



# Seed Basics for Farmers and Gardeners

Hawai'i Public Seed Initiative – Hua Ka Hua: Restore Our Seed  
Kauai November 6-8, 2011



# Hawai'i Public Seed Initiative

Where Have We Been and Where Are We Going?  
10,000 Years of Seed Work  
For the first 9,920 years  
Farmers/Gardeners saved seed for the next planting.

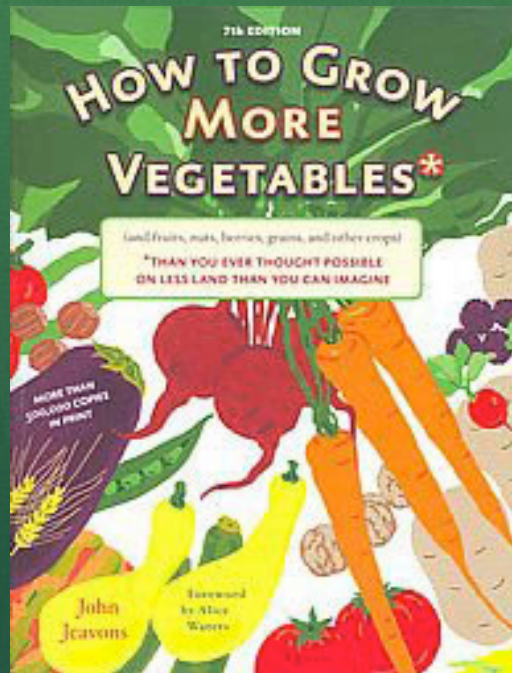


# Kawanui Farm Kona





# My Seed Story





# A Century Ago

Beet: 288 Varieties

Today 17

Cabbage: 544 Varieties

Today: 28

Sweet Corn: 307 Varieties

Today 12

Lettuce: 497 Varieties

Today 36

Pea: 408 Varieties

Today 25

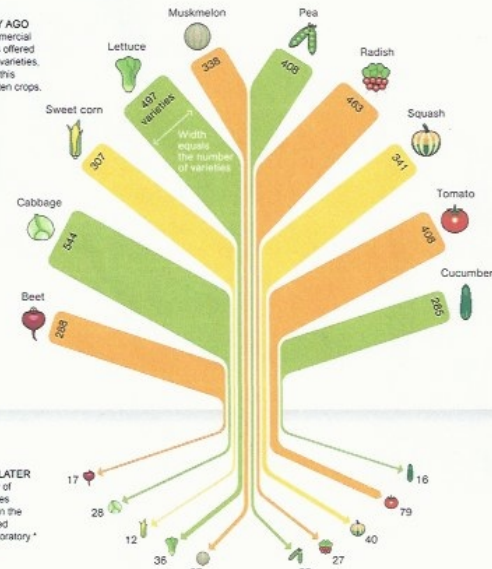
Radish: 463 Varieties

Today 27

National Geographics – 9/11

National Geographic Magazine – NGM.com

**A CENTURY AGO**  
In 1903 commercial seed houses offered hundreds of varieties, as shown in this sampling of ten crops.



