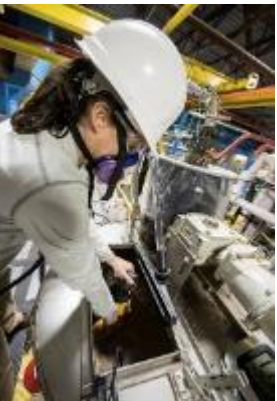


Barriers to Scale: Algae Crop Protection Workshop

Daniel Fishman, Technology Manager

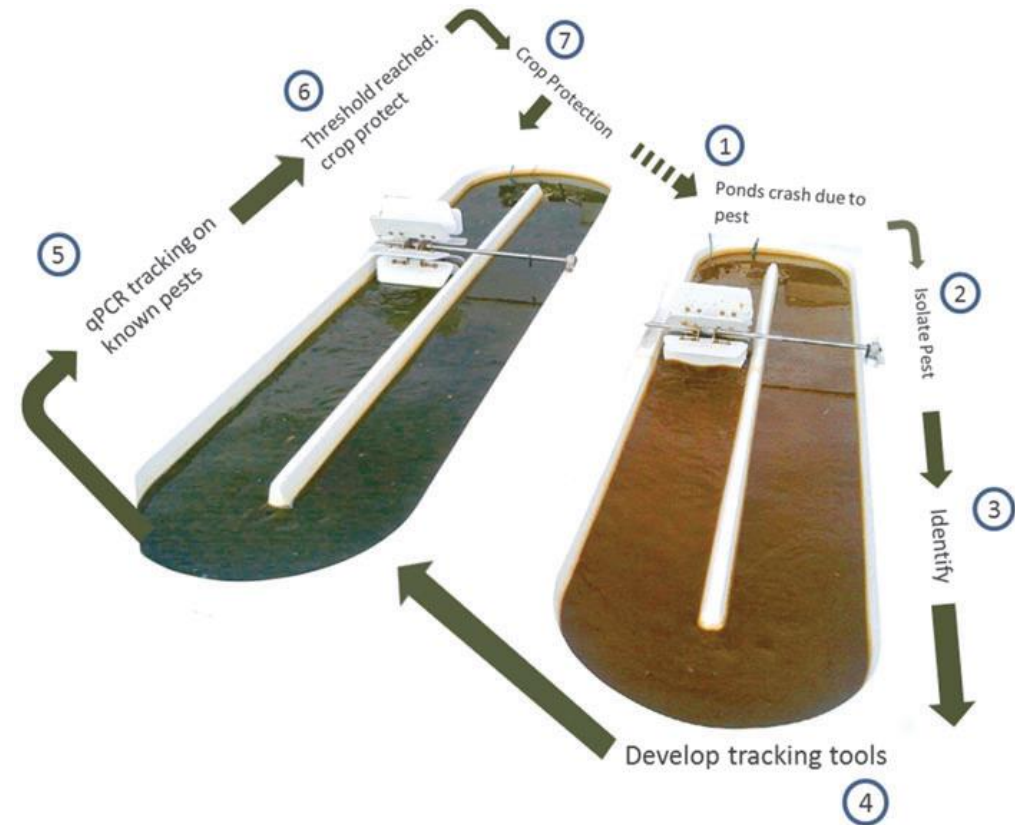
April 20, 2021



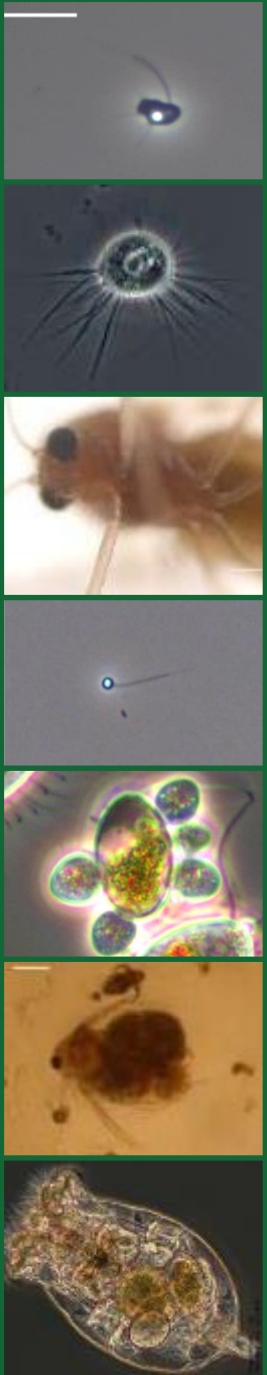
Welcome to the “Barriers to Scale: Algae Crop Protection Workshop”!

