

Creating a Culture of Bamboo

Rich von Wellsheim (Hawai'i – Farmer/Rancher Grant)

Project Number: FW04-114

Title: Creating a Culture of Bamboo

Project Coordinator:

Rich von Wellsheim
Ola Honua Reforestation and Whispering Winds Bamboo
HRC1 Box 180
Hāna, HI 97713
(808) 248-7561
wwb@starband.net



Rich von Wellsheim with young bamboo plants in the Whispering Winds Bamboo greenhouse.

Technical Advisor:

Dean Johnston, Professor
University of Hawai'i
P.O. Box 791978
Pā'ia, HI 96779
(808) 579-9778
djohnsto@hawaii.edu

Western SARE Grant: \$4,816

Situation:

As Hawai'i agriculture continues to evolve from its traditional sugar and pineapple base to one of greater diversity, the need grows to find crops that have both commercial value and minimal negative impacts on the environment.

Ola Honua, which operates Whispering Winds Bamboo located in the Kīpahulu Valley of Maui, has undertaken the task of reforestation on 175 acres of deforested tropical land. Through a combination of permaculture and large-scale reforestation, Ola Honua is planting a variety of native Hawaiian trees, including trees for food and timber, trees that fix nitrogen and bamboo.

The bamboo, more than 40 varieties, is grown for three main markets: nursery plants, edible shoots and timber poles. By planting bamboo, Ola Honua is replacing overgrazed ranch land with a permanent ground cover. Bamboo, it contends, can:

- limit soil erosion
- eliminate the runoff of effluent into the ocean
- provide years of income-producing product
- enhance the quality of life for farmers and ranchers

"This is alternative tropical agriculture at its best," says Ola Honua, "and our project grant proposes to share this technology with the major landowners on the island of Maui."



Visitors learn about bamboo and reforestation at Ola Honua.

Objectives:

1. Educate agricultural producers on Maui about the many values and uses of bamboo
2. Stimulate a large-scale conversion from potentially harmful agriculture practices to those that help ensure agricultural sustainability



Bamboo starts are grown in tubes.



Workers move plants at Ola Honua on the slopes of Haleakalā near Hāna.

Actions:

The project team quickly learned that one of the first barriers it had to overcome was a misconception about bamboo, namely that it is an invasive species that will take over landscapes. Running types of bamboo (monopodial) can spread rapidly if not controlled. But Ola Honua is promoting clumping bamboo types (sympodial).

To help counter concerns, Ola Honua refined its education approach and now has two PowerPoint presentations for two different audiences:

1. A focus on growing bamboo, including details on species, uses and what is required
2. A broader focus that includes the value-added potential of bamboo in industry

Results:

From its educational efforts, the project team marked several achievements:

- Six articles on bamboo were published in a local newspaper, The Haleakalā Times:
 - o Creating a Culture of Bamboo
 - o Bamboo – The New Lumber?
 - o Bamboo Is All about Romance
 - o Tales of Kalo and Bamboo from Kīpahulu
 - o Learn How to Landscape with Ornamental Bamboo
 - o The Bamboo Romance Is Heating Up
- Seven presentation on bamboo reached 582 people.
- The presentations generated a contact list of 218 people who want more information about bamboo.
- The presentations also generated \$29,256 in sales, much of that to landscapers as well as to farmers for timber and shoots.

The project reached two of Maui's large agricultural producers:

- Maui Land and Pine (pineapple plantation) is looking at bamboo for controlling wind and water erosion along field borders and unstable slopes in higher elevations.
- Hāna Ranch Partners, which owns 4,500 acres in Hāna, is considering a trial with bamboo as a way to diversify its cattle business.

The project's educational efforts also succeeded in reaching the general public.

In addition to its Western SARE grant, "Creating a Culture of Bamboo," Ola Honua received a second grant, FW04-115, "Agroforestry and Reforestation Workshop." The open house and workshop drew 36 people, who learned of reforestation efforts, all organically derived, on Ola Honua's 175 acres. Among the practices showcased:

- On-site recycling of biomass into plantings as mulch and compost
- Use of heavy grass cover to smother guava and other invasive plants
- The addition of nitrogen-fixing trees adding fertility and organic matter



Whispering winds propagates clumping, or sympodial, varieties of bamboo.



A close look at bamboo planted at Ola Honua.

Potential Benefits:

Bamboo, says the project's final report, is a "poster child" for sustainability. Among its values are these:

- It is a perennial plant offering a sustained annual harvest.
- It eliminates the need for yearly plowing and planting, which eliminates soil erosion and protects the watershed.
- It is disease-resistant, eliminating the need for pesticides.
- It is a high-yield renewable resources with multiple uses, including as food, furniture, flooring, shelter belts, windbreaks and fence posts.
- It is the strongest and fastest growing woody plant.
- It releases 35% more oxygen than an equivalent stand of trees, helping to protect the ozone.

These trees are part of the reforestation effort at Ola Honua.

