

SESSION SEVEN

Session Seven

Flowering, fruit set and yield

New Zealand and Australia Avocado
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Understanding Avocado Fruit Set in New Zealand – an Overview

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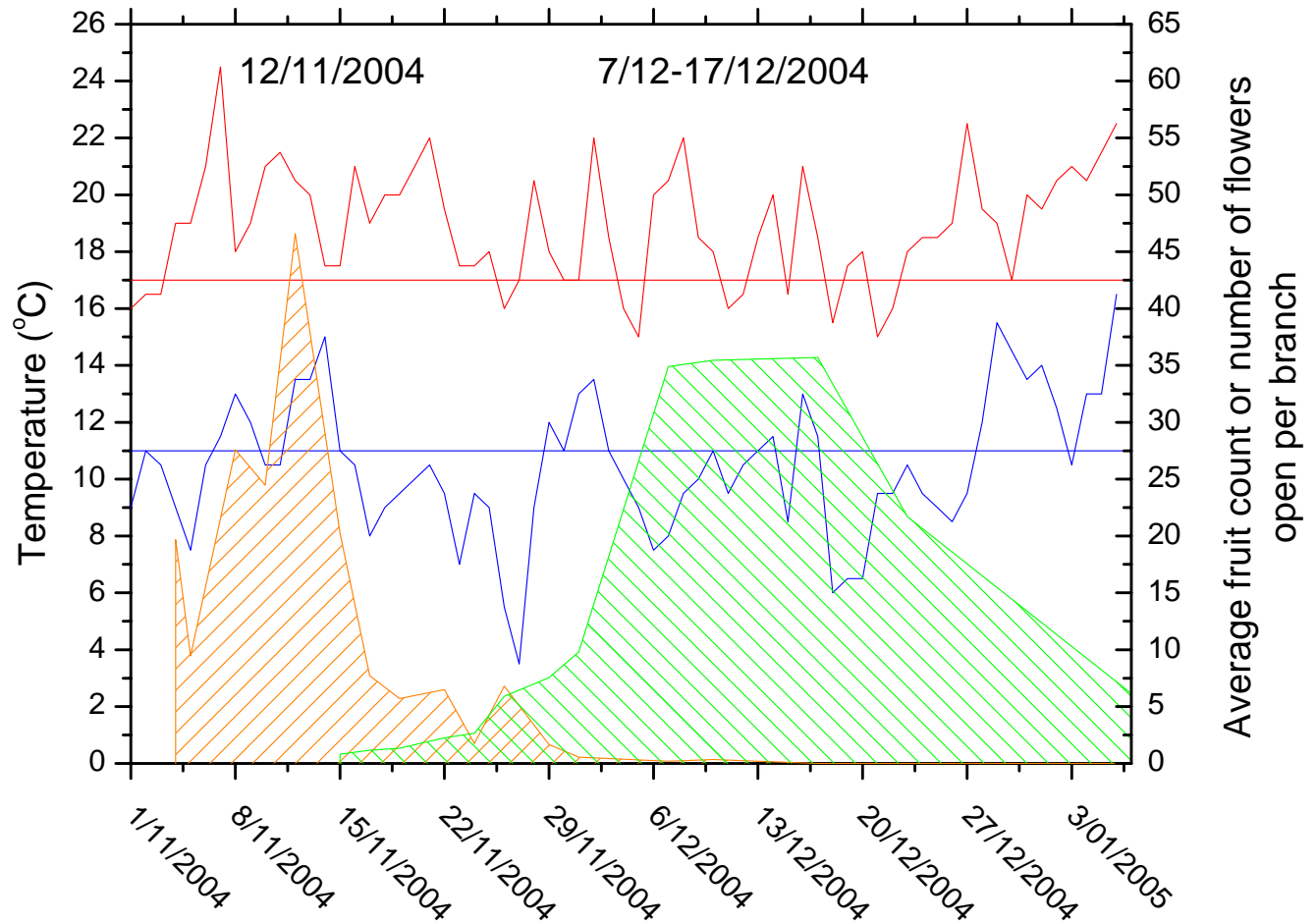


What is the role of the weather?