Algae Crop Protection

- Just like traditional agriculture, algae farming is prone to pest damage
- Pests compete with, consume, or otherwise have a detrimental effect on productivity or biomass quality
- “Crop Protection” research seeks to understand these problems and develop solutions
- Under-populated area of research
- Essential to scaling the industry
- Traditional focus on chemicals may not be viable long term

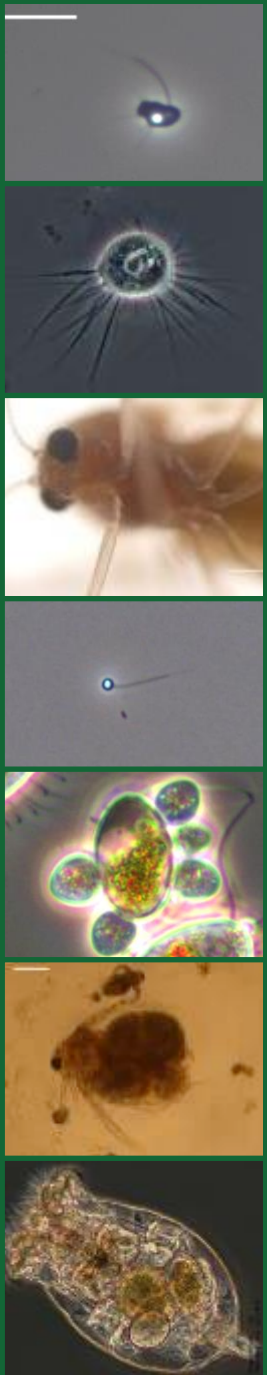


McBride et al., *Ind Biotechnol* 2014;10:221–7



Workshop Goals:

- Identify the gaps in current knowledge, research, and technical capabilities
- Foster collaboration between basic, applied, and commercial researchers
- Identify regulatory hurdles to crop protection at scale
- Identify strategies to overcome technical barriers

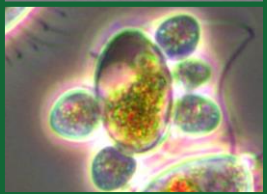


Tuesday, April 20

- Keynote Presentation – Barry Goldman, Pluton Biosciences
- Session #1 – Current State of Crop Protection
- Session #2 – Alternative Crop Protection Approaches to Chemicals and Pesticides

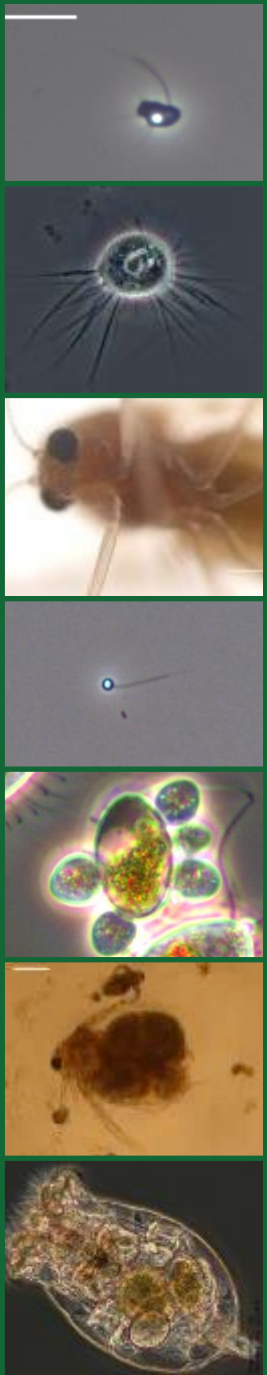
Wednesday, April 21

- Keynote Presentation – Claire Gachon, Scottish Association for Marine Science
- Session #3 – Pest Models: Understanding Pest Life Cycles and Infection Mechanisms
- Session #4 – Current and Future Pest Monitoring Practices



