

# Education Update

Amanda Peters Haugrud

Katherine Running

# 2022 Activities

- Slack work page created, used for communication between the 3 current writing groups
- 7 monthly meetings
  - Using T3/Breedbase
  - Private industry panel
  - Equity in Plant Breeding discussion
- PAG workshop
  - Student introductions, updates, and a presentation on the wheat Practical Haplotype Graph

# Annual Survey Results

- 21 students responded by the due date
- Results at: <https://www.triticeaecap.org/2022-graduate-student-survey/>
- Some things brought up:
  - How to design experiments based on budgets and how to manage a program and people (business side)
  - Bringing in more speakers to meet with students
  - Student confidence in different breeding methods and selection theory was lower than expected

# How can PIs help train their students

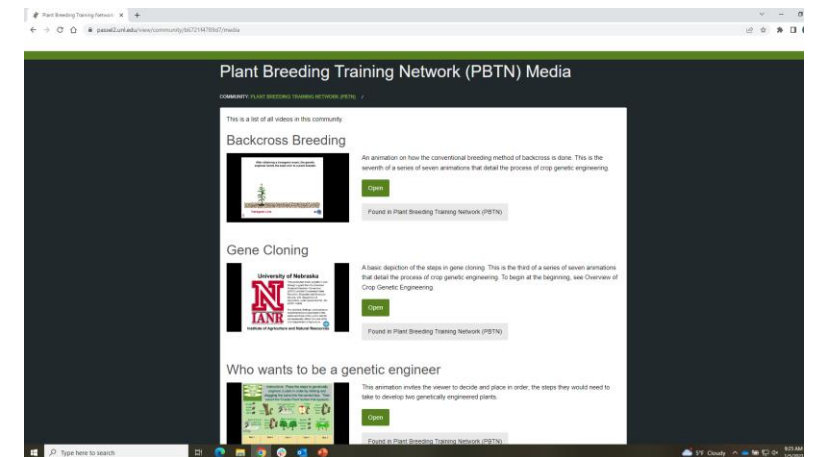
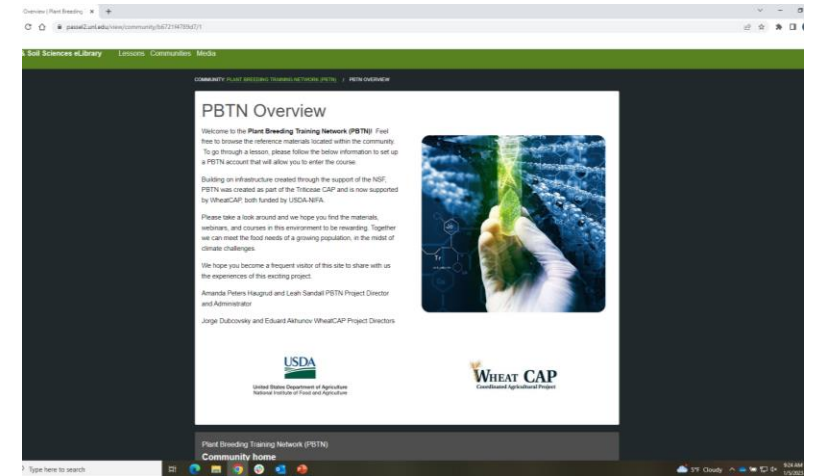
Obj/tool	Tasks and milestone	Y1	Y2	Y3	Y4	Y5
BreedBase	Use the information in BreedBase for experimental design (e.g. field randomization and design of crossing blocks).					
BreedBase	Learn how to input and extract data from T3.					
BreedBase	Generate reports and make critical breeding decisions based on the data.					
UAS-HTP	Field data collection-learn how to operate and use a drone for collecting phenotypic information.					
UAS-HTP	Data analysis and interpretation-how to evaluate data collected using a drone.					
UAS-HTP	Interpret phenotypic data and learn how to decide which lines to advance and which to discard.					
GS	Learn how to set up and perform a GS experiment.					
GS	Collect samples, submit for genotyping, and analyze data to prepare for GS.					
GS	Learn how to generate GS models and implement them in a breeding program.					
General	Assist in planting and harvesting.					
General	Generate crosses for breeding program.					
General	Learn how to make selections from breeder.					
Education	Monthly meetings, some with guest speakers from other crops/diverse backgrounds.					
Education	Participation in scientific meetings.					
Education	Student's plan/organize a student symposium.					
Education	Bi-weekly writing groups available for students.					
Education	Resources in Wheat Genomics.					
Education	Utilization of T3 database.					
Education	UAS-HTP workshop.					
Education	Genomic Selection.					
Education	Quant-Seq and functional genomics resources.					
Education	Genomics and bioinformatic resources for wheat in the UK.					
Education	Soft-skills / science communication.					
Education	Wheat genomics and germplasm resources at CIMMYT.					
Education	Industry networking/internship.					
Education	Data analysis and scientific writing.					

# Mentors

- Students expressed interest in having mentors in industry/academia that are not part of the current WheatCAP
- Do PIs have contact info for your previous students who may be interested in mentoring current students?
  - If so, please send that info to [Katherine.Running@ndsu.edu](mailto:Katherine.Running@ndsu.edu)

# Plant Breeding Training Network

- Curator is Leah Sandall at the University of Nebraska-Lincoln
- Many of the current videos are old or outdated
- Does anyone have a lecture recording they would like to submit?
- Would you like to give a lecture to students on a newer technique or topic that could be added?



# Some parting words

- Katherine Running will be taking over this position from now on
  - Update her with anything you want on the twitter page!
- Please update her whenever you have a change in student personal with:
  - Old students' graduation date and future plans
  - New students start date, degree pursuing, contact information
- There is only so much an educational coordinator can do when not physically meeting with students. Please check that your students are attending WheatCAP education events, participating, and utilizing this part of the grant.

# 2023

- Continue writing groups and monthly meetings
- Set up mentorship program
- Workshops
  - T3-Breedbase: online (February 6<sup>th</sup>-9<sup>th</sup>)
    - Students need their field plot layouts for 2023
  - UAS-HTP: Amarillo, Texas (May 23<sup>rd</sup>-25<sup>th</sup>)
    - Need numbers of students attending, will send out an email after PAG
  - Genomic Selection : TBD (August)
    - Online? In person in Fargo?