Stewart Lab

• Research Interests
  – Health Benefits of Local Foods
  – Nutrient Analysis (dietary fiber, fatty acids)
  – Digestive Health
    • Prebiotics, probiotics, dietary fiber

• Contact info
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Fatty Acid Analysis of HI-grown Avocados

• Project funded by USDA-Agricultural Diversification-Tropical Specialty Fruit Grant

• Background
  – Growing conditions, maturation and variety affect nutrient content, especially fat

• Aim
  – Measure individual fatty acids in 4 varieties of HI-grown avocados
Fatty Acid Analysis of HI-grown Avocados

**Varieties**

**Kahaluu**

**Linda**

**Malama**

**Sharwill**

*Photos Courtesy of Ken Love [www.hawaiifruit.net](http://www.hawaiifruit.net)*
HI avocados are different from mainland avocados

- Preliminary Data

**California (USDA Database)**

- Palmitate (C16:0): 9.07
- Palmitoleate (C16:1): 0.70
- Oleate (C18:1): 1.67
- Linoleate (C18:2): 0.13
- Linolenate (C18:3): 0.05
- Other: 2.08

**Kahaluu**

- Palmitate (C16:0): 8.97
- Palmitoleate (C16:1): 1.97
- Oleate (C18:1): 4.00
- Linoleate (C18:2): 1.99
- Linolenate (C18:3): 2.41
- Other: 4.00
HI avocados are different from each other

- **Preliminary Data**

  **Oleate**

  **Linoleate**

  **Linolenate**

  **Total Fatty Acids**
What’s next

• Finish running replicates for complete data analysis
• Publication

• New project starting in February 2013
  – Consumer education to promote HI-grown avocados
Revealing the Hidden Health Benefits of Hawaii Grown Avocado through Nutrition Education

- Specialty Crop Block Grant Program-Farm Bill (USDA/HDOA)
- Feb 2012-May 2013

- Create educational/promotional materials based on current avocado research
- Distribute at retailers/producers across the state
- Conduct demonstrations at retailers
Producer involvement

• Provide avocados for research and demonstrations
• Feedback pre/post
  – What are your typical consumer questions?
• Contact me
  – mstew@hawaii.edu
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Long-term goals?
Thanks to my research team!

- Grad Students
  - Kai Iwasaki
  - Eva Chiu
  - Ziwen Wang
  - Alison Zenel

- Undergrad Students
  - Karlo Dieron
  - My Huong Vong

- UH
  - CTAHR
  - HNFAS