Each Session will Include:

- Presentations from invited panelists
- Moderated Panel Q&A
- Facilitated open discussion with opportunity for direct input via a web-based collaboration software, Xleap by MeetingSphere



Full Agenda – Day 1

Time	Agenda Item	Speaker
11:05 a.m. – 11:15 a.m.	BETO Mission and Vision	Valerie Sarisky-Reed – Deputy Director, DOE-BETO
11:15 a.m. – 11:30 a.m.	Stakeholder Session Overview	Lauren Illing – Lead Facilitator, BCS, LLC
11:30 a.m. – 12:30 p.m.	Keynote Presentation 1	Barry Goldman, Pluton Biosciences
12:30 p.m. – 1:00 p.m.	<i>Break – Optional Networking Activities</i>	
1:00 p.m. – 2:45 p.m.	Stakeholder Input Session #1 – Current State of Crop Protection	Panel and Group Discussions
1:00 p.m. – 1:45 p.m.	Plenary Panel Discussion and Q&A	Moderator + John McGowen (AzCATI), Charley O’Kelly (Cyanotech), Jason Quinn (CSU)
1:45 p.m. – 2:45 p.m.	Stakeholder Group Discussions	Group Leaders
2:45 p.m. – 3:00 p.m.	<i>Break – Optional Networking Activities</i>	
3:00 p.m. – 4:30 p.m.	Stakeholder Input Session #2 – Alternative Crop Protection Approaches to Chemicals and Pesticides	Panel and Group Discussions
3:00 p.m. – 3:45 p.m.	Plenary Panel Discussion and Q&A	Moderator + Rhona Stuart (LLNL), Kim Ogden (UA), Jeremy Guest (UIUC)
3:45 p.m. – 4:30 p.m.	Stakeholder Group Discussions	Group Leaders

Full Agenda – Day 2

Time (EDT)	Agenda Item	Speaker
10:30 a.m. – 11:00 a.m.	Login and Networking	All participants (optional)
11:00 a.m. – 11:30 a.m.	Welcome and Day 1 Summary	Volunteer Rapporteurs
11:30 a.m. – 12:30 p.m.	Keynote Presentation 2	Claire Gachon, Scottish Association for Marine Science
12:30 p.m. – 1:00 p.m.	<i>Break – Optional Networking Activities</i>	
1:00 p.m. – 2:30 p.m.	Stakeholder Input Session #3 – Pest Models: Understanding Pest Life Cycles and Infection Mechanisms	Panel and Group Discussions
1:00 p.m. – 1:45 p.m.	Plenary Panel Discussion and Q&A	
		Moderator + Todd Lane (SNL), Shawn Starckenburg (LANL), Tim James (UM)
1:45 p.m. – 2:30 p.m.	Stakeholder Group Discussions	
		Group Leaders
2:30 p.m. – 2:45 p.m.	<i>Break – Optional Networking Activities</i>	
2:45 p.m. – 4:15 p.m.	Stakeholder Input Session #4 – Current and Future Pest Monitoring Practices	Panel and Breakout Group Discussions
2:45 p.m. – 3:30 p.m.	Plenary Panel Discussion and Q&A	
		Moderator + Jerilyn Timlin (SNL), Natalie Cookson (QBI), Ryan Simkovsky (UCSD)
3:30 p.m. – 4:15 p.m.	Stakeholder Group Discussions	
		Group Leaders
4:15 p.m. – 4:30 p.m.	Closing and Day 2 Summary	Volunteer Rapporteurs Daniel Fishman – Technology Manager, DOE-BETO

Daniel B. Fishman

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Learn more about **BETO**: energy.gov/bioenergy



Dr. Valerie Reed, Acting Director, DOE-BETO



“Bioenergy Technologies Office Overview”