STEM Education in the College of Tropical Agriculture and Human Resources (CTAHR)

SEARCh Symposium

September 19, 2014

Charles Kinoshita
CTAHR – Evolving Name …
Common Mission

- College of Agriculture and Mechanic Arts of the Territory of Hawaii (1907)
- College of Applied Science (1920)
- College of Agriculture (1947)
- College of Tropical Agriculture (1970)
- College of Tropical Agriculture and Human Resources (1978)

Maerten’s House 1907
CTAHR has >300,000 ft² of laboratories, offices and classrooms in seven major buildings on the Manoa campus.
CTAHR manages >1,600 acres of off-campus facilities including 22 research stations and 9 extension offices throughout the State.
CTAHR’s Broad Spectrum of Study

- Molecular Biology
- Plant & Animal Sciences
- Biological Engineering
- Environmental Management
- Natural Resources
- Families & Communities
- Food & Nutrition
- Fashion
Bachelor of Science Degrees Offered by CTAHR (% STEM Courses)

- Animal Sciences (59%)
- Biological Engineering (83%)
- Family Resources
- Fashion Design & Merchandising
- Food Science and Human Nutrition (74%)
- Molecular Biosciences & Biotechnology (68%)
- Natural Resources & Environmental Management (55%)
- Plant & Environmental Protection Sciences (48%)
- Tropical Plant & Soil Sciences (51%)
Scientific Discovery in CTAHR

*Bactrocera dorsalis* and sister species
Computer-Aided Design in CTAHR
CAD in Food Engineering

3D mesh

Ohmic-microwave combination heating cavity for multi-phase foods

Temperature distribution

Ice crystallization

Super cooled frozen strawberry

CAD in Food Engineering

Dr. Soojin Jun - Food Processing Lab
# CTAHR’s Research Funding

<table>
<thead>
<tr>
<th></th>
<th>FY2012</th>
<th>FY2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposals Submitted</td>
<td>211</td>
<td>206</td>
</tr>
<tr>
<td>Awards Received</td>
<td>146</td>
<td>137</td>
</tr>
<tr>
<td>Funds Received ($M)</td>
<td>$25.0</td>
<td>$19.9</td>
</tr>
</tbody>
</table>
CTAHR’s Research Funding

Purple and green banana grass at 5 months after planting are both napier grasses grown in trials at the University of Hawaii’s Waimanalo Experiment Station at an elevation of 60 feet.

Bioenergy Project - $25MM from USDA (2012)
Mahalo

College of Tropical Agriculture and Human Resources
University of Hawaii at Manoa

www.ctahr.hawaii.edu
acadaff@ctahr.hawaii.edu
acadaff2@ctahr.hawaii.edu