

# Implementation of Agroecology Summer Institutes for Secondary Teachers in South Texas

Tim Sears, Assistant Professor in Practice



# The Rio Grande Valley of South Texas



- one of the highest obesity and diabetes rates in the country
- ranks last in the percentage of the state population that eats vegetables regularly; one the agriculturally richest areas in TX
- invasive species and recent urban development threaten the sustainability of local agricultural efforts

# Three-Year Grant-Funded CENA Program (2014-2016)

- Curriculum Development, Experiential Learning, Networking, and Agroecology for a diverse clientele in South Texas (CENA) program
- A project of UTRGV's Agroecology and Resilient Food Systems Program
  - College of Sciences: School of Earth, Environmental, and Marine Sciences
- Grant funds awarded from the USDA's National Institute of Food and Agriculture were used to increase teachers' awareness of agroecology concepts and research, one component of the university's program
- Dr. Alex Racelis, Agroecology Program Director
  - Poster Presentation today from 2:05-3:10 pm (number 274)
  - Oral Presentation tomorrow at 11:10 am (number 272)

# Summer Institute Goals

1. Mechanism to improve agricultural education in South Texas
2. Create a high school-college-career pipeline for Hispanic students in the agroecological and food related sciences
3. Increase future participation in our Hispanic-Serving Institution's research internships and undergraduate and graduate environmental sciences programs



# Summer Agroecology Institute Applicants & Participants

Summer Institute	Summer 2014	Summer 2015
<b># Applicants</b>	<b>33</b>	<b>103</b>
-Elementary	7	0
-Middle School	23	43
-High School	3	60
<b># School Districts</b>	<b>10</b>	<b>25</b>
-# of Schools	19	66
<b>Participants</b>	<b>20</b>	<b>20</b>
-# of Districts	7	15
-# of Campuses	14	21

# Activities on Four Fridays in June

- Morning session: field trips to local USDA and university agricultural research facilities
  - UTRGV university research garden, community garden, and greenhouse
  - Texas A&M AgriLife Extension Service (Weslaco, TX)
  - USDA APHIS CPHST (Mission, TX lab) - fruit fly production, current research on citrus pests, and cattle tick fever research
  - Terra Preta organic farm and Rio Farm (Edinburg, TX)
  - Plantation Produce Packing Plant (Mission, TX)
- Afternoon session: hands-on activities related to plant science, local crops and organic farming
- Teacher participants reported that they incorporated the local issues and concepts into their schools' secondary science curriculum
- Third institute is planned for July 2016



