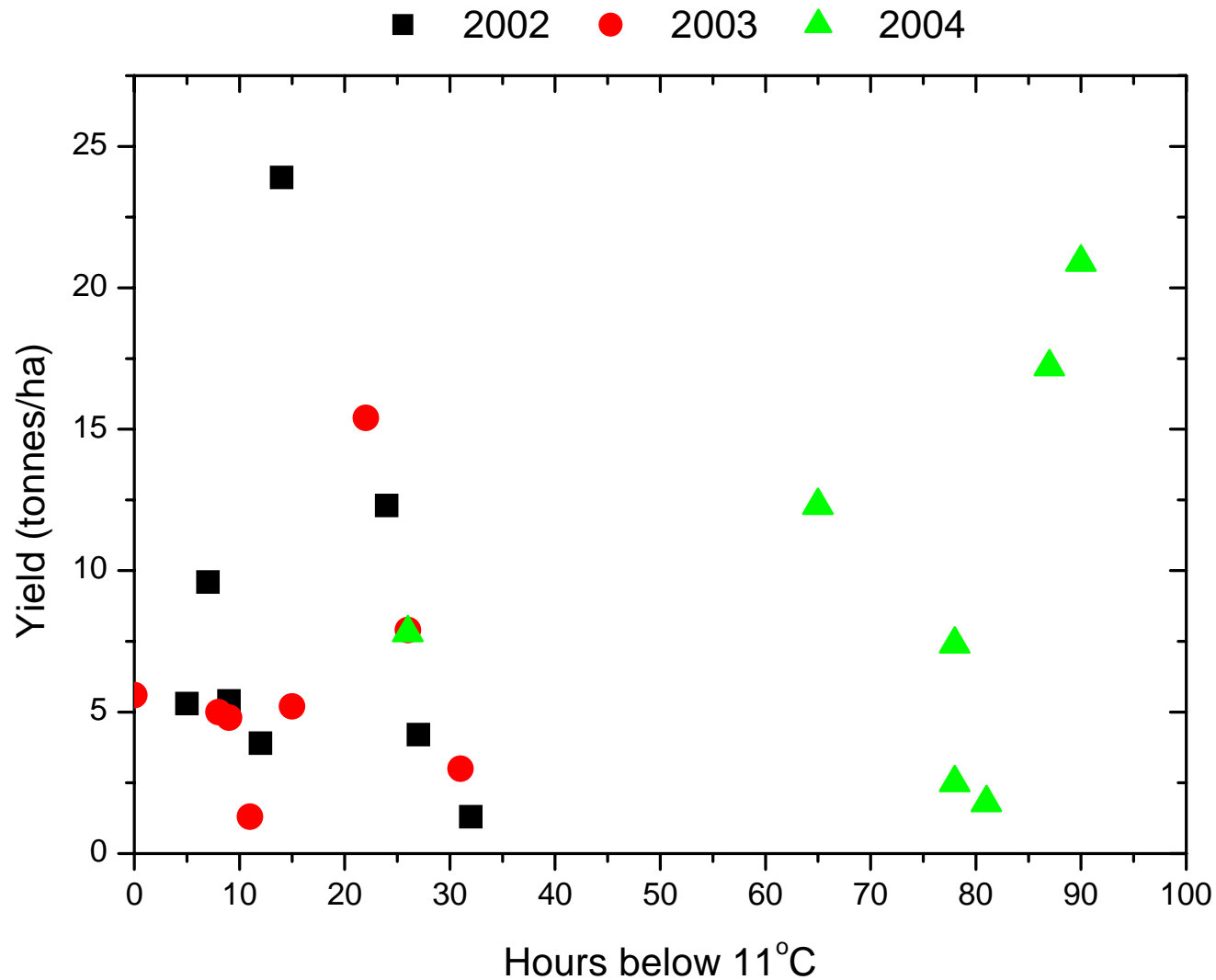
Two main factors

- Temperature
- Rainfall

