

**Interviewee Name:** Alex DeKoning

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**Interviewer(s) Name(s) and Affiliation:** Matt Frassica (Independent Producer)

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**Interview Description:**

Alex DeKoning, a mussel farmer based out of Bar Harbor, ME, is the son of seventh generation mussel farmers from Holland. DeKoning and his family run the only mussel farms in North America that farm mussels on the bottom instead of on ropes. He talks about the integration of an immigrant into life on the coast of Maine, the process of farming mussels, and how his methods differ from the norm. He also mentions concerns about green crabs as predators and explains how the mussel reproductive cycle can be impacted by new species.

**Collection Description:**

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**Transcribed By:** Griffin Pollock

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[0:25:15.4]

MF: Matt Frassica  
AD: Alex DeKoning

[0:00:00.0]

MF: Uh, I'm gonna start recording

AD: Okay.

MF: Can I just start by asking you your name?

AD: I'm Alex DeKoning.

MF: Can you do that again, I'm sorry, I bumped the mic.

AD: Okay, I'm Alex DeKoning.

MF: Thank you. And what do you do?

AD: I farm mussels, and starting to experiment with other species.

MF: And when did you start doing that?

AD: I—here we started 14 years ago, but I emigrated from the Netherlands where my family's been farming mussels since the 1750s.

MF: Wow. So where do you do it here, I should ask.

AD: Around . . . We've got five leases, most of them are in Frenchman Bay, near Bar Harbor.

MF: Hm. And was this something that you always anticipated you would be doing since it's such a long family tradition?

AD: When I was a four year old I knew I wanted to be a mussel farmer, went the typical teenage route and decided, "You know what, I should have a backup option." So I went to college for chemical engineering, decided I liked farming mussels more and joined the family business.

MF: And what was the Maine connection?

[0:01:03.9]

AD: Um . . . Basically random chance, we—my dad believes