

SEAWEED HUB - Production Systems Work Group Meeting #6

October 15, 2021; 9am Pacific/Noon Eastern

Summary

- Seaweed Hub project funds were discussed as an option to hire contractors to help reach out to nursery operators and assemble the nursery list, ultimately deciding to use funds to hire 2 UConn students to do this
- The group specifically went through the list of topics suggested as important for the list in a previous meeting and tried to assign questions to be asked of nursery operators to assemble the list of information
- More details on the scope of work for potential contractors was also discussed, including the hours and types of students who might be good for this work

Agenda

Meeting Focus - Compile a list of seaweed nursery facilities

Goal - Agree on the nature and scope of a Nursery List contract

- Review previous meeting outcomes
- Seaweed Hub Project Funds
 - what are they; criteria for use
 - hire UConn student(s) to develop Nursery List?
- Nursery List - Project Scope
 - research questions
 - hours, timing, duration
 - deliverable(s)
- Next Steps

Participants

Meg Chadsey, Washington Sea Grant (WA)

Josh Reitsma, Woods Hole Sea Grant (MA)

Anoushka Concepcion, Connecticut Sea Grant (CT)

John Colt, NOAA National Marine Fisheries Service (WA)

Holly Turner, Grower/Educator, Bridgeport Regional Aquaculture High School (CT)

Dave Bailey, Researcher, Woods Hole Oceanographic Inst., MA

Diane Boratyn, Grower (tank culture) (WA)

Gregg Shiosaki, Culinary Instructor (ret.); Puget Sound Food Hub (WA)

Kate Alfano, Researcher

Bailey Moritz, World Wildlife Fund (WA/ME)

Brady Blake, Washington Dept. of Fish & Wildlife (WA)

Seaweed Hub Project Funds

- \$40k total for four WGs (so ~\$10k each);
- UConn student can be supervised by CTSG/UConn cooperative extension
- Whole process fully transparent
- WG determines what's on the list & job description parameters
- Required to document how funds are spent.
- Immediate cost is assembling, but we should also think about long-term maintenance. Who? Paid? Follow Rutgers Coop Extension maintenance of [shellfish nursery list](#) model?
- Open up to questions & discussion, are we interested in hiring student contractors to compile the list or should we look at other options?
 - Holly: CT AQ HS students have to do 100 hrs of service; perhaps enlist? Holly can make some calls to other aquaculture schools in the state too.
 - Group agrees to move forward with student contractors to compile the nursery list with oversight from the production WG and UConn

Nursery List

WG participant comments:

- How will info be collected? email or phone call? (probably both)
- Dave Bailey: if we get too specific, maintenance is going to be arduous (assuming updates every 6-12 months). Just an entry point; customers will always pick up the phone. Should have more info than shellfish list, but not *too* much...
- Bailey Moritz: caveat with "please provide as much info as you're comfortable sharing"

Notes below suggest specific questions that should be asked based on topics identified as important in previous meetings: ("Q: ...", is a suggested question that should be asked

Location

- Location of facility
 - Q: What's the name and address of your hatchery?
- Area supplied (where can they sell?)
 - Q: Where are you currently allowed to sell seed string? (acknowledge that this may change as regulations/science evolves)
 - Q: Do you currently need an importation permit?

Production

- Species/strains (past, current & anticipated)
 - Q: What species do you produce?
 - Discussion:

- Diane B categorizes by **species name**, and uses visual **descriptors** to define unique strains. Suggested that genetic history of unique strains may be of interest if known (esp for pharmaceuticals/neutraceuticals)
- Supply can be variable, sp might want to solicit information about 'status' of particular strains (see Availability below).
- Specify 'cultured' vs. 'wild type'

Propagation

- Sori collection (where & how?)
 - Q: Does hatchery require growers to send them sori, or do they collect their own?
- Settling substrate (anything besides string?)
 - Q: What type of string, synthetic or organic? (anything more detailed may be proprietary)
- Any other relevant details?

