

**Interviewee Name:** Robert Morse

**Project/Collection Title:** Voices of the Maine Fishermen's Forum 2018

**Interviewer(s) Name(s) and affiliations:** Galen Koch (the First Coast)

**Interview Location:** Maine Fishermen's Forum, Rockland, Maine

**Date of Interview:** March 3, 2018

**Interview Description:**

**Robert Morse**

Waldoboro, ME

Owner, Atlantic Laboratories North American Kelp

Interviewed by Galen Koch

Robert Morse is the owner of Atlantic Laboratories North American Kelp. He runs a plant in Waldoboro, ME, that has been operating since the 1970s to produce fertilizers and animal feed supplements out of rockweed. They export to more than 24 countries and have established a global market for seaweed. Morse talks about the uses for "liquid seaweed" as well as how the seaweed business has changed over the years.

**Collection Description:**

Voices of the Maine Fishermen's Forum 2018 is a project of Maine Sea Grant, The First Coast, College of the Atlantic, and the Island Institute, with support from the Maine Fishermen's Forum Board of Directors.

**Citation:**

Morse, Robert, Voices of the Maine Fishermen's Forum 2018 Oral History Interview, March 3, 2018, by Galen Koch, 9 pages, NOAA Voices from the Fisheries. Online: Insert URL (Last Accessed: Insert Date).

**Transcription by:** Kaitlyn Clark, College of the Atlantic intern

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RM: Robert Morse

GK: Galen Koch

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RM: Bought a building up there on the river, it was an old grain mill. And we've been in that area since. And we're, we've expanded to the other side of the road at the Pine Cone Industrial Park. So we're on both sides of the Route 32 in Waldoboro.

GK: Robert, can I have you repeat your name? Because this was being a little funky.

RM: Robert Morse. M-O-R-S-E.

GK: Great.

RM: Yeah, I'm with Atlantic Laboratories North American Kelp. We're your main kelp source.

GK: And how, so 1971, is this an innovative industry back then?

RM: I was in the Merchant Marine during Vietnam. A marine engineer. Our union went from 12,000 people to 3,000 people. So I was planning to ship for a while and the boats were ground up and destroyed. And so we went to 3,000 man union and there wasn't any room for junior engineers at that point.

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I had done seaweed processing with my cousins in Cape Cod, in Ellenville, MA. And when I was 12. And I was in charge of baling and drying on the beach. And my big job was to pull the starfish and the rotten mussels out before we threw it in the baler to bale it to go to, then, Marine Colloids which is located here now in Rockland, ME. They were in New Bedford. And it was the Irish moss. And so that was my first go-round at processing seaweed. Then as a family we moved to Maine. My dad went to University of Maine. We had friends up here. So we moved to Boothbay Harbor, ME, and then proceeded to go into the Merchant Marine and then come back and decided to grow a garden. It was in the early 70s. It was another back to the land movement. And I didn't know anything about a garden except I paid off on a ship in Baltimore, MD, in March, and I said I'm going home and growing a garden. And I got a copy of *Organic Gardening and Farming* at the bookstore in Baltimore, and I said, well, yeah, this is what I want to do. I want to grow organically.

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And when I got back home, I went to my neighbor, Captain Hugh Baker, and he always had a nice garden and he said, "Okay, here's my grandfather's rockweed harvesting rake from the 1880s. And go harvest some rockweed and go over to the cannery and get some fish waste." And I said, "Okay Hugh." Now he didn't tell me about the raccoons would eat the fish waste. I had to dig it deep and rot it. But I got on the way. So when I was developing my seaweed

products, I had a quarter acre vegetable garden and I did all my testing myself on the products. And I had a little help from the Norwegians. They sent me a brochure for liquid seaweed from (Chicago Pair-Ostrum?) who fought in World War II. Hell of a nice guy. He passed away recently.

