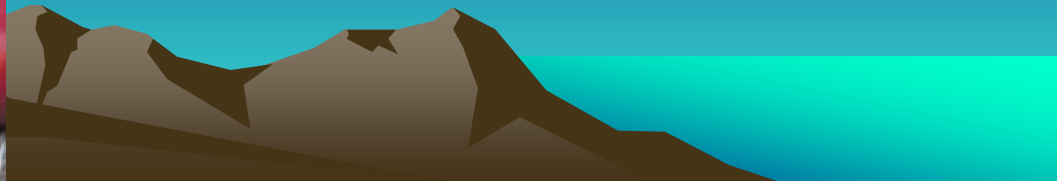




# Irrigation Strategies in Drought Conditions

Scott Johnson  
UC Extension Pomologist





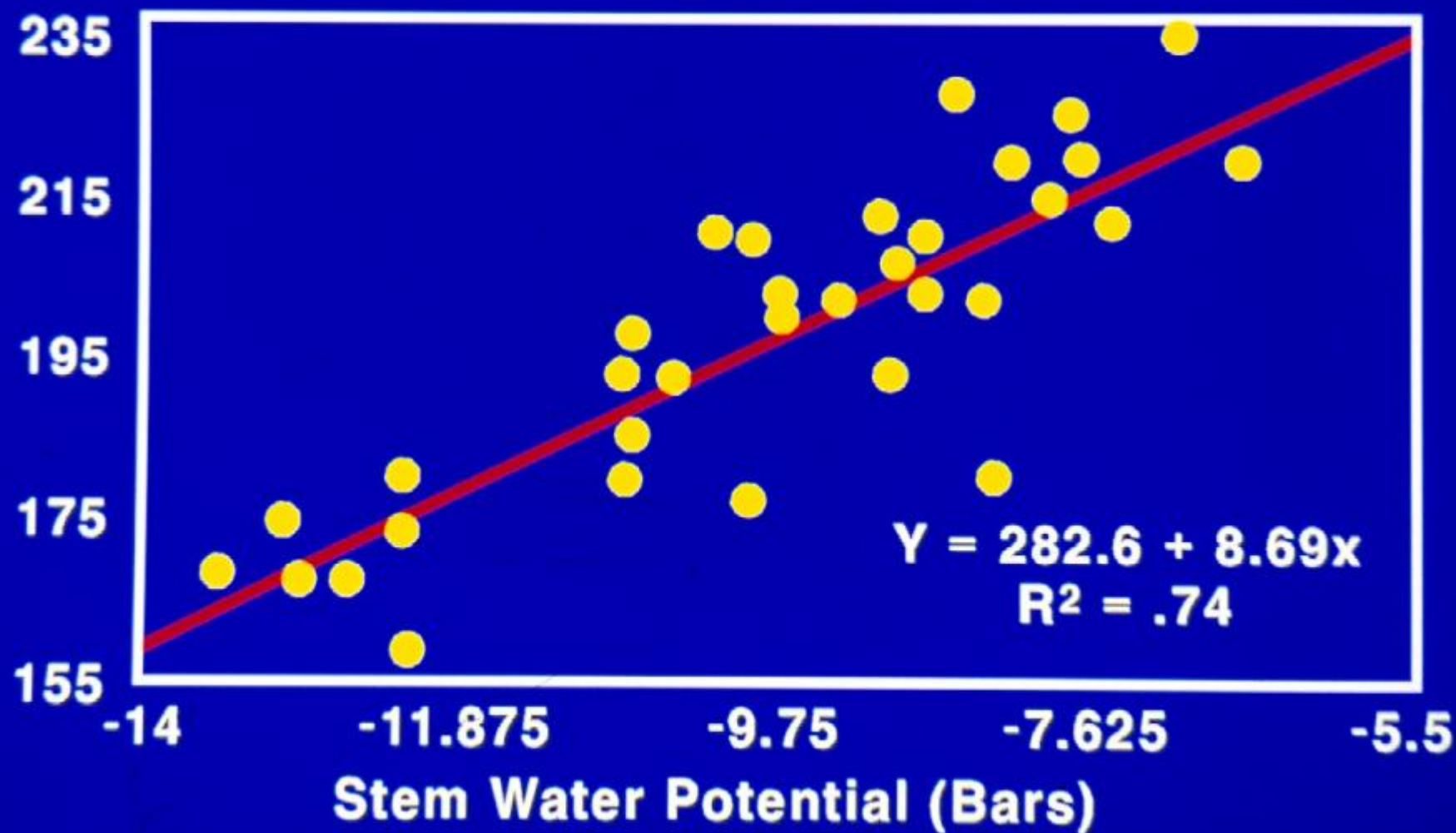




# The Impact of Water Stress on Fruit Growth

Elegant Lady Peach 1995

Fruit Weight (g/frt)