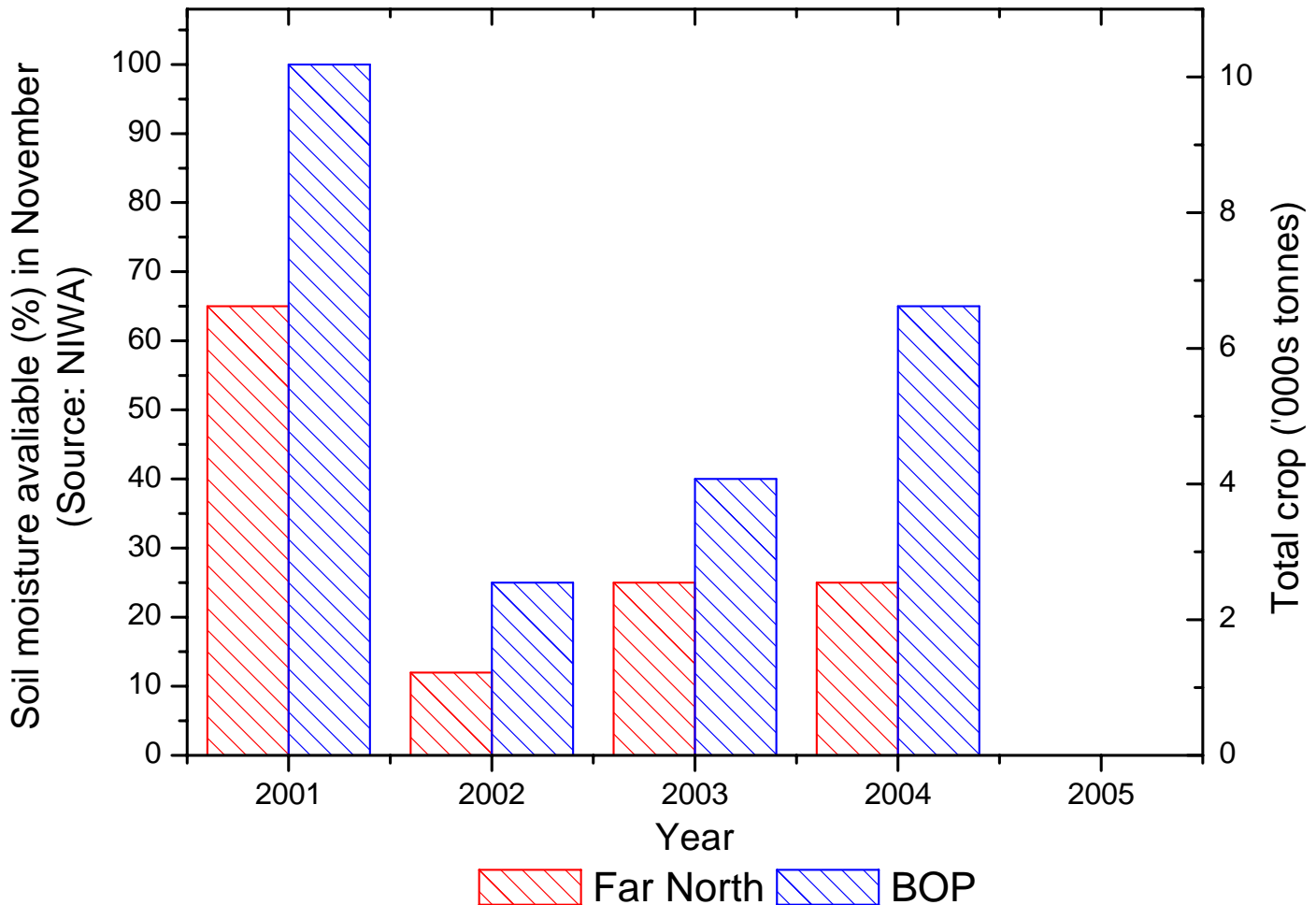
Fruit Set