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When I got the brochure for the Norwegian liquid seaweed, the front yard, it looked like my front yard, you know, with the rockweed. And I said, well, you know, I've done a little seaweed before when I was 12, I think, maybe I can branch out. Because I could have gone to Bath Ironworks. I could hear the whistle blow when the wind blew out of the west from Boothbay. But I did not want to go. I'm not a real good whistleblower, follower, or whatever you want to say. So I started the business and it's been entertaining. I haven't made a lot of money, but I wouldn't of picked another a career. I'm very happy.

GK: So liquid seaweed is like a growing starter or something?

RM: Our plant is a, we have dehydration where we take, we're primarily a rockweed harvester and processor. The rockweed is what grows in the intertidal zone.

[0:04:02.2]

There's approximately a million plus tons of standing resource on the coast of Maine. And we dehydrate that. We get it in fresh. We have mechanical cutters that are owned and operate by the fishermen, I believe in traditional fisheries where the harvest is done by the captains of the boats. We have some other Canadian company down here that supplies boats and turns them into not what I would call real independent fishermen. So we do the fishing tradition. And I help with their management of their beds. We're organically certified in a lot of our beds with MOFGA. I don't know if you've heard of MOFGA. Maine Organic Farmers and Gardeners under the USDA NOP, National Organic Program. So we're harvesting certified Maine seaweed. And that, one of our lines goes to animal feed supplements. Primarily into the dairy and beef and hogs and chickens. So if you're a certified organic farm, you have to have certified kelp. So that's one of our markets for my dehydration operation.

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And then the other half of the plant, we do seaweed fertilizer, liquid fertilizers, extracts from home and garden to commercial. We have a line of EPA registered plant growth regulators based on [cytokinins?]. Where you use one pint to the acre for yield and quality increases. We also use that with ag chemicals. And it reduces the amount of herbicides needed to kill weeds and heightens the effectiveness of fungicides and herbicides. And we once got deregistered in Canada by Esso because we were eliminating an \$800 million herbicide market down to \$400 million. And they didn't take kindly toward it and they control the regulatory people so they ended up, we were all registered, we were the first growth hormone product to be registered in Canada and we were the first agricultural product ever to be deregistered. All in the matter of 4 years.

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We know the products are very effective. We sell in about 24 countries directly exporting to. And a lot of our reformulated business is we sell our products as bases for other biological products.

So other manufacturers. And just one of our customers sells to 90 countries. So we have a footprint all over the world from little old Waldoboro.

GK: And how has that industry, I mean, seaweed has changed, that industry has changed.

RM: Well, it was a little hard to sell in 1971. To put it mildly. I used to sell the kelp meal and I'd tell the farmers well, take you 6-8 weeks to see the changes. And now if the, some of the dairy farms are having a tight economics again now with the large commercial dairy farms that are on the edge of being organic. So sometimes they get a little tight for money and they'll eliminate products.

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They'll eliminate the kelp once in a while but within a month they're coming back and say, well that wasn't the one I should've eliminated. You know, because there's a natural iodine and that produces the milk in humans and cows. You know, iodine is the mammary gland stimulator. And so they're production is going down and they're just trying to cut, you know, just trying to bring the expenses down. So now, it's like, it doesn't take 6 or 8 weeks for people to realize what the benefits are. We feel our farmers get 5-10 times their money back on the animal feed supplement. The sea vegetables or seaweeds, they concentrate the minerals of the ocean 20-40,000 times of what they're present in the seawater.

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But in the process, we don't eat dirt. And we eat the plants that digest the minerals from the dirt. It's the same thing with the seaweeds. They concentrate the minerals, but in the same time they concentrate them, they break them down into the right angstrom size so that they can be absorbed in [nanomols?] and excreted if they're not needed. And in the intercellular cracks of plants, when we spray with the liquid fertilizers, they're able to penetrate the intercellular cracks, not having to go through the stoma on the bottom of the leaf. And so there's 1,500% more cracks, cell cracks on the leaf so it's very absorbable. And it's used with enhancing ag chemicals. If you want to put natural fertilizers with it. It's just a great base translocation product because of the alginate base. Seaweeds are unlike, land plants are cellulose cellular wall. The brown seaweeds are alginates. And there's a lot of growth stimulates in the alginates that the plant can use. Is that too detailed?