# Irrigation Strategies in Drought Conditions

1. Avoid water stress if possible
2. Monitor the level of water stress





NEPT

HANSEN





# Irrigation Strategies in Drought Conditions

1. Avoid water stress if possible
2. Monitor the level of water stress in the tree (not soil)

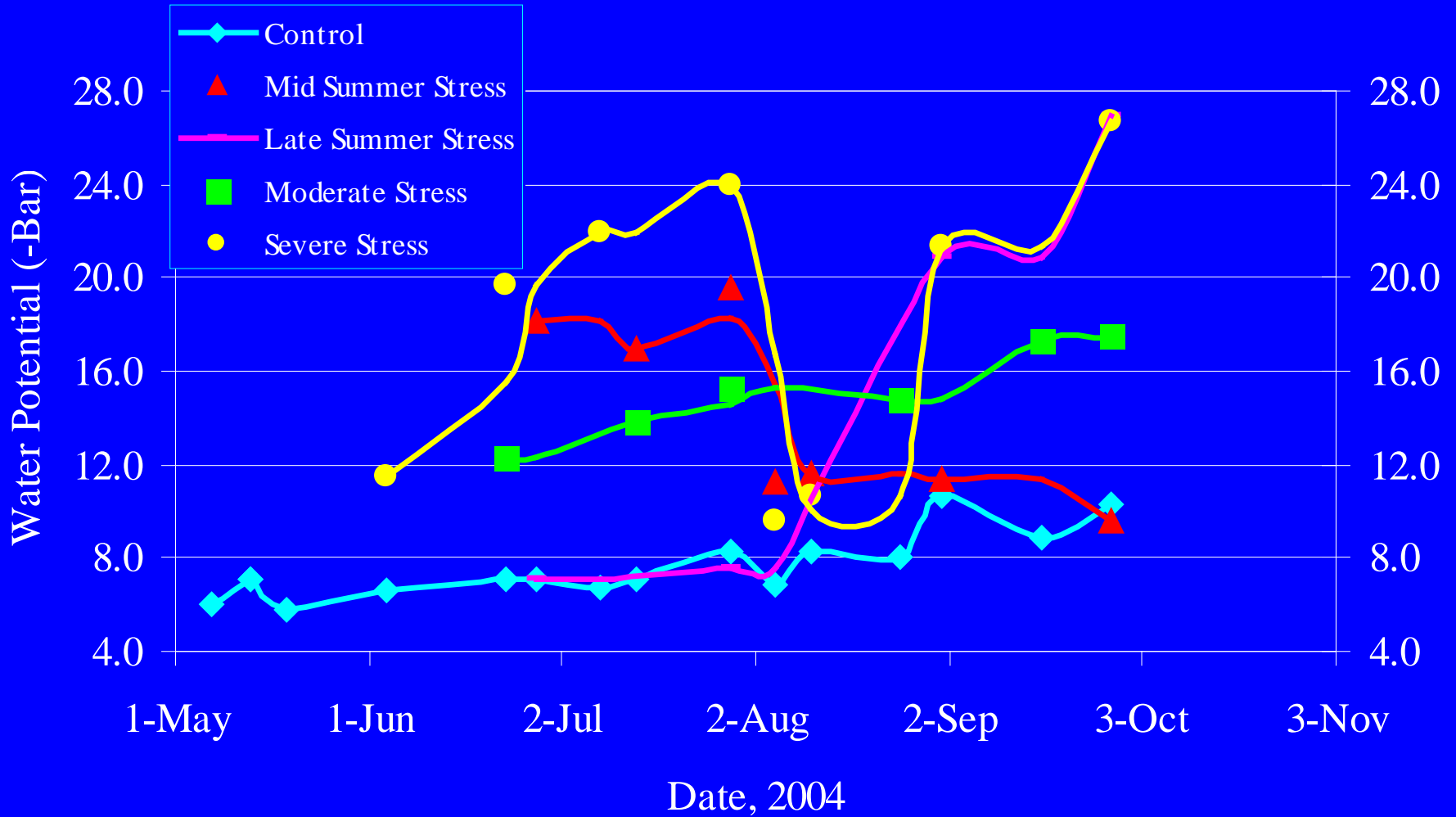








# Crimson Lady Midday Stem Water Potentials





# Irrigation Strategies in Drought Conditions

1. Avoid water stress if possible
