Coffee Flower Research Update

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Non-synchronized fruit development

- Increases harvesting costs
- Damage to trees with multiple harvests
- Berries can be a source of CBB if left in field
Gibberellic acid (100 ppm) promotes flowering in coffee

- Previous Research
  - Flower buds > 4 mm, (not at candle stage open earlier than untreated buds)
  - May have some effect on fruit ripening
  - Schuch, Fuchigami and Nagao, 1990)
    (Clearwater, Meinzer, and Osgood, 1999)
Daily Rainfall Amounts (Inches) for Experimental Plot at Greenwell Farms Kona from February 17, 2010 thru April 27, 2010
Photos on 10-6-10

Control trees

ProGibb
Coffee Berry harvest in 2010

Ripe and Green Coffee Berries harvested per tree

Ripe berries (kg) each harvest date

- Control
- ProGibb + FP
Kauai Coffee, typica field
Total harvest per typica tree on Kauai

Ave Coffee Berry Harvest/tree (kg)

- Green
- Ripe

Control
50 ppm GA3
100 ppm GA3
Abscisic Acid

- Naturally produced plant hormone
- Induces stomatal closures, to decrease transpiration
- Produced in response to environmental stress such as drought, temperature stress or salt stress
- Involved in bud dormancy
Rainfall (mm) in Kona flowering field trial 2011
Total Green and Ripe Berries

Total Berries harvested on each harvest date

- Green
- Ripe

Untreated Control
VBC030051 Foliar weekly (x4)
VBC030051 Drench weekly (x7)
ProGibb 100 ppm GA3 weekly (x3)

- 3-Nov-12
- 29-Nov-11
- 27-Dec-11
- 24-Jan-12
- Green
Kauai Coffee Yellow Catuai Field
Total Yellow Catuai Berry Harvest Kauai 2011

Ave Coffee Berry Harvest/Tree (kg)

- Control
- 100 ppm sABA + Foliar & Drench
- 1000 ppm sABA Drench
- 25 ppm GA3 x 4 Foliar Sprays
- 50 ppm GA3 x 2 Foliar Sprays
- 100 ppm GA3 Foliar Spray

Green

Ripe
In progress - rainfall and plant growth regulator interaction in Kona
Waialua Coffee, Oahu
Mahalo to:

Greenwell Farms – Tommy and Pepe
Waialua Coffee - Mike
Kauai Coffee Company –
Wayne, Greg, Jon and David
Dr. Chifumi Nagai –HARC
Stoller- Noel and Brian
Valent Bioscience – Dan and Johnny