INTENSIVE, HANDS-ON TRAINING

DATES
- Module 1 - Phenotyping: Field design and analysis
  May 18-22 2015
- Module 2 - Marker Assisted Selection
  June 1-5 2015
- Module 3 - Genome Wide Selection
  June 15-19 2015

TRANSPORTATION AND ACCOMMODATION
The OARDC Campus in Wooster, Ohio is accessible from Cleveland Hopkins International Airport (CLE) and the Akron-Canton Airport (CAK). Participants will want to consider renting a car in order to enjoy local amenities and tourist attractions.

Several hotels serve the Wooster and OARDC Campus area. Dorm-style housing may be arranged through the Appelwood Village Apartments operated by OSU’s Office of Student Life, Conference Services
http://conferenceservices.osu.edu/
(see conference request forms link).

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Plant Breeding Summer Workshops 2015

INSTRUCTORS:
Dr. David Francis, The Ohio State University
Dr. Clay Sneller, The Ohio State University

Plant Breeding Summer Workshops
Intensive training in theory, practical application and hands-on data analysis covering:
- Phenotyping: Field design and analysis
- Marker Assisted Selection
- Genome Wide Analysis

Horticulture and Crop Sciences
The Ohio State University,
OARDC
1680 Madison Ave
Wooster, Ohio 44691
Phone (330) 263-3893
e-mail: francis.77@osu.edu
http://www.oardc.ohio-state.edu/tomato/

PUTTING RESEARCH INTO PRACTICE
MODULE 1: PHENOTYPING: FIELD DESIGN & ANALYSIS

- Introduction to R Statistical Software
- Linear models of phenotype, heritability, & gain under selection
- Randomized Complete Block Designs
- Augmented and lattice designs for trials with many entries
- Best Linear Unbiased Predictors (BLUPs)
- Partitioning Variation and estimating heritability
- Genotype by environment interactions
- Selection indices

SCHEDULE:
Monday 1:30 – 4:30 Introduction
Tuesday 8:30 – 12:00 AM lectures, 1:30 - 4:30 PM computer
Wednesday 8:30 – 12:00 AM lectures, 1:30 - 4:30 PM computer
Thursday 8:30 – 12:00 AM lectures, 1:30 - 4:30 PM computer
Friday 8:30 -12:00 AM wrap up

MODULE 2: MARKER ASSISTED SELECTION (MAS)

- Introduction to R for marker-trait analysis
- Molecular marker platforms and scoring
- Basic marker-trait models
- Populations for breeding and mapping
- Linkage analysis and Linkage disequilibrium (LD)
- Genetic Variation in Populations
- Selecting for Recombination
- Background Genome Selection
- Population sizes required for selection

PAYMENT:
Each Module is open to registration from practicing plant breeders, allied professionals and students. Registration is $450 for students and $850 for others (includes lunch Tue – Thurs.). Contact Dr. Francis or Dr. Sneller for registration information.

Course registration for graduate students at The Ohio State University is under HCS8825W. Registration is limited to 20.

Horticulture and Crop Sciences
1680 Madison Ave
Wooster, Ohio 44691
Phone (330) 263-3893
e-mail: sneller.5@osu.edu
e-mail: francis.77@osu.edu
http://www.oardc.ohio-state.edu/tomato/