



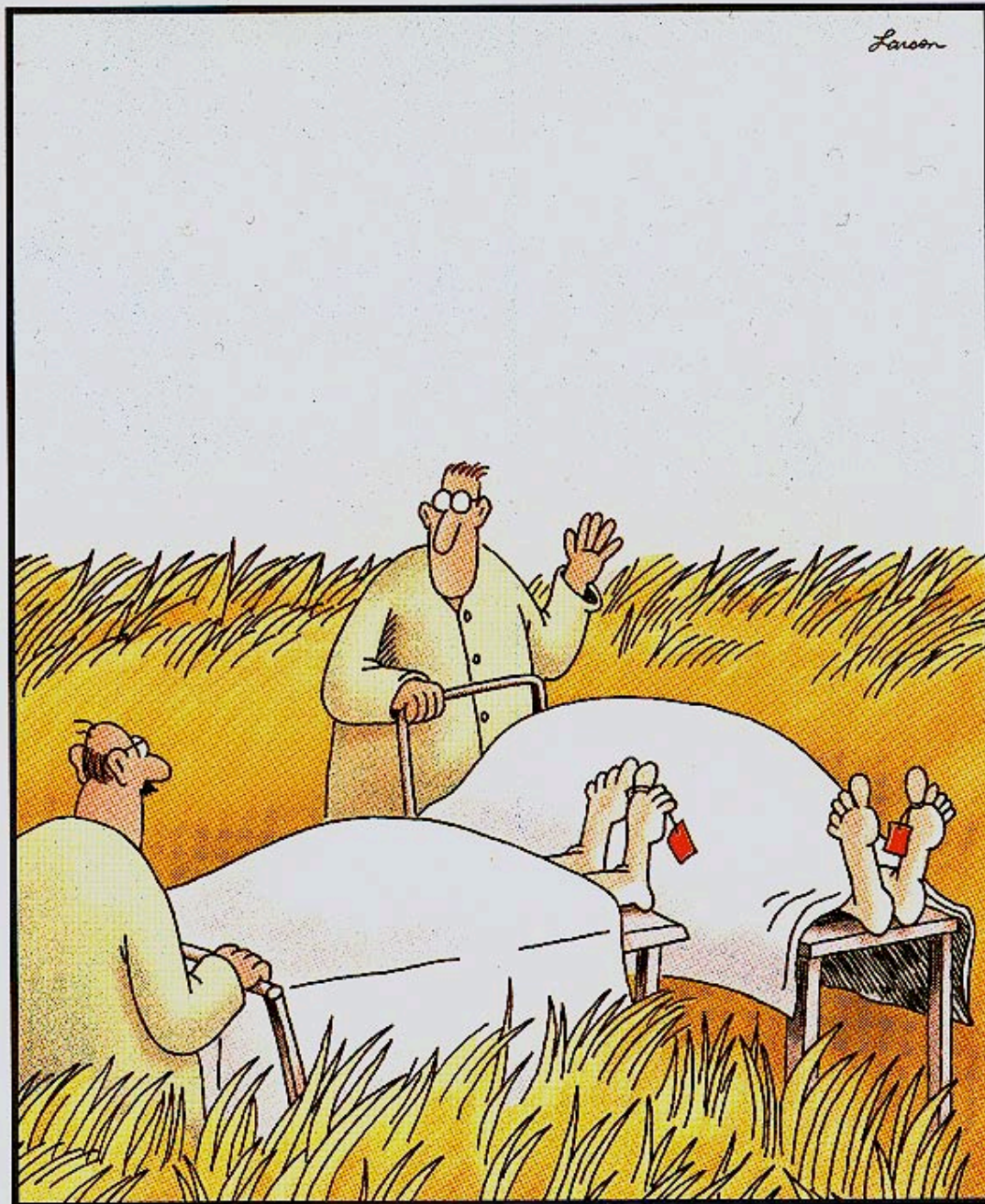
# Crop Plant of the Week for Teaching Basic Crop Science

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# The Course

- AGRN 1000 (Basic Crop Science)
- 4 Semester Credits, with laboratory
- Required of all majors and minors in Agronomy & Soils
- Popular Elective in many majors
- Approximate enrollment – 80 students/year





When a body meets a body comin' through the rye

# The Concept

- Making the connection between **CROPS** and **FOOD**
- Exposing the student to new ways of preparing familiar old crops
- Exposing the student to old crops that are not familiar
- Emphasizing biodiversity

# Crop Plant of the Week - Objectives

- Give students information about specific crops
- Show the raw form of the crop product
- Prepare the product for sampling by the class
- Explain “unusual” processing methods for some crops, such as the malting of barley

# Information handout

- Information on history, origin, scientific name, and sources of additional information is included.

## Crop Plant of the week: Quinoa

Scientific name: *Chenopodium quinoa* (same genus as lambsquarters, the goosefoot family)

Area of origin: Andes mountains, S. America

Since at least 3000 B.C., if not longer, the seed of the plant *Chenopodium quinoa* has been a vital part of the Andean diet, used as a grain in baking, as well as being served in numerous dishes prepared by Aymara, Quechua and other indigenous peoples found throughout the Andean region. It has found a recent resurgence in these areas, as well as in the health-food industry of developed countries.

