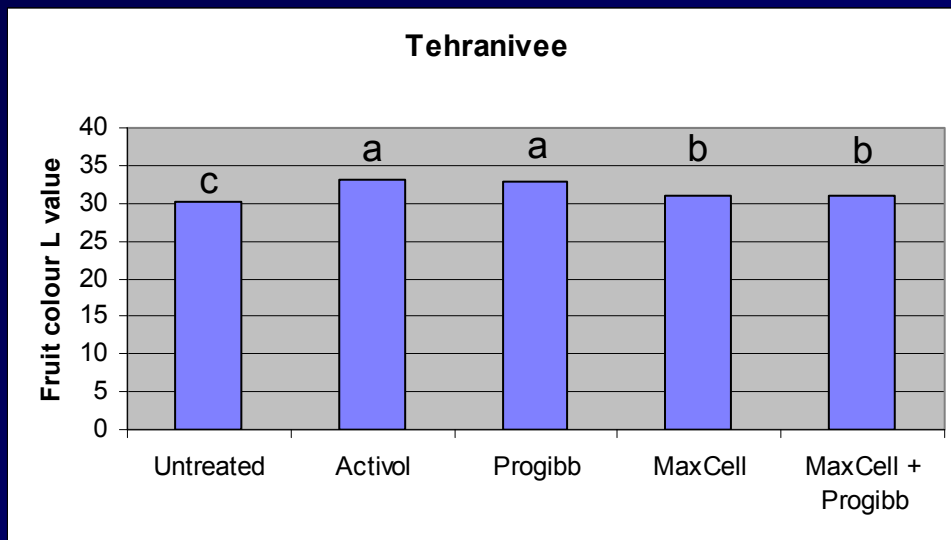


Vandalay



- ◆ No significant treatment effect on fruit weight
- ◆ Fruit was variable and treatment effects were inconsistent

Fruit Colour (1st harvest)



- ◆ All treatments delayed colour development of Terhanivee in comparison with untreated controls
- ◆ Activol and Progibb were less effect in delaying colour development of Vandalay.

Fruit Cracking

No significant treatment effect on:

- ◆ Fruit cracking
- ◆ Marketable fruit



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