Mexican Fruit Fly  
Rearing Facility













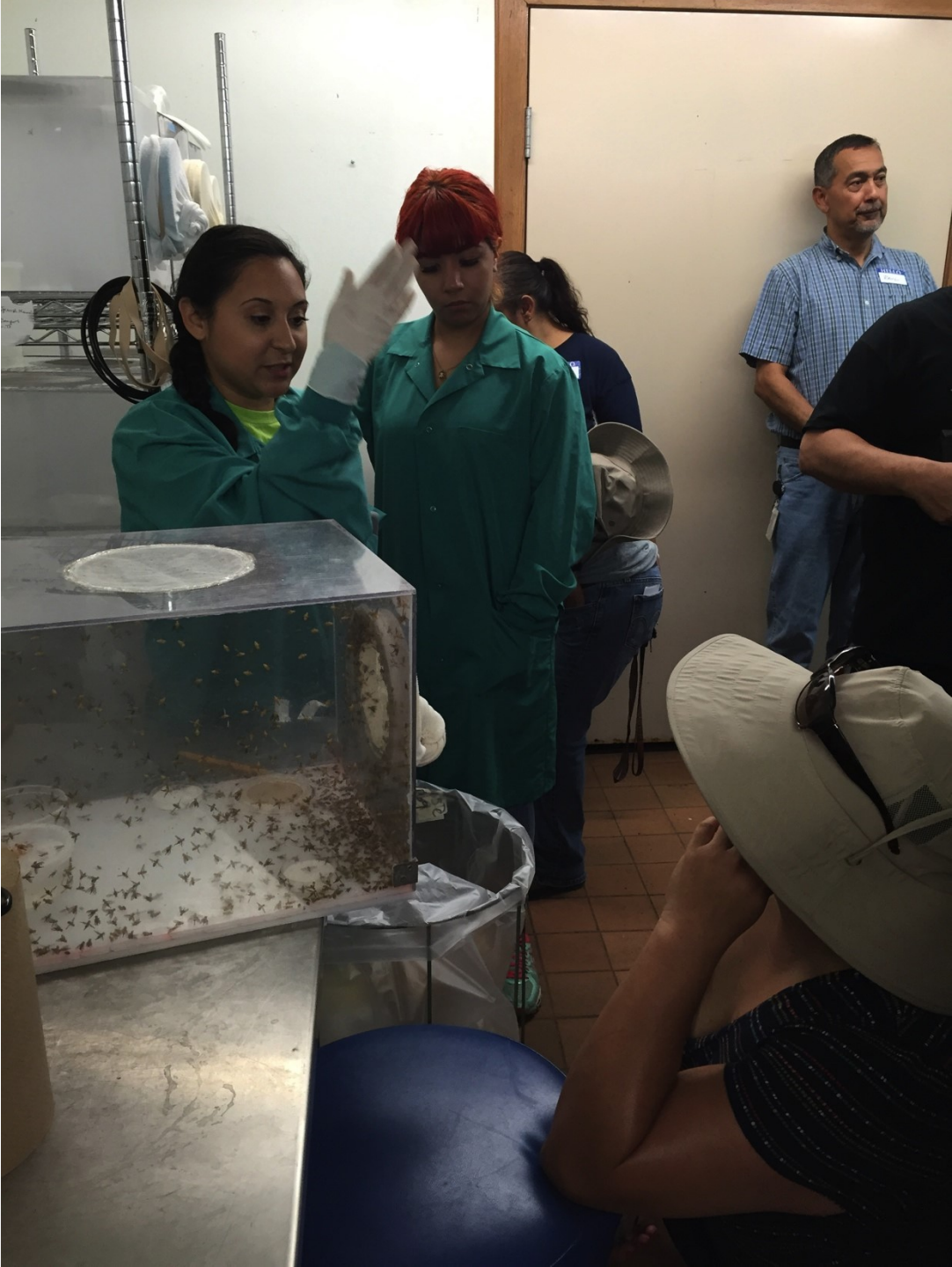
THE SCIENCE TEACHER



I SOLVE PROBLEMS  
BY ASKING THE RIGHT  
QUESTIONS

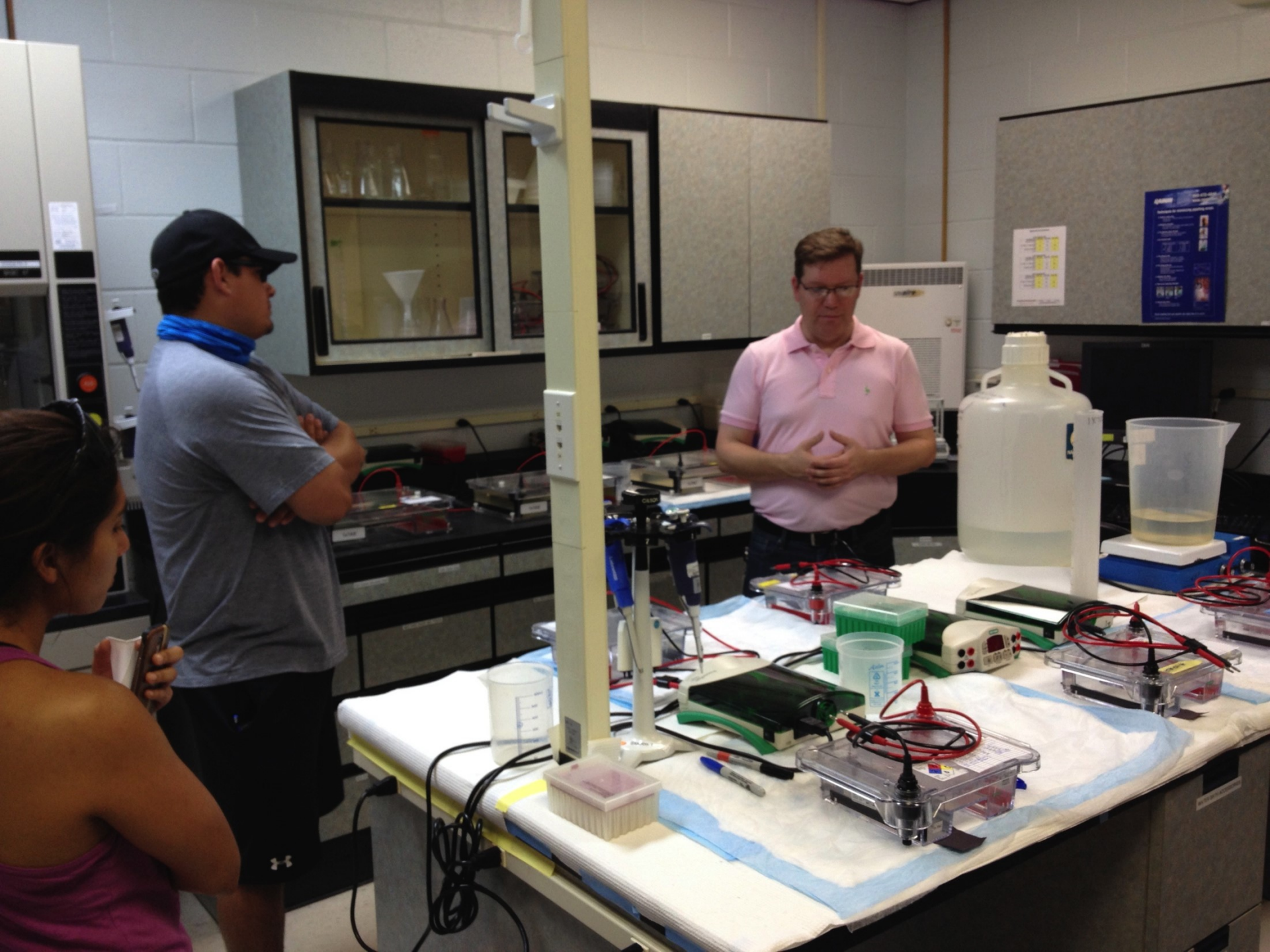
Total 3 Gallon Plants  
200  
Total 1 Gallon Plants





































# Title



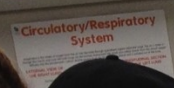








Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm



Arundo donax  
Great Reed







...BE  
...OYICRA  
...NDREY  
...HILGOLJUS  
...FRUIT-FLAVOR  
...CARE-STYLE OVER  
...SEED(S)  
...LEST  
...STIGMA  
PLUS ANY OTHERS YOU CAN THINK OF!





# Mimosa Strigillosa

Dicot

Common Names: Sensitive Plant, touch-me-not, shame plant

FLOWER  
Reproduction



LEAF

LEAF

STEM

ROOT

ROOT

# Contact Information

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