2. Monitor tree stress
  - Stem water potential
  - Canopy temperature



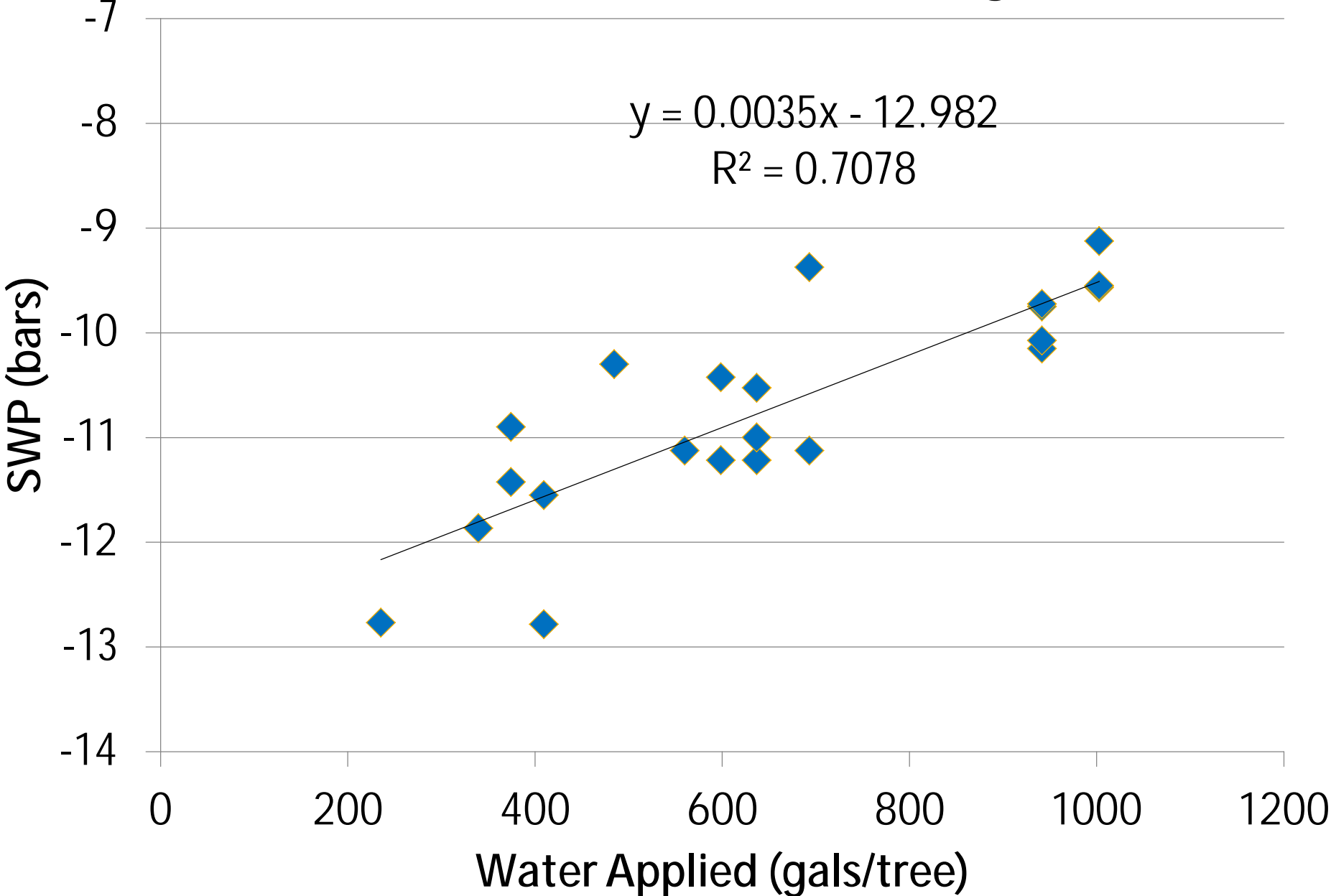




# Tart Cherry Water Stress Project

- Montmorency cherry orchard at USU field station
- In cooperation with Brent Black and Bruce Bugbee at USU
- Trees about 8 years old
- Gradient of emitter flow rates down 2 rows
- Main objective – find easiest reliable method of measuring water stress