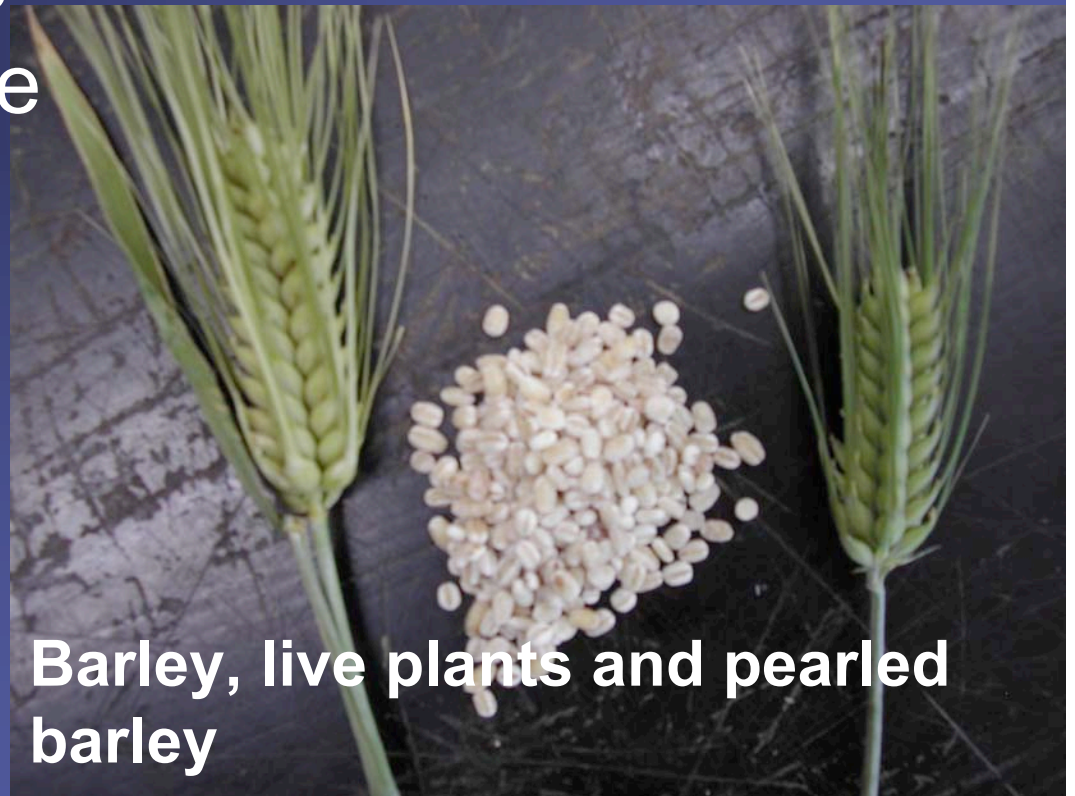
Following a visit to Colombia, the great Latin American geographer Alexander von Humboldt wrote that quinoa was to ancient Andean societies what "wine was to the Greeks, wheat to the Romans, cotton to the Arabs."

With a growing concern regarding the loss of the world's genetic diversity, quinoa has found a renewed interest among scientists who believe its landraces (local crop varieties) could be useful in providing genetic source material for plant breeding. While there are over 80,000 edible species of plants grown around the world, only 150 are presently cultivated for commercial purposes. Dependence on so few species creates a danger to food production, should these species become threatened.

More info: <http://www.planeta.com/planeta/99/1199quinoa.html>

# The raw form of the crop

- Many students are not familiar with the raw forms of even the most familiar crop plant foods, such as barley, wheat, oat, corn, and soybean



**Barley, live plants and pearled barley**

# The food product is prepared

- Many of the crop plant foods can be prepared right in the laboratory
- All that is needed is a burner, gas supply and large pot for boiling water
- Others can be prepared ahead of time at home





# Some featured crops and their method of serving

- Oat – Oatmeal cookies
- Millet – Flatbread
- Corn – Hominy or Popcorn
- Soybean – Edamame
- Grain Amaranth - Porridge
- Quinoa – Porridge
- Peanut – Boiled or Roasted
- Cocoa – M&M's
- Wheat – Bread
- Rice – Aromatic rice
- Barley - Porridge

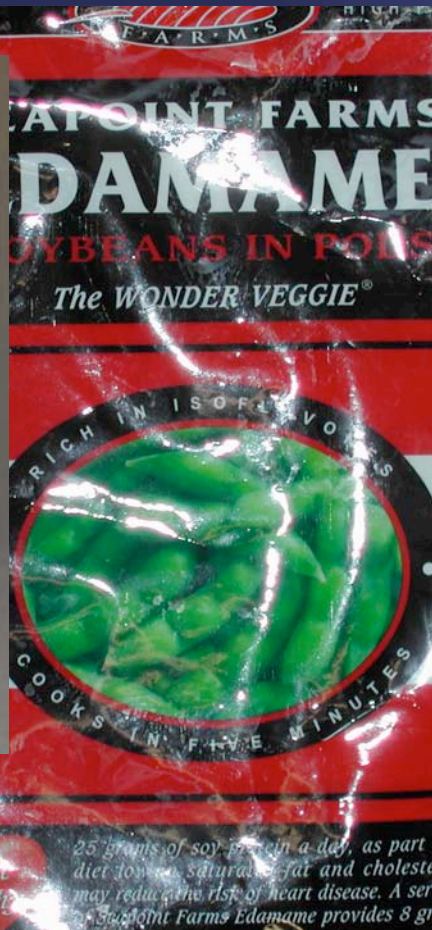
# Some crops that are featured

Corn as  
Hominy

Soybean  
as  
Edamame

Millet flour

Grain  
Amaranth



# Millet grains and flatbread



# Some observations

- Good way to begin the laboratory period
- Taste of many of these products may be enhanced by the addition of margarine and/or salt
- All items can be found at local grocery or health food stores
- Students learn new things
- Not all students are receptive

Mostly, CPOTW is met with enthusiasm