Availability/Seasonality/Volume (past, current & anticipated)

- Q: When should customers place their orders?
- Q: When is seed string usually available?
- Q: Are there volume maximums or minimums?
- Q: Do you ship seed string or is it pickup only?
- Discussion:
 - Yes, ask if they will ship (e.g. some Alaska nurseries will fly it to growers)
 - Also ask about shipping costs? This is probably a one-on-one question
 - Might ask about shelf life during travel (e.g. time & temp). Again, this is probably a one-on-one question

Product

- Q: Are there any descriptors you would like to list about the product?
- Discussion:
 - Ask about typical results (size, color, etc) or success rate? This might not be a fair question, as results will vary depending on grow-out location
 - Ask about recommendations for cultivation (where, when, **water quality considerations, temperature**, what type of gear, time to maturity, how to harvest)?
 - Ask about recommended uses (best for fresh, dried, processed, non-food applications, etc.)?
 - Diane: there are tiers to quality (analogous to apple grades)
 - Dave: quality may be beyond nursery's control

Price

- Shouldn't ask for quotes. Hard to pin down because of variability. Nurseries also likely uncomfortable sharing
- Possible Q: Is there a contractual requirement to sell seed back to particular entities/markets if purchasing seed string from you?

- Discussion
 - Ask if they do custom orders? - likely more appropriate for individual interaction with nurseries
 - Ask if they offer samples?

Facility

- Q: What type of facility best describes your operation (i.e. commercial, research, educational, private)?
- Discussion:
 - Anoushka: regulators want an approved facility, so private grower's facility likely not allowed to sell (at least that's the case in southern New England open-water).

Logistics

- Q: Who is the best point of contact to be listed?
- Q: Do you have a website?
- Q: When do customers have to get their orders in?

Customers

- Q: What are typical end-use purposes of seaweed produced with your seed string (food, pharmaceutical, etc)?

Purchasing restrictions/regulations

- Q: Where are you currently allowed to sell seed string? (acknowledge that this may change as regulations/science evolves)
- Q: Do you currently need an importation permit?
- Discussion: we could potentially have a separate section where relevant state specific regulations for importation of seed string are listed

Job Description Scope

hours?

- 200? (2 students, 10 hrs/week, 10 weeks). More?
- Front load hours, because initial research will be more intensive
- And also towards the end, when they're working on refining and formatting the list

Time frame?

- Announcement posted for 2 weeks. Can post & start whenever
- Best time frame depends on species. Assume sugar kelp is the main product; should we tailor the project timing to sugar kelp season?
- Advantage to conducting survey during nurseries' busy season: someone answers the phone.

Required/recommended skills (does *not* have to be marine science major; advantages to diversifying pool (Josh has had success with business students)).

- Undergrads (but Junior or Senior) (can't afford grads)
- Graphic design
- pre-law

1 vs. 2 students?

- 2 students would allow for regional focus (split between West & East coast).
- Depending on where they're from, they could tap into local knowledge ('feeder system').

Anoushka will draft job description, but still needs input on specific desired skills.

Simplified list of questions:

Q: what's the name of your hatchery/nursery?

Q: what is address and phone number?

Q: who is the best point of contact to be listed?

Q: do you have a website?

Q: what type of facility best describes your operation? (commercial, research, educational)

Q: What species do you produce?

Q: when is seed string usually available for each species?

Q: when should customers place their orders?

Q: are there volume maximums or minimums?

Q: do you ship seed string or is it for pickup only?

Q: are growers required to send sori for production of seed string, or do you use your own stock?

Q: what type of string do you use? i.e. synthetic, organic, etc.?

Q: is there a contracted requirement to sell product back to particular entities/markets if purchasing seed string from you?

Q: what are typical end-use purposes of seaweed produced with your seed string (food, pharmaceutical, etc)?

Q: are there any other descriptors you would like to list about the product?