

**SAA FINAL BILLING REPORT**

**JULY 2023**

Submitted to:

Easton Kuboushek  
Executive director  
Soy Aquaculture Alliance

Prepared by:

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August 2023

## **Summary of work completed in preparation for, during, and following completion of the short course.**

In preparation for the short course, the following work was completed.

- Preparation of Teams-based seminar application for the event.
- Development of event agenda.
- Registration of event participants.
- Development of subject matter for the 2-day short course.
  - Dr. Dominique Bureau:
    - Welcome Remarks
    - Principals of Aquaculture Feed Formulation
    - Feed Ingredient Quality: From Chemical Composition to Nutrient Bioavailability
    - Introduction to the International Aquaculture Feed Formulation Database (IAFFD)
    - Approaches to Assess Feed Quality: From the QA/QC Lab to the Field
  - Dr. Neda Nemati
    - Defining Nutritional Specifications for Aquaculture Species
  - Mr. Matthew Wong
    - Soybean Meal in Aquaculture Feed Formulations
  - Mr. Stephen Gunther
    - Tools to Support the Production of Sustainable Aquaculture Feeds
  - Wittaya Aqua Personnel
    - Practical Sessions 1-4: Collaborative Feed Formulation Exercises
- Chairing, participation, and live presentation of the subject matter for the duration of the course.

### **Summary of the short course**

There were 29 participants on each day of the course (see participant list in annex) that took place on 21 and 23 June 2022. Through a combination of presentations and guided practical formulation exercises as detailed in the attached Agenda, participants received training in principles of aquaculture feed formulation, defining nutritional specifications, feed ingredient quality, feed manufacturing, formulating with soybean meal, formulating to address challenges, assessing feed quality, sustainable feed production, and formulation impacts on manufacturing.

Each participant was given access to Wittaya Aqua's AquaOp Feed platform during the course and for the period following the course until contract period end date 31 December 2022. Participants were free to use the software for their own feed formulation needs and practice and were encouraged to reach out to the Wittaya Aqua team for help and guidance.

In the six (6) month period following the short course, Wittaya received two requests for help accessing the platform, but no requests for help or guidance with feed formulations.

This represents completion of the contracted work for which a final invoice for the remaining USD\$6,344 is enclosed.

## Annex: Participants

Name	Surname	Email	Status	Institution
Trent	Corby	tlc0059@auburn.edu	Cancelled	Auburn University
Khanh	Nguyen	kqn0001@auburn.edu	Registered	Auburn University
Magida	Tabbara	mzt0083@auburn.edu	Registered	Auburn University
Abdulmalik	Oladipupo	aao0022@auburn.edu	Registered	Auburn University
Tucker	Graff	tuckerg@ksu.edu	Registered	Kansas State University
Ashton	Schardt	ashton.schardt@kysu.edu	Registered	Kentucky State University
Kasondra	Miller	kasondra.miller1312@gmail.com	Registered	Kentucky State University
Michelle	Loftus	Michelle.loftus@kysu.edu	Registered	Kentucky State University
Fernando	Yamamoto	fy5@msstate.edu	Registered	Mississippi State University
Jing	Huang	jh4728@msstate.edu	Registered	mississippi state university
Hayin	tamut	ht549@msstate.edu	Registered	Mississippi State University
Yu-Ting	Chu	chu141@purdue.edu	Registered	Purdue University
Pedro Luiz	Pucci Figueiredo de Carvalho	pedro.puccifigueired@agnet.tamu.edu	Registered	Texas A&M University
Blaine	Suehs	bsuehs19@tamu.edu	Registered	Texas A&M University
Jami	de Jesus	j4mila@uab.edu	Registered	UAB
Rebecca	Lochmann	lochmannr@uapb.edu	Registered	University of Arkansas at Pine Bluff
Michele	Jones	thompsonm@uapb.edu	Registered	University of Arkansas at Pine Bluff
Vikas	Kumar	vikaskumar@uidaho.edu	Registered	University of Idaho
Amit	Yadav	yada2122@vandals.uidaho.edu	Registered	University of Idaho
Marina	Rubio Benito	rubi3631@vandals.uidaho.edu	Registered	University of Idaho
Jeongwhui	Hong	jhong@uidaho.edu	Registered	University of idaho
Mosope	Abanikannda	aban3311@vandals.uidaho.edu	Registered	University of Idaho
Krishna	Singha	sing7486@vandals.uidaho.edu	Registered	University of Idaho
Piper	Evans	piperevans@cox.net	Registered	University of Idaho
Kimia	Kajbaf	Kajb5952@vandals.uidaho.edu	Registered	University of Idaho
Jose	Ortiz	Orti2440@vandals.uidaho.edu	Registered	University of Idaho
Kala Mallik	Meesala	kala.meesala@maine.edu	Registered	university of maine
Sean	Starkman	sas3832@miami.edu	Registered	University of Miami
Julio	Camperio	jfc146@miami.edu	Registered	University of Miami
Jorge	Suarez	jsuarez@rsmas.miami.edu	Registered	University of Miami