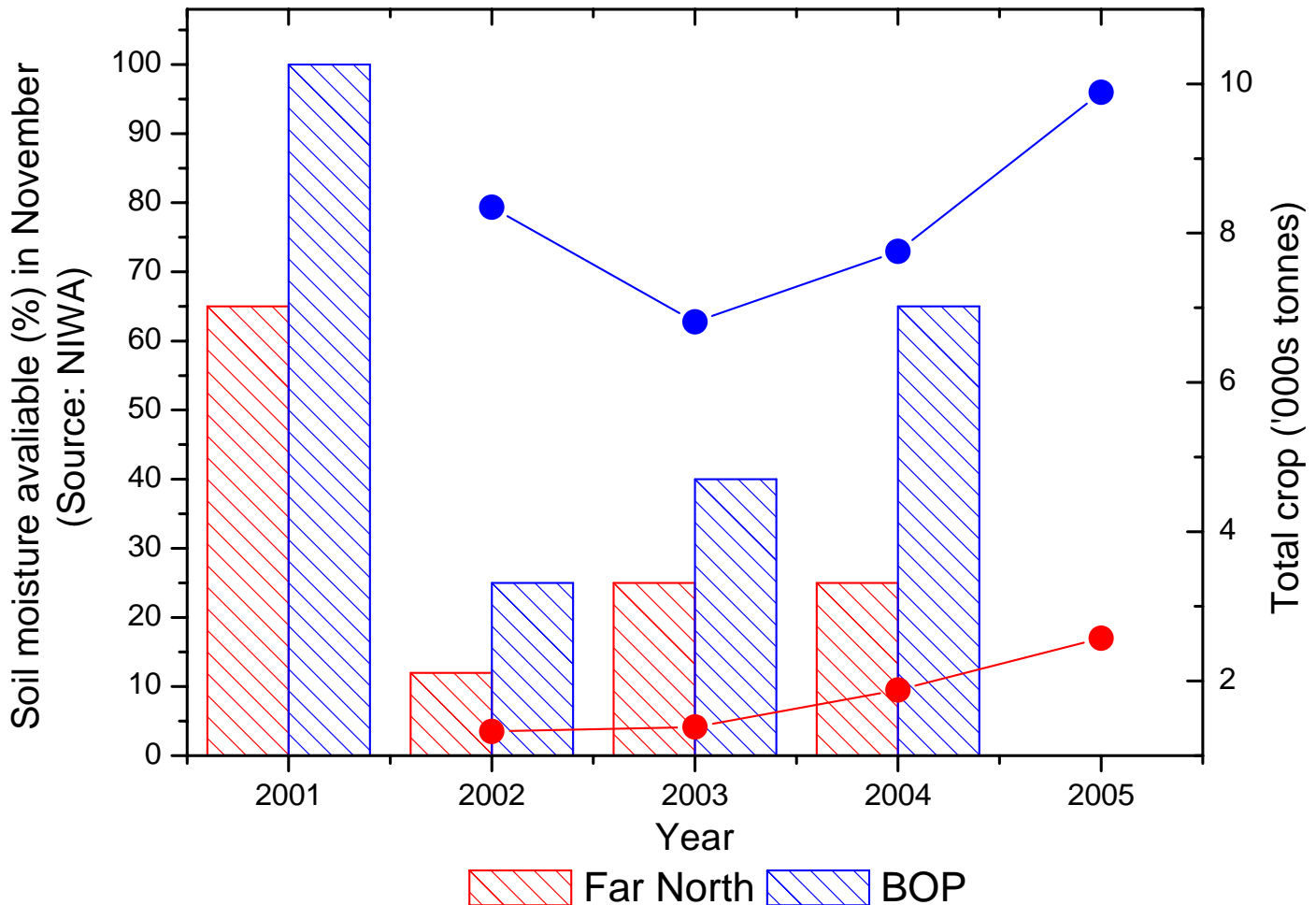
Why not temperature?



Is a lack of water the problem?



