

Place-based research as a tool to achieve science literacy



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A Sense of place



90% of Hawaiian plants are endemic



Mike Neal - MNeal.net



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Lobelia gloria-montis

Lobeliad grayana

Strong Cultural Connection to Plants



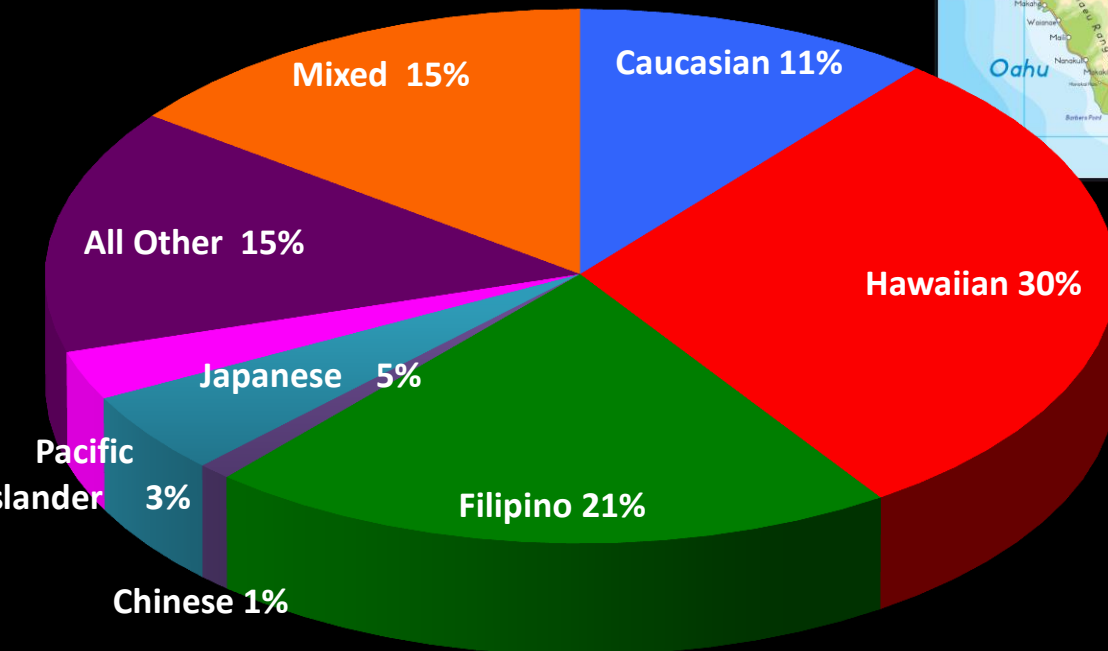




The Leeward Campus

Number of students

8,000- 9,000





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Place-Based learning

- Hawaii Horticulture and Nutrition Hort 110 (4 credits)
- Non-majors, science and lab credits



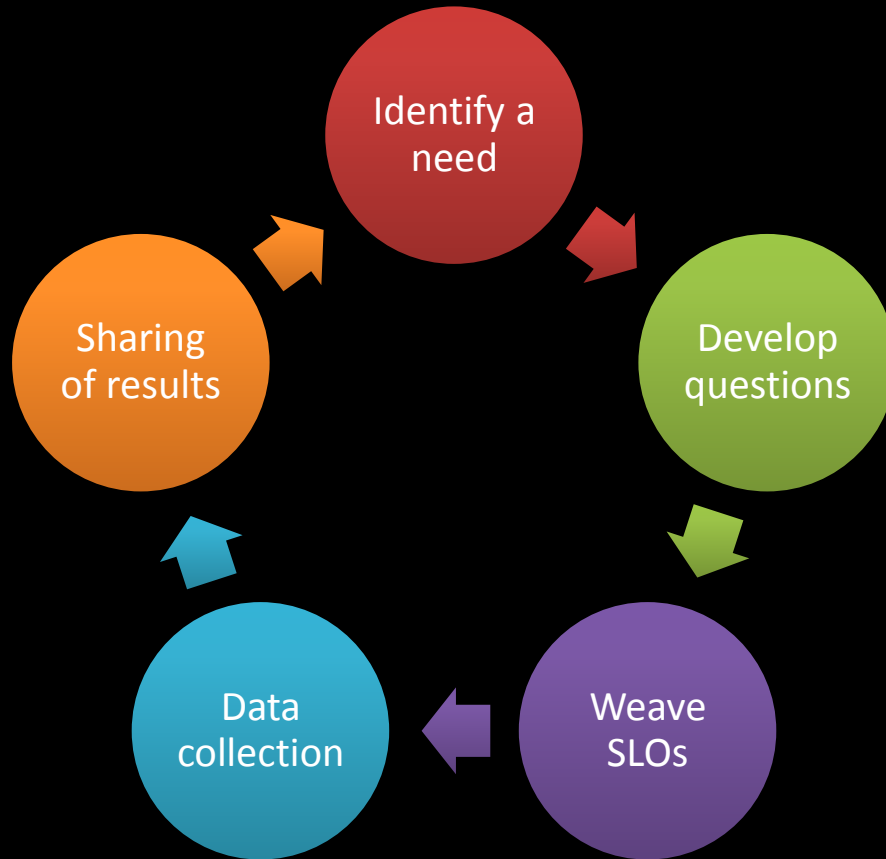
Why is place-based learning beneficial?