**U.S. SAA Academic Aquaculture Feed Formulation Initiative Workshop  
Program**

**Tuesday 21 June 2022: Day 1**

<b>Time</b>	<b>Topic</b>	<b>Proposed Speaker</b>
0830-0845	Welcome Remarks	Dr. Dominique P Bureau <i>Wittaya Aqua</i>
0845-0915	Introduction to the SAA IAFFD Academic Initiative	Mr. Easton Kuboushek Soy in Aquaculture Alliance (SAA) & Lukas Manomaitis, USSEC
0915-0945	Principles of Aquaculture Feed Formulation	Dr. Dominique Bureau <i>Wittaya Aqua</i>
0945-1030	Defining Nutritional Specifications for Aquaculture Species	Dr. Neda Nemati <i>Wittaya Aqua</i>
1030-1045	<b>COFFEE BREAK</b>	
1045-1130	Feed Ingredient Quality: From Chemical Composition to Nutrient Bio-Availability	Dr. Dominique P Bureau <i>Wittaya Aqua</i>
1130-1215	Introduction to BestMix 4	Mr. Arpad Zsok <i>Adifo</i>
1215-1230	<b>Q&amp;A Period</b>	
1230-1330	<b>Lunch Break</b>	
1330-1430	Introduction to Aquaculture Feed Manufacturing	Dr. Ramesh Gangatharan Wenger Manufacturing
1430-1500	Introduction to the International Aquaculture Feed Formulation Database (IAFFD)	Dr. Dominique Bureau <i>Wittaya Aqua</i> & <i>Lukas Manomaitis</i> <i>USSEC</i>
1500-1515	Practical Session #1: Guided Feed Formulation Exercise in BestMix 4	<i>Wittaya Aqua Personnel</i>
1515-1545	<b>COFFEE BREAK</b>	
1545-1630	Practical Session #2: Guided Feed Formulation Exercise in BestMix 4	<i>Wittaya Aqua Personnel</i>
1630-1700	<b>Q&amp;A Period</b>	
1700	<b>End of Day 1</b>	

**Thursday 23 June 2022: Day 2**

<b>Time</b>	<b>Topic</b>	<b>Proposed Speaker</b>
0900-0915	Recap of Previous Day	Dr. Dominique P Bureau <i>Wittaya Aqua</i>
0915-0945	Soybean Meal in Aquaculture Feed Formulations	Mr. Matthew Wong <i>Wittaya Aqua</i>
0945-1030	Practical Session #3: Feed Formulation to Address Specific Challenges Exercise	<i>Wittaya Aqua Personnel</i>
1030-1045	<b>COFFEE BREAK</b>	
1045-1130	Approaches to Assess Feed Quality: From the QA/QC Lab to the Field	Dr. Dominique Bureau <i>Wittaya Aqua</i>
1130-1200	Tools to Support the Production of Sustainable Aquaculture Feeds	Mr. Stephen Gunther <i>Wittaya Aqua</i>
1200-1300	<b>Lunch Break</b>	
1300-1400	How Feed Formulations Can Impact Feed Manufacturing	Dr. Ramesh Gangatharan Wenger Manufacturing
1400-1515	Practical Session #4: Collaborative Feed Formulation Exercise - Input from participants	<i>Wittaya Aqua Personnel</i>
1515-1530	<b>COFFEE BREAK</b>	
1530-1615	Practical Session #4 (continued): Collaborative Feed Formulation Exercise - Input from participants	<i>Wittaya Aqua Personnel</i>
1615-1645	Q&A & Open discussion with participants Expectations and thoughts about the SAA initiative	SAA, <i>Wittaya Aqua</i> , USSEC <i>Personnel</i>
1645-1700	Final Remarks	Dr. Dominique Bureau <i>Wittaya Aqua</i>