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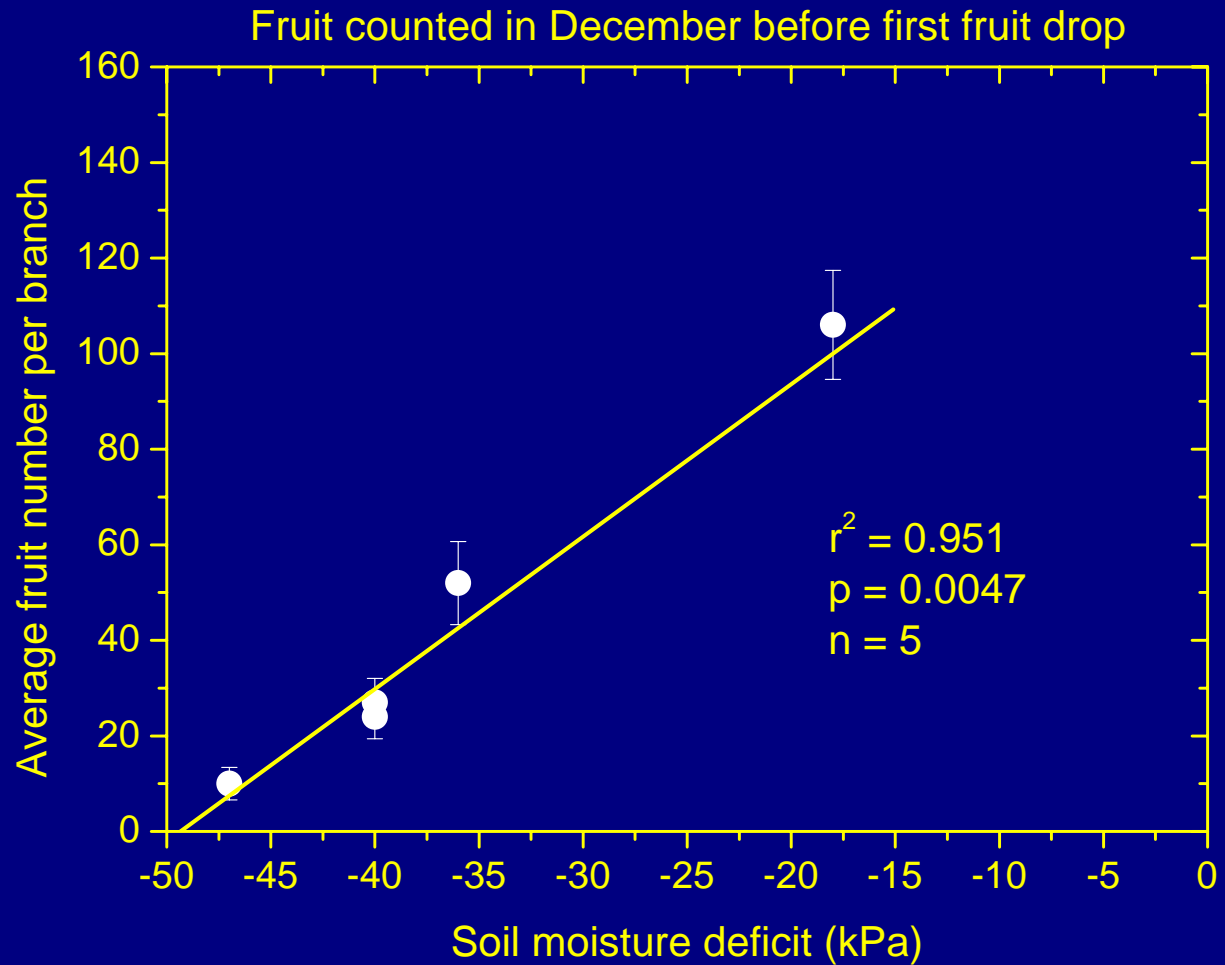
“In Florida a wet spring is followed by a good avocado crop and a dry one by a poor crop”

Wilson Popenoe 1920

In the: Manual of Tropical and Subtropical Fruits Excluding the Banana, Coconut, Pineapple, Citrus Fruits, Olive and Fig.

www.avocadosource.com

How important is soil moisture?



What else is affecting fruit set?

Apart from water stress are there any other factors that can affect fruit set?