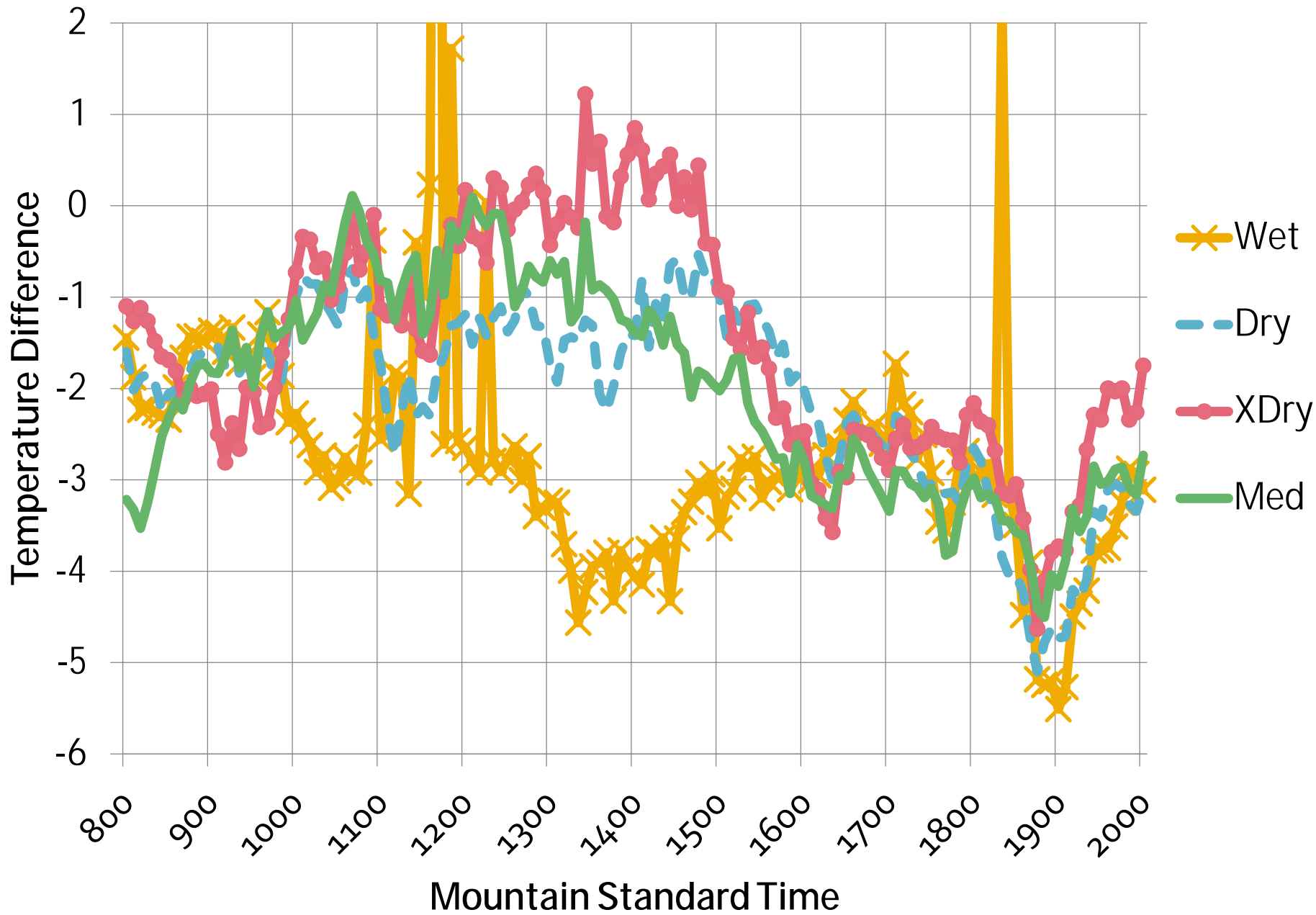
# Stem Water Potential on Aug 10

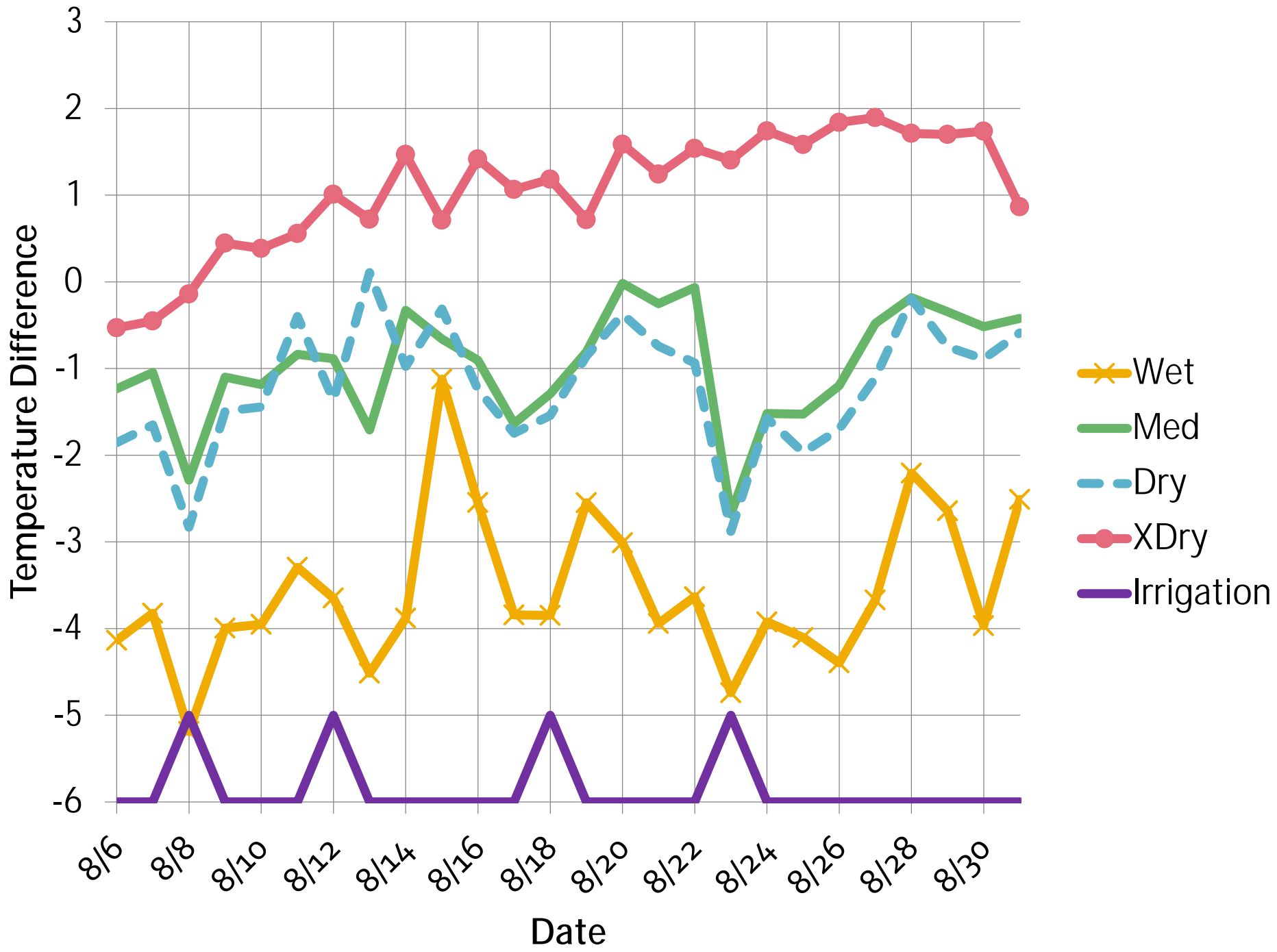




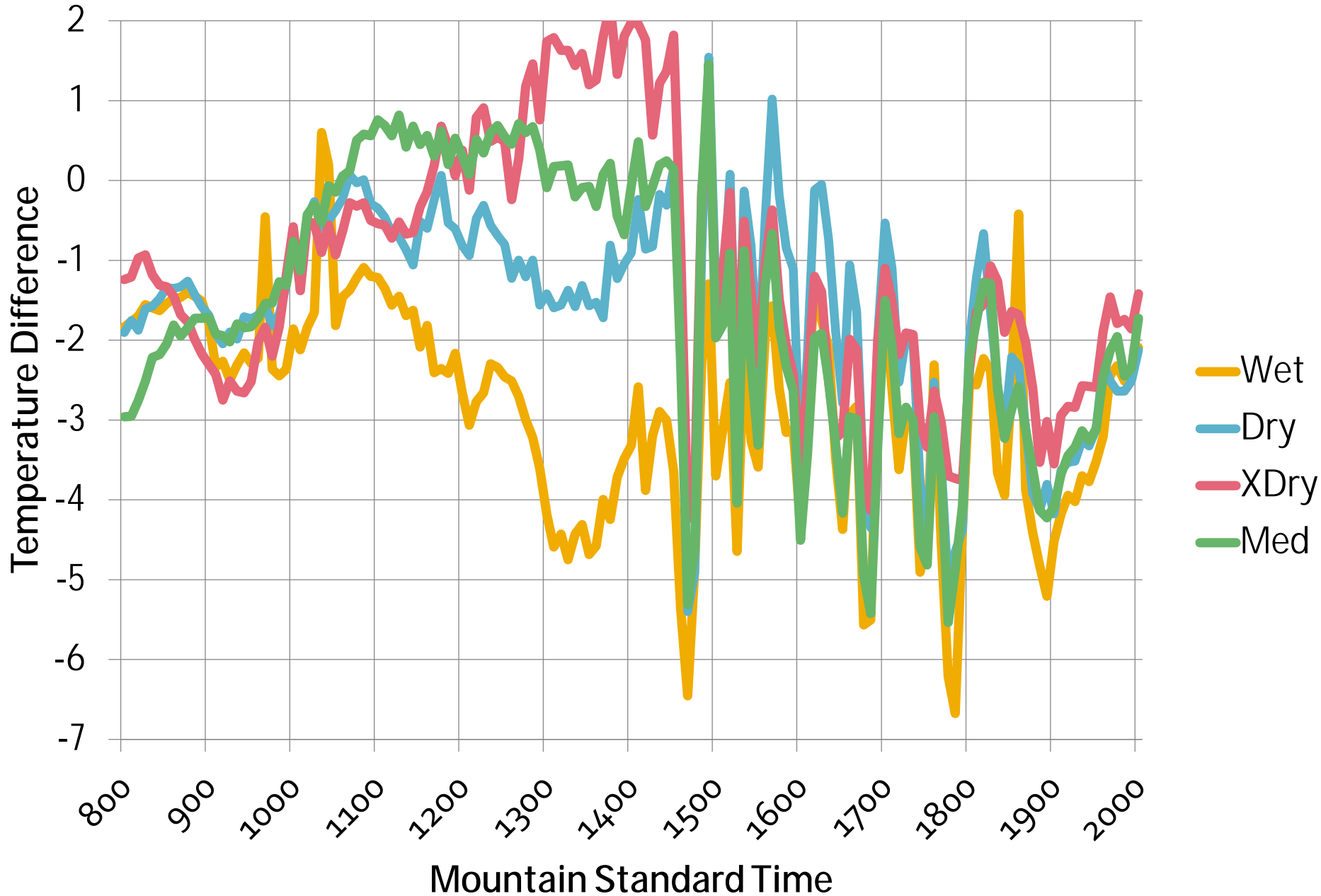


