

Education

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If you haven't, please send me:

- Are you carrying over any students from the previous grant? If so, I would like their name, degree pursuing, and anticipated graduation date (or semester). If any students recently graduated, please update me on this information and what they are currently doing for employment or further education.
- If you have your student for this current CAP onboard, please send me their name, degree pursuing, when they started, and their contact information.
- If you do not have a student onboard, please let me know if you have a rough estimate of when you plan on having a student start. We would like this information for planning future activities.
- Lastly, if you have any students or previous students that you would like included on the email list for jobs and resources that I will pass along, please let me know and their contact information.
- **Amanda.peters@usda.gov**

Current happenings

- Writing group occurring ~every 2 weeks
 - Slack channel set up for this
 - Will email students as they start with the information if they want to join
- Monthly meetings on hold
 - Will start these up again in January/February for new and old students to connect
 - May be every other month throughout the spring/summer

First Year activities

- Most groups indicated that plan on having a student start by Summer 2022
- Will start monthly meetings in September
 - Zoom
 - Will send out a poll to schedule time for each month
 - Include updates, graduate school/research tips & advice, good place to discuss research, guest speakers, soft skills, science communication
- Resources in Wheat Genomics workshop
 - January 2023?
 - Hosted/coordinated by UC-Davis

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.					

Outreach

- WheatCAP website
 - Student bios, links, etc
- Twitter
 - Student bios
 - Graduation
 - Publications
 - Maybe have each group take over the twitter for a couple of days during their field season



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FORUM

- Ten basic advices for positional cloning
- Spectral Canopy Reflectance



Educational activities

Meet our students

As in the previous collaborative projects, one of our main goals is to contribute to the formation of the next generation of breeders. Here you can meet the WheatCAP graduate students and postdocs and learn about their lines of research.



Annual Graduate Student Survey

See the results of the 2021 Annual Graduate Student Survey [here](#).

You can also see the summaries of the 2020, 2019, 2018, and 2017 surveys.

The Plant Breeding Training Network

The Plant Breeding Training Network (PBTN) is a platform for sharing breeding related educational materials (videos, webinars, on-line courses). PBTN was built on infrastructure funded by NSF and it was created as part of our previous collaborative project, TriticeaeCAP. Now we continue supporting it through WheatCAP.

Introduction to the Practical Haplotype Graph (PHG) Workshop (2019)

On July 9 we had a workshop at Cornell University on building and using Practical Haplotype Graphs (PHG). This is a computational technique to infer the haplotype of progeny lines sequenced at low coverage from the haplotype of a few parents sequenced at high coverage. Below you can download two of the workshop presentations

- [What is the PHG?](#)
- [Populating the PHG database.](#)



2018 RNA-Seq Workshop Lectures



We organized a workshop about wheat transcriptomics that covered different subjects such as RNA-Seq library construction protocols, using bioinformatics pipelines and network analysis of RNA-Seq data. We are making publicly available the recordings of the lectures, slides and protocols [here](#).

The T3 Database Online Course

Also in 2018 we designed an on-line training activity to teach how to work with the wheat module of the [Triticeae Toolbox](#) (T3). The T3/wheat is a rich repository for public wheat data maintained by the WheatCAP. The on-line course includes video

Questions/Discussion?