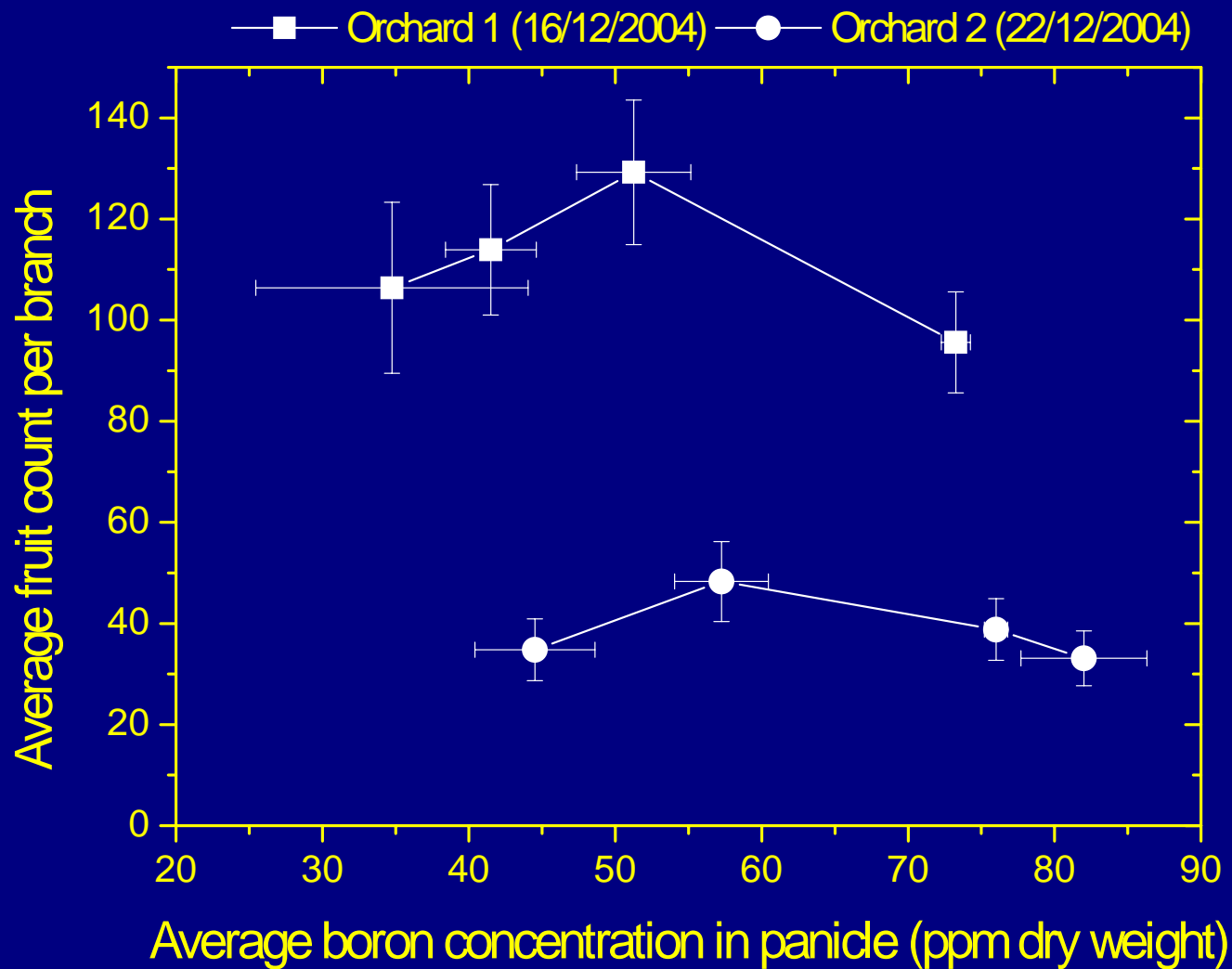
Can different crop levels between orchards be explained by differences in nutrition?

Is fruit set affected by nutrition?