[0:09:12.8]

GK: No, this is great! What's the community like where you have this plant? What has that been like since the 70s to now, this area of Waldoboro?

RM: Well, yeah, see I started down here and then I moved to Waldoboro. Where's Waldoboro? Where is Waldoboro? Right here.

GK: Where's this? What is this?

RM: That's Boothbay Harbor.

GK: Boothbay.

RM: That's where I started. And in, as soon as I could find a place to move, I drove around all kinds of places looking for 3 phase power and a position for a plant because I always had the vision we'd grow. And I moved up to Winslow's Mills, somewhere up in here. Which is on the Medomak River. And that was very active then. We had the canning company doing squash and potatoes and blueberries. We had the canoe factory making lengthened canoes.

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We had a freezer locker processing all kinds of chickens, beef, pork. And then we had the button factory. It was a 100-and-some-odd year old button factory where they made buttons. And so I said wow, they've got industry here in Waldoboro and they had 3 phase lines and I found the place that I could rent affordably, that I later bought.

GK: What's a phase line?

RM: 3 phase is your commercial electric to run your motors on.

GK: Okay. Got it.

RM: Yeah. That was one of my requirements. You know, when I'm in the engineer, as a marine engineer, I mean, I know all about electricity. I can machine tool parts. I can weld. I can run steam boilers. I can run generators. I mean, and my dad had a heating oil business and I worked for my uncles since I was young in cleaning burners and burning oil and doing all of that stuff.

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So I mean, I was, you know, I really liked the machinery. So I picked that spot there. And in 1981 we burned— Yeah, we had a fire in— I should . . .

GK: It's okay, yeah.

RM: Don't know what happened.

GK: Was it a big one?

RM: Oh yeah, we lost the whole plant.

GK: Oh my god. Do you mind if I'm recording?

RM: Yeah, no, that'll stop.

GK: Oh that's okay. I understand.

RM: Yeah, so, in 81 we had July 16th, we had a fire that basically wiped the plant out. Luckily we had remote inventory. We were selling quite a bit of our extraction product up in Aroostook County.

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We were, the insurance didn't pay, you know, paid something. But, yeah, so we toughed it back out and built it back. And stayed in the ballgame. Ask your other questions. What do you want to know?

GK: Yeah, do you think you could move your phone? Because I'm getting some interference on it.

RM: Yeah.

GK: We only have a couple more minutes before (Micah?) comes in here, so, but I am curious how your perception of your industry has changed along the coast?

RM: Along the coast like from harvesting? Or just employment? Or?

GK: I guess, well, in also specifically seaweed and some of the things that have happened with, in that marine industry?

RM: Well the seaweed, when I started in the early 70s, we were in a cold section.

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I mean, we had the huge shrimp fishing industry because we had a lot of ice and the shrimp would come in. The Norwegians were in here bringing their shrimp equipment from Norway over because they had a warm spell and they didn't have the shrimp. And they came here. And we had -20°F, a week at a time, three times a year. The ice was incredible on the saltwater. I mean, I could walk across from my dock in Boothbay to the island across the way. You know, we had to let the floats go and let them go in and out with the ice. And since then, it's, you know, they say well the other 4 years ago was really cold, but it was nothing like the early 70s with the water temperature the way it is. So the seaweed is growing very well. The water's been a little warmer. So the volume of seaweed is massive. If you harvest it right, our harvesters do a rotating cutter on it so it just takes the tops of the plants off. We're required to leave 16 inches in the regrowth from the tips, it's 2 years and you're back to where you were. We like to do 3 year rotations just in case there is a winter that's too much.

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And so the seaweed is, the rockweed that we harvest is in great supply. As far as employment goes, we're seeing a very good surge in younger people that want to work in our facility lately. And our average age in our plants dropped down below 30 recently. And we've had a opioid crisis on the coast. Has made it very hard for any business, maybe the coast or the whole country, to get help and particularly help that, you know, we're working in a manufacturing facility. We're automated now. One person will run the dehydration line and process 10,000 lbs an hour. Back a few years ago we had 5 people on that line. So we've tried the best we can to

upgrade the jobs, and it's also upgraded the pay scale we can offer with our benefits packages and the hourly wage.