# Canopy - Air Temps on August 10





# Canopy - Air Temps on August 22















apogee

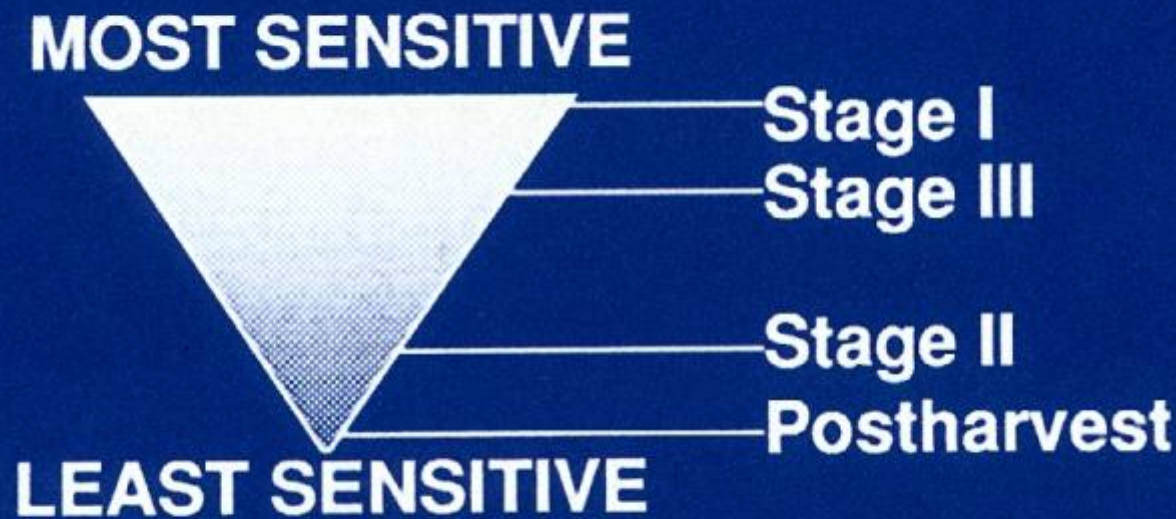




# Irrigation Strategies in Drought Conditions

1. Avoid water stress
2. Monitor tree stress
  - Stem water potential
  - Canopy temperature
3. Minimize stress during critical times

# Peach, Plum, and Nectarine Sensitivity to Water Stress



**Dormancy and Prebloom?**





# Conclusions

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**Any postharvest water stress treatment increases the potential for problems with fruit quality or tree health.**

