**W-4008 Meeting: March 5th, 2024**

* Start Time: 8:33 am
* Frank Hay, Chair: Overview of annual report including objectives, impacts, and outputs
* Introduction of meeting participants: Lindsey du Toit (WSU), Ram Nupane (Penn State), Gina Shin (UGA), Teresa Coutinho (University of Pretoria), Adri Grobler (University of Pretoria), Tim Waters (WSU), Mike Derie (WSU), Scott Hendricks (Seminis), Sahil Thapa (WSU), Gabe LaHue (WSU), Juan Carlos Brevis (BASF – Nunhems), Peter Rogers (BASF – Nunhems), James Woodhall (University of Idaho), Jaspreet Singhu (UC Cooperative Extension), Brenna Aegerter (UC Cooperative Extension), Christy Hoepting (Cornell Extension), Subas Malla (Texas A&M), Mark Uchanski (Colorado State), Joe DiSalvo (DiSalvo Farms), Claudia Nischwitz (Utah State University), Jo Ann Asselin (USDA – ARS), Emmanuel Byamukama (USDA NIFA National Program Leader), Bhabesh Dutta (UGA), Jake Fountain (UGA), Jeremiah Dung (Oregon State University), Erik Hansen (Bioworks), Paul Stodghill (USDA – ARS), Chris Hayes (Bioworks)
* USDA NIFA Update (Emmanuel Byamukama):
	+ New NIFA Director as of 2023
	+ Plant Protection Division has 3 plant pathologists, 3 entomologists, and 1 weed scientist as National Program Leaders
	+ USDA NIFA has six strategic goals that should align with any submitted grant proposals
		- Linked with broader USDA strategic goals
	+ Summary of AFRI Foundational and Applied Science (FAS) deadlines relevant to W-4008
		- Other relevant USDA NIFA grant programs
		- Include education and workforce development grants (fellowships, REEU, etc.)
		- Non-AFRI programs: SCRI, OREI, Biotechnology Risk Assessment Research Grants
		- Applied Research and Development Program Area
		- USDA NIFA Equipment Grant Program (up to $500,000), not a lot of proposals
	+ NIFA Application Status Dashboard
* California update, Brenna Aegerter (8:57 am – 9:06 am):
	+ Members: Rob Wilson, Tom Turini, Brenna Aegerter, Jaspreet Sidhu, Cassandra Swett, Alex Putnam, Jairo Diaz
	+ Stop the Rot project on bacterial diseases (Rob Wilson, Brenna Aegerter, Jaspreet Sidhu)
	+ New project on Fusarium basal rot including a national planning grant (Cassandra Swett)
	+ Downy mildew project with funding from the California Onion Board (Alex Putnam)
	+ Onion maggot seed treatments (Rob Wilson)
	+ Continuing work on evaluating existing products for weed control (Rob Wilson)
* Colorado update, Mark Uchanski: (9:06 am – 9:23 am)
	+ Members: Mark Uchanski, Griffin Carpenter, Eduardo Gutierrez-Rodriguez
	+ Project on human pathogens in dry bulb onions (two major outbreaks linked to contamination with *Salmonella*) – no single entry point for contamination
	+ Onion antimicrobial compounds had no effect on *Salmonella* populations
	+ Irrigation water remains a significant contamination source and if a contamination event occurs, it can persist for the entire cropping cycle
	+ Populations reduced during storage conditions and during winter conditions
	+ Questions and comments: Similar work going on in Georgia, Oregon, and Texas
* Idaho update, James Woodhall: (9:24 am – 9:37 am)
	+ Members: Brenda Schroeder, Mike Thorton, James Woodhall
	+ Curing studies, growth differences in center rows, long-term storage evaluation, heat mitigation strategies, Stemphylium leaf blight monitoring, Stop the Rot
	+ New lab facility opened in Parma this year
	+ Diagnostics: 72 onion and garlic samples, onion yellow dwarf, black mold, Stemphylium
* Georgia update, Bhabesh Dutta and Jake Fountain: (9:38 am – 9:49 am)
	+ Botrytis leaf blight was widespread and moderately severe in 2023
		- Most fungicides were efficacious except for Scala
	+ Stemphylium leaf blight was very hard to control in Spring 2023 (hypothesized that stressed plants were more vulnerable due to frost injury)
	+ Downy mildew was moderate in 2023
	+ Diagnostics: 72 onion and garlic samples, onion yellow dwarf, black mold, Stemphylium
	+ Looking at *Aspergillus niger* fungicide sensitivity, genetic diversity, and mycotoxins (Jake)
	+ Dr. Coolong using 15N to determine N use efficiency related to N application timing
	+ Dr. Sparks is screening new insecticides for efficacy against thrips
	+ New hire of precision agriculture extension specialist (Dr. de Oliveira)
		- Transplanting, mechanical harvest, etc.