**80 YEARS LATER**  
By 1983 few of those varieties were found in the National Seed Storage Laboratory\*

\* CHANGED ITS NAME IN 2001 TO THE NATIONAL CENTER FOR GENETIC RESOURCES PRESERVATION

JOHN TOMANIO, NGM STAFF FOOD ICONS, QUICKHONEY  
SOURCE: RURAL ADVANCEMENT FOUNDATION INTERNATIONAL



# Seed Savers Exchange Yearbook 2011

460 Pages

13,876 Varieties

21,711 Total Listings

Vegetables

Fruits

Grains

This is 3-5% of varieties that  
were grown in the US in 1900

Seed Savers Exchange Yearbook  
2011





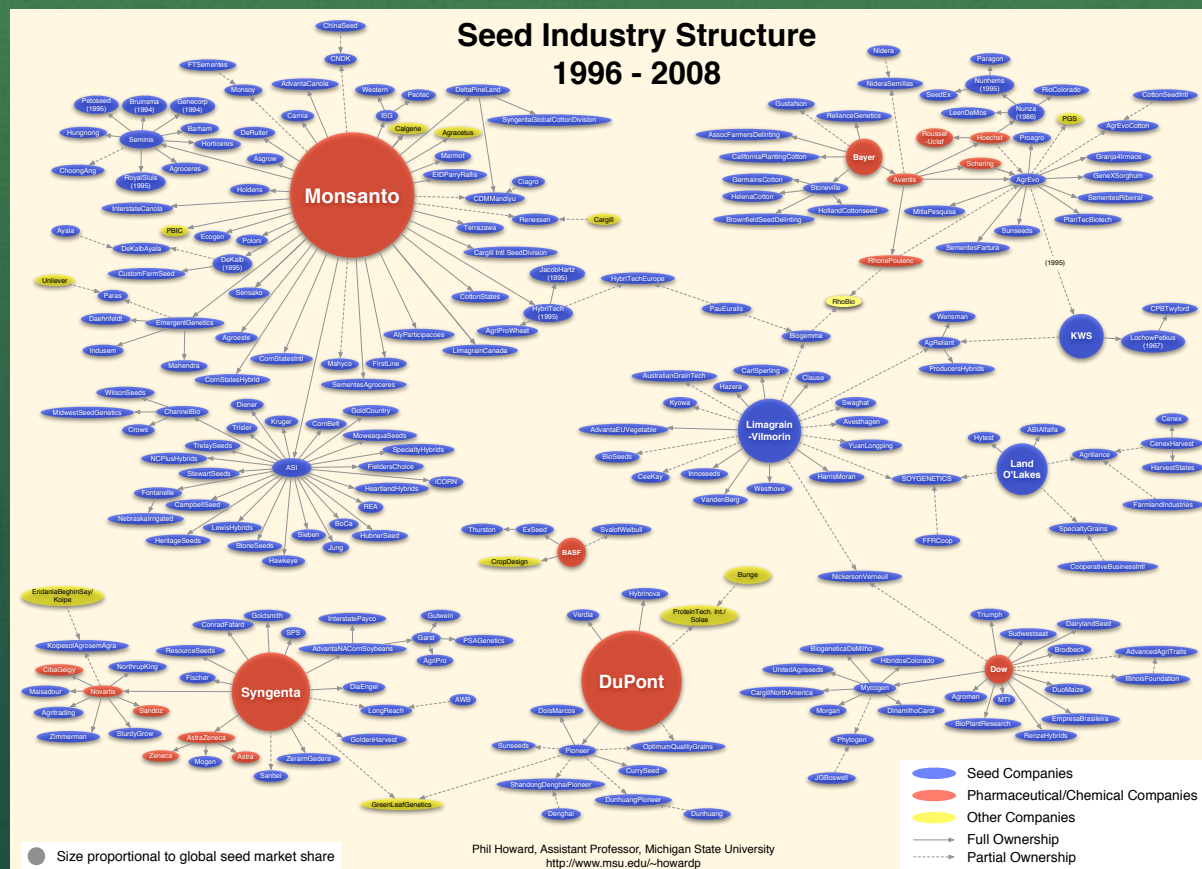


8 crops make up 75% of  
everything we eat

The world's top 20 crops account for 90% of the total caloric intake



# Consolidation of the Seed Industry





# Seed is the first- last link in the Global Food Chain

- “Seed is at the scientific center of today's and tomorrow's Food Security.” ETC Group
- IAASTD Report: 3 years, 110 governments, 400 scientists and experts, NGOs, producers and consumers. Future? Agroecology/Small Producers/Local Seed/Local Knowledge
- In Hawai'i in 1970 there were 100 seed companies. 200 on the mainland.
- Today there is one-UH Manoa



# Hawai'i Island First Seed Exchange 2003



FIRST ANNUAL HAWAII ISLAND  
SEED & PLANT EXCHANGE  
Saturday, March 1, 2003 HONOLULU, HI

Calling all  
farmers,  
gardeners, and  
plant lovers!  
Come and share  
your gardening  
successes with  
others  
Help build  
community and  
self-sufficiency

Schedule:

9-10	Set-up, network
10-11	Educational talk and demonstration "The importance of Seed Saving" by Gerry Herbert & Nancy Readfeather
11-12	Exchange & trade: seeds, cuttings, and plants
12-1	Picnic Lunch
1-2	Introduction to compost making. Make a pile together!

RSVP (ASAP) to  
Nancy Readfeather 322-2801  
or Ipo Truloran 328-2192

Also co-sponsored by: Kauai Farm Alliance & HIGLANS (Hawaii Island Gardeners League of America)





Saturday, June 13, 2009, 8:30 am–12:30 pm  
Amy B. H. Greenwell Ethnobotanical Garden, Captain Cook

**Educational presentations**  
 Stories of the Moon Goddess Hina—Hi'ilani Shibata  
 Storing Food in the Landscape—Craig Elevitch  
 The Moon and Agriculture, Exploring Connections—  
 Hawai'i's Farmers and Gardeners

7:30–8:30 Sign in and set up

8:30-9:30 Opening ceremony with Kumu Keala  
Ching and Ka Pi Hula Nāi Wai Iwi Ola. This year's  
theme is "Moon and Agriculture—Relationships &  
Connections." Please bring a fruit or vegetable from  
your garden as an offering.

9:30-12:30 Networking, Seed Exchange, Agricultural  
Organizations presenting information for gardeners,  
and Youth Program.