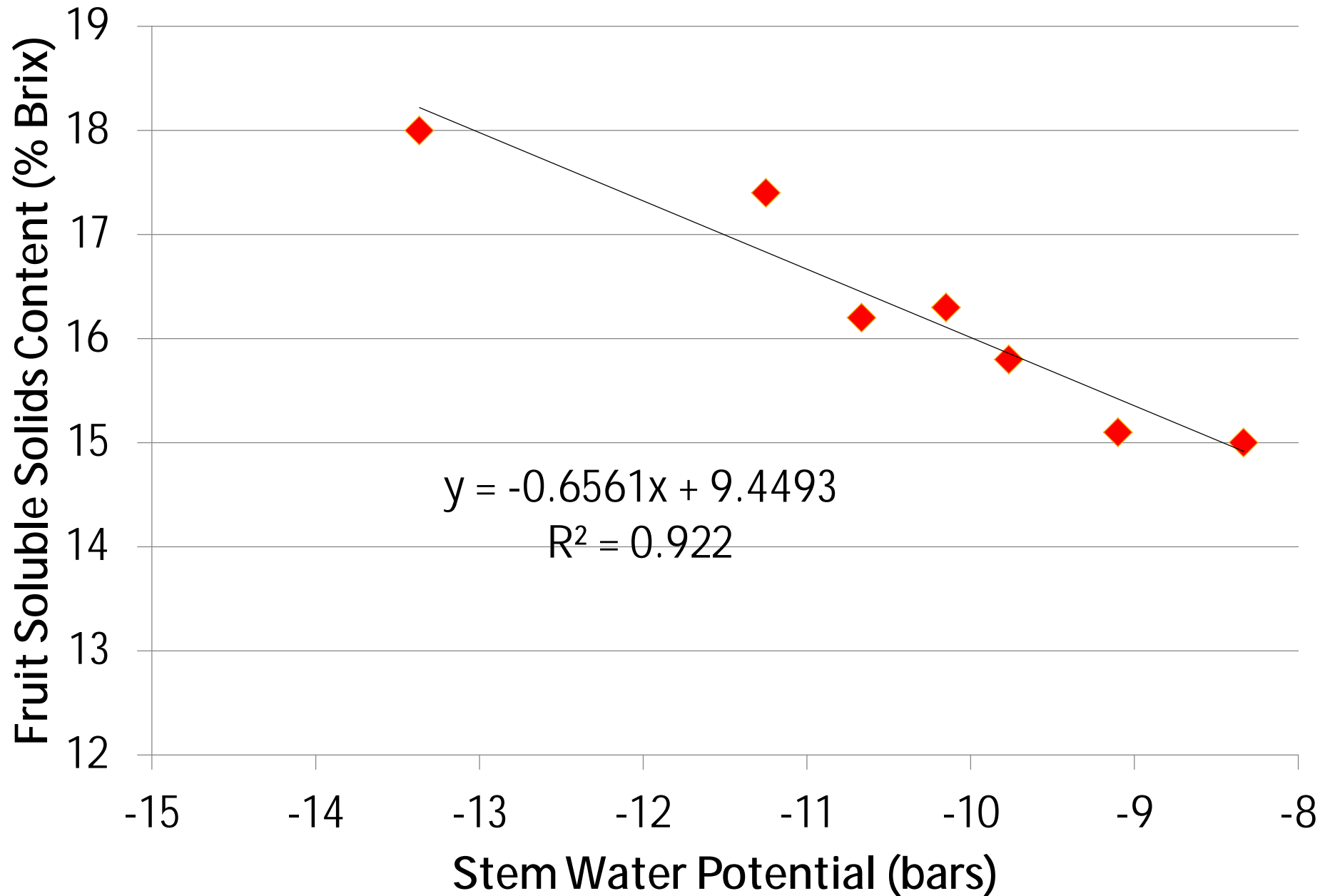
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**If irrigation water is limited, the best strategy is to withhold water during the period right after harvest (June & July), but fully irrigate at the end of the season (August & September).**

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# %SS vs SWP on Aug 25





# Irrigation Strategies in Drought Conditions

1. Avoid water stress
2. Monitor tree stress
  - Stem water potential
  - Canopy temperature
3. Minimize stress during critical times

# http://ucanr.org/sites/fruitreport/

Rootstocks - Fruit Report - Windows Internet Explorer

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## University of California Fruit Report

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### Rootstocks

Nemaguard has been the standard rootstock in California peach, plum and nectarine orchards for many years. Recently, a variety of new rootstocks have become available from numerous breeding programs around the world. This section provides information on the characteristics of these stocks.



**Search for Rootstock by:**

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