* Michigan: No participants present
* New Mexico: No participants present
* New York, Christy Hoepting: (9:50 am – 10:39 am)
	+ Members: Frank Hay, Sarah Pethybridge, Christy Hoepting, Ethan Grundberg, Brian Nault
	+ Dry spring, low onion maggot pressure, weed escapes due to absence of sufficient rainfall to activate the pre-emergent herbicides, injury from post-emergent herbicides
	+ Normal thrips pressure
	+ Unknown necrotic spots: Suggestion of powdery mildew from Peter Rogers and Lindsey du Toit, also the possibility of Stemphylium leaf spot partially controlled by fungicides
		- Suggestion to use Next-Generation Sequencing to identify
	+ Moderate Stemphylium leaf blight and very low downy mildew pressure
	+ High variability in bacterial back rot
	+ Onions that “died standing up” were rolled based on Stop the Rot recommendations
	+ Timely rains led to good size, good yields, and excellent prices
	+ Onion variety trial looking at thrips control and relationship with bulb rot
	+ Dr. Nault looking at the prevalence onion maggot vs. seed corn maggot (CA and WA dominated by seed corn maggot, OR, NY, and Canada dominated by onion maggot)
		- Evaluating the efficacy of insecticide treatments
	+ Efficacy of insecticides for thrips control and reducing iris yellow-spot virus
		- Early application of an insecticide with activity on adults is promising
	+ Stemphylium leaf blight: resistance to FRAC 3 products, combinations working better
		- Concern that it’s only a matter of time before losing product efficacy
		- Discussion on need for crop rotation, growers trying to rotate (e.g., onions with soybeans) and it helps to control maggots but still having disease issues
		- Discussion on characteristics of Stemphylium resistance development, how resistance developed so quickly, and the ability to grow as a necrotroph on many different hosts, which may expose it to more fungicide pressure
	+ Using mid- to late-season applications of pre-emergent herbicides for extended weed control through harvest, these applications seem to be safe and promising
* Break (10:40 am – 11:02 am)
* Texas, Subas Mallas: (11:03 am – 11:19 am)
	+ Germplasm screening for pink root resistance
	+ Thrips management trial with different onion varieties
		- Question about potential observation of predatory thrips
		- Question about counting thrips per leaf vs. assessing damage on leaves (not doing the assessments of damage due to bandwidth and labor)
	+ Award from SCRI for mechanized harvest in sweet short-day onions (CA, GA, NM, TX)
		- Using an impact sensor to see the impact forces during harvesting
* Oregon, Jeremiah Dung: (11:20 am – 11:32 am)
	+ Thrips management and fungicide treatment impacts on IYSV incidence (Stuart Reitz)
		- Insecticides reduced IYSV severity (no effect of fungicides)
		- Insecticides also reduced the Stemphylium severity
	+ Work on encapsulated sclerotia germination stimulants for white rot management
		- Encapsulated garlic oil works comparably to DADS
		- Encapsulation helps with storage and application
		- Next step: USDA NIFA Crop Protection and Management proposal
		- Would need several applications over several years to get a field back into production given how low the threshold is for economic damage
* Utah, Claudia Nischwitz: (11:32 am – 11:34 am)
	+ Unusually large snowpack so many fields didn’t get planted and production is down
	+ Having issues with grower attendance at meetings
* Washington, Tim Waters: (11:34 am – 12:03 am)
	+ Yellow nutsedge and weed control overall is one of the biggest challenges in onions
	+ Malformation of onion leaves seen in a field without herbicide application (organic)
		- Attributed to cold weather followed by a spike in temperature, so the newly emerging leaf grows faster than the older leaf and gets trapped
	+ No issues with smoke compared to previous years
	+ Crop did not have great curing conditions in many fields
	+ Variety trials from 2022 and 2023 with 52 and 53 varieties, respectively
	+ Standard efficacy trials for thrips management (resistance to Lannate)
		- Plinazolin has good efficacy for thrips and seed corn maggot but not yet labeled for onions (should be labeled the following year)
	+ Good attendance at the WSU Onion Field Day
	+ Questions about yellow nutsedge control: Halosulfuron works well, Eptam surpresses
		- Recommend going to two years of corn in rotation (forms a canopy)
	+ Potential trials on laser-weeding but takes a long time to go through the field
		- Multiple farms have purchased laser weeders and are using them
		- Looking at trying to speed up the machines by training them to focus on only the most problematic weeds that can’t be controlled with herbicides
* Comment about the APS Compendium being out of date (from 2008) from James Woodhall
	+ Lindsey has all the files from Howard Schwartz previous editor
	+ APS can makes sections digitally available before the entire compendium is available
* Nominations for the next secretary of W-4008: (12:03 pm – 12:07 pm)
	+ James Woodhall has agreed to be secretary for the following year
	+ Seconded by Peter Rogers, Christy Hoepting, and Lindsey du Toit
* Location and venue for the next W-4008 meeting (12:07 pm – 12:16 pm)
	+ National Onion Association meeting in Savannah, GA in December 8th, 2024
	+ California Garlic and Onion Meeting and Tulare Farm Show, Tulare, CA on February 10th (W-4008 would be held the day after on Tuesday, February 11th)
	+ Frank will follow up with Emannuel about whether the meeting could happen with National Onion Association and NARC in December 2025
* Adjourn: 12:16 pm