10:00-12:30 Educational presentations

12:30 Closing ceremony

'O ka mahina ka māla, pili iho kākou!  
'O ka māla ka mahina, pili iho kākou!  
The moon is the garden, all of us together!  
The garden is the moon, all of us together!  
—Kumu Keala Ching



Share see



Discover new food plants



Exchange knowledge

\$5 donation suggested  
Plenty of free parking available (across from Manago Hotel)  
Organic lunches by Lotus Café available for purchase 10:30–12:30

Label everything you bring to share and bring small envelopes for gathering seed. Remember, no potted plants. Camping available on Friday, June 12. Space is limited, reservations required. RSVP [lynnbell@hawaii.rr.com](mailto:lynnbell@hawaii.rr.com). For more information, call Nancy Redfeather 322-2801 or e-mail [nancyredfeather@hawaii.rr.com](mailto:nancyredfeather@hawaii.rr.com).

Sponsored by Bishop Museum's Amy B. H. Greenwell Ethnobotanical Garden,  
Know Your Farmer Alliance, Hawai'i Peoples Fund, and Hawai'i Community Foundation.  
Seeding the future of life in our farms and gardens. Creating abundance through stewardship and education.

This project is supported in part by the Native Hawaiian Culture and Arts Endowment, a Native Cultural & Historical Organizations, also known as ECHO, an initiative under the Office of Innovation and Improvement of the U.S. Department of Education. ECHO provides educational enrichment of Native and non-Native children and lifelong learners. The views and conclusions expressed in this document are those of the authors and should not be construed as representing the opinions or policies of the U.S. Government.



# Seed Symposium: 2010

## Hua ka Hua



### HUA KA HUA - Restore Our Seed

A Public Seed Symposium

April 17-18, 2010

Outrigger Keauhou Beach Resort, Kona, Hawai'i

#### Symposium sessions include:

- History of Seed Industry Development
- State of Seed in Hawai'i
- Seed Saving Basics/Reproductive Biology
- Separating the Seed from the Chaff: Seed Cleaning Basics
- Seed: A Farmer's Perspective
- Conducting On-Farm Variety Trials

- Fundamentals of Plant Variety Improvement and Breeding for Organics
- Historical Perspective and Reproduction of Hawaiian Crops
- Variety Improvement and Breeding
- Creating Island Seed Working Groups
- Visioning Future Work Together

#### Speakers include:

Matthew Dillon – Founder, OSA  
Micaela Colley – Director, Research and Education, OSA  
John Navazio, Ph.D. – Research and Education Specialist, OSA; Seed Specialist, Washington State University  
Frank Morton – Owner, Wild Garden Seed  
Hector Valenzuela, Ph.D. – Crop Extension Vegetable Specialist, UH Mānoa

Ted Radovich, Ph.D. – Sustainable Farming Systems Laboratory, UH Mānoa  
Alvin Yoshinaga – Restoration Ecologist, Center for Conservation Research and Training (CCRT), UH Mānoa  
Also Seed Researchers/Farmers/Home Producers from around the State

**Partners:** The Kohala Center, College of Tropical Agriculture and Human Resources (CTAHR), UH Mānoa; College of Agriculture, Forestry and Natural Resource Management (CAFNR), UH Hilo; Hawai'i Organic Farmers Association (HOFA); Seed Conservation Laboratory/UH Center for Conservation Research & Training (CCRT); and the Organic Seed Alliance (OSA) and their university partners.

**Sponsors:** USDA Organic Research and Education Initiative (OREI); Organic Seed Alliance; Keauhou-Kahalu'u Education Group, Kamehameha Schools; and County of Hawai'i Research & Development.

For registration and full program, visit [www.kohalacenter.org/seedsymposium/about.html](http://www.kohalacenter.org/seedsymposium/about.html) or contact The Kohala Center at 808-887-6411, or [info@kohalacenter.org](mailto:info@kohalacenter.org).  
Free Public Talk: April 16, 2010 at 5:30 p.m. See Web site for details.

THE KOHALA CENTER







# Climate Change

May 6, 2011 Kawanui Farm



“Farmers’ lack of access to seeds that are locally adapted to their region’s soils and climates is a major concern. The problem is particularly problematic for organic farmers, who have very few seed choices to meet their needs. Historically, the federal government has funded “classical breeding” in all regions to assure public availability of locally adapted seeds. USDA has largely abandoned this funding. The last Farm Bill required USDA to make classical breeding a priority for agricultural research, but the agency has not complied with that mandate. The new Farm Bill should explicitly designate ten percent of the Agriculture and Food Research Initiative (AFRI) for classical breeding to address this problem.”

Christine Bushway CEO  
Organic Trade Association  
October 11, 2011



# Seed Dreams for Hawai'i





# Rising and Setting