- Allows for integration across disciplines
- Reflects the learning style of the target student population
- Better grade point averages
- Improved class behavior
- Increased confidence and problem-solving skills
- Higher levels of critical thinking
- Higher attendance rates
- Less likely to drop out of school

Powers, A. L. 2004. An evaluation of four place-based education programs. *The Journal of Environmental Education*, 35(4), 17-32.

Place-based Education Evaluation Collaborative. 2010. *The Benefits of Place-based Education: A Report from the Place-based Education Evaluation Collaborative (Second Edition)*. Retrieved September 17, 2014 from http://www.litzsinger.org/PEEC2010_web.pdf

Place-Based Research



Identify a need in the community



Basil Downy Mildew



Develop questions and methodology

- Organic farming applications
- Variety trials to identify resistant varieties



Weaving research project into SLOs



Data Collection and Analysis







www.Aloha

EASTSPORT
OUTDOOR COMPANY

Year	Map

Downy Mildew





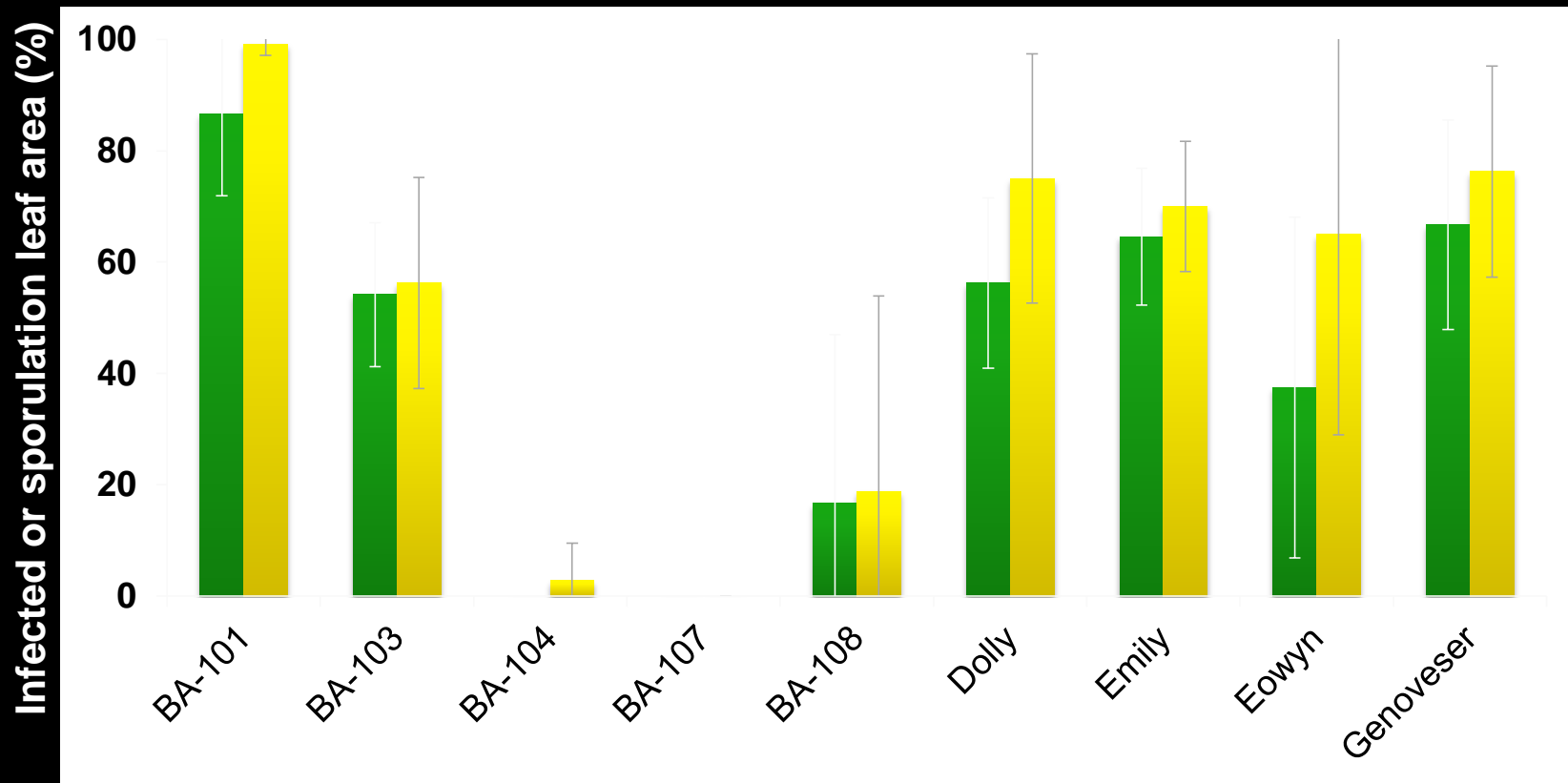
Genovese

BA 108

Jolina

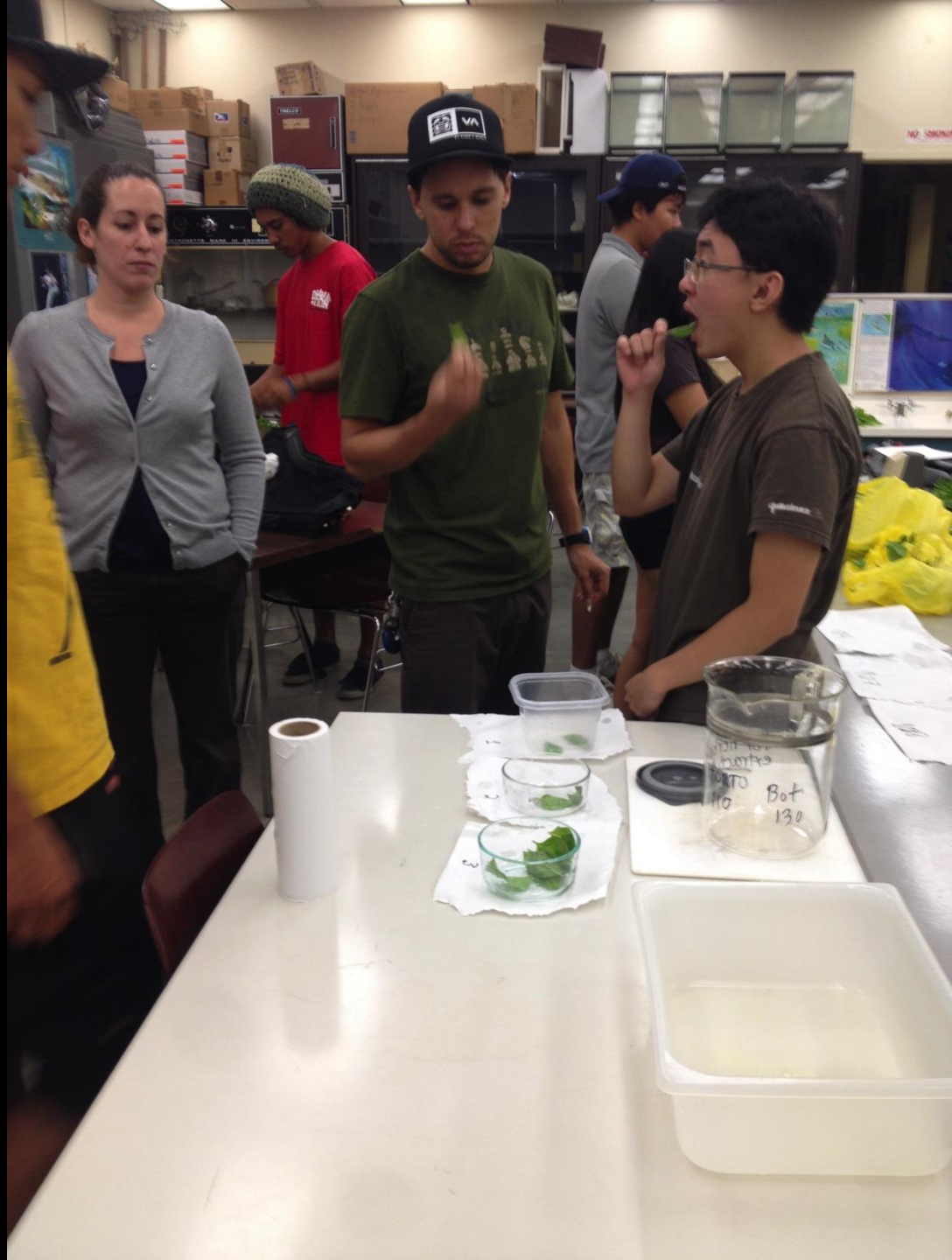
Trial Results

Similar Downy Mildew results for two independent experiments



Blind Taste Test

- 3 varieties that did the best:
 - BA 104
 - BA 107
 - BA 108



Sharing Results

Oahu Cooperative Extension
2014 Basil Growers Annual Meeting, 15-Dec-2014
Vitalis Organic Seeds

ENZA ZADEN



Understanding a problem in depth



Making new connections







Mahalo

ALASKA NATIVE AND NATIVE HAWAIIAN SERVING INSTITUTIONS
Agribusiness Education, Training and Incubation Program

Project Collaborators:

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Dr. Miaoying Tian, University of Hawaii

Erica Renaud, Vitalis Organic Seeds

Hawaii farmers and community leaders

Alyssa Haygood and Kabi Neupane, Leeward CC



United States Department of Agriculture
National Institute of Food and Agriculture