From: Dan Ward

To: Aquaculture2018 - ARS

Subject: USDA input to research, extension and education programs

Date: Monday, August 27, 2018 9:40:16 AM

To Whom It May Concern,

• What is your business? Ward Aquafarms, LLC. Commercial shellfish production, grant-funded aquaculture research, and aquaculture consulting

- What is the largest constraint to growth and expansion of your sector of aquaculture? Low margins due to high labor costs, means higher risk and low capital investment.
- What do you see as the greatest short-term, 1-4 years, research and extension needs? Technology-assisted increases in efficiency.
- Over the longer term, what do you see as the greatest research and extension needs over the next 5-10 years?

Development of the technology to move further from shore (shellfish, finfish, seaweeds). Investment in technology development, NOT permitting work.

• What is most effective communication strategy to reach and inform farmers of new solutions to problems or better technologies?

On farm demonstration is the only method that works. No farmer is going to invest actual capital based on a slideshow, it needs to demonstrated on a commercial farm.