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We have a lot of family being those younger generations, they've got a lot of families involved in the business. And that's good.

GK: So you're feeling the effects of the opioid crisis in your own workforce?

RM: Oh we all, you talk to any small business person or any large business person. It's been very hard to get help. It's, it is what it is, you know.

GK: To get help that's not . . .

RM: We're dealing with, you know, 100 horsepower grinders and, you know, you've got to be on your game.

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I mean, we have all the safety equipment. Our plant is one of the 56 plants in the state that is, Sharpe, we're in the Sharpe Safety Program, one of the highest programs you can get in. You know, so we keep stuff safe, but, you know, I get nervous if, you know, this certain people that you, you can't, you got to be on your game, you know, around heavy machinery. I don't know if you want to put that on, about . . . But the younger crowd that's coming up now, they're extremely trainable. They're excited. I try to give them advancement. We've had a lot of advancements going on as we grow. So we've got opportunity and that's the name of the game.

GK: Yeah.

RM: Yeah.

GK: Well, yeah, I mean, we're interested, especially with being here at the Forum and just having so many people that we can speak with. I'm particularly interested in trends that are happening along the Maine coast. I mean, I'm a year-round Mainer and a lifelong Mainer and there's some stuff that's been happening that seems to be affecting a lot of people all along the coast and in the country in general.

[0:17:15.8]

RM: Yeah, I'm just speaking from the coast because I don't get around to a lot of other places. But when I talk to other people, I mean, we've been limited on our growth because of trying to get employees. It's got to work as a team, you know? It's no different than a football team. It's got to go right. There's got to be a rhythm. And we have a lot of foreign competition. And we've got to meet that competition. Nobody's helping us with tariffs or anything like that. We have subsidized competition from the Canadians left and right. Unfair competition in my book. But I just ignore it and go right straight ahead and make a better quality product and go direct to the customer. The internet has really helped us because we can bypass distributors and we can

bring our quality to the farm. And the farmers want our product. I've had no inventory for 5 years now on one of our product lines, on our kelp meal for animals, because of our quality and because I price it right too. But that's . . .

[0:18:22.8]

GK: Let me catch (Micah?) and let him know that we're almost done.

RM: I don't know if that's the stuff you want to hear or what.

GK: Micah, we're almost ready for you. Yeah, that's great. Look at my thing just smoking.

RM: Yeah, no, I see it puffing.

GK: Yeah, this is great. I'm really glad that we caught you. Because this is a great perspective, Robert.

RM: Yeah, this is my perspective. It's not necessarily, somebody else would look at it a different way.

GK: Yeah. It's a little smoky in here.

Micah: Oh it's okay.

RM: Some puffs out the back.

GK: I know, it's because of the wind. But if I don't have it on, it's really just too windy and it's also kind of (inaudible). There's a little axe in there, you could give it a, get some kindling.

RM: Got to work for this mic.

GK: Well Robert, is there anything else that you want to say while you're in here?

[0:19:13.6]

RM: No, we're very happy. We're very excited about the future and the future of the seaweed business in the coast of Maine. There's a lot of opportunity for young people to come in here. We do need the state to belly up and get into the 21st century in regulation, which seems almost impossible because of the politics, you know. I would strongly suggest that anybody that goes to the legislature takes their Democrat, Independent, Purple, Republican, and everything else and park it over on the other side of the river where the mental institution used to be and come to the State House and represent the people. How about a novel idea. Represent us for a minute. Take the politics out of our fishery and let's get it done.

[0:19:54.2]



We need jobs for the young people. They're leaving here in droves. We're paying the University of Maine \$400-600, \$600 million a year to subsidize them and they're getting great education, and we're not benefiting in Maine because we can't create the jobs. Our grade schools have gone from 240,000 kids down to 160,000 because the families can't make it in Maine. That's ridiculous, we live in the best state.

GK: Perfect.

[0:20:22.4]

End