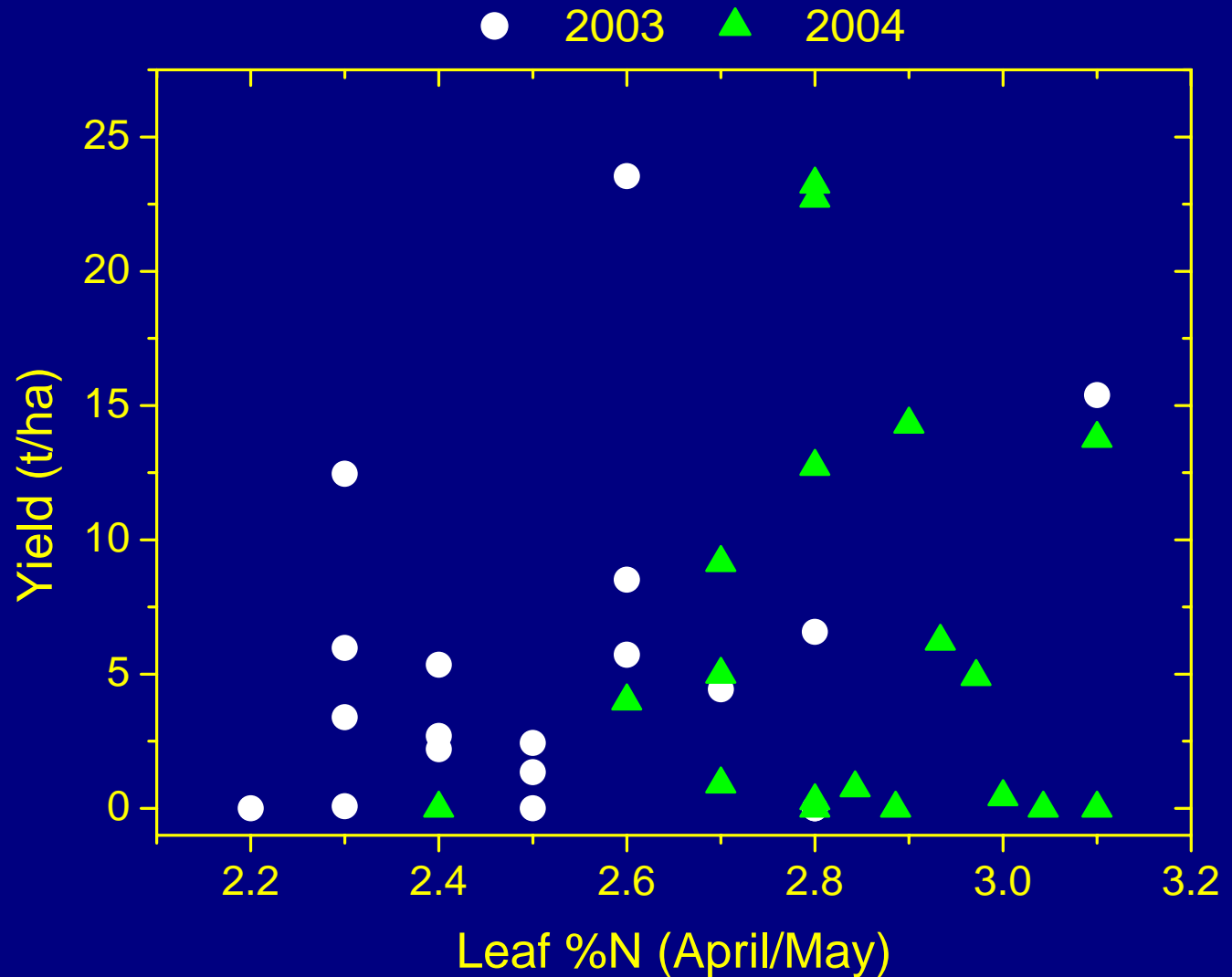
Nutrition factors

- Flower boron concentration
- Leaf Nitrogen percentage

Flower Boron levels



Leaf Nitrogen



How important is mineral nutrition?

- A general influence on yield
- Not the main driver of yield

Conclusions

- Temperature a minor role
- Soil moisture a major effect
- Mineral nutrition a general effect
- Pollination not a problem
- Problem excessive fruit drop

Acknowledgements

We wish to thank:

- Over 30 Bay of Plenty orchards
- Bay of Plenty avocado packers
- NIWA (National Institute of Water and Atmospheric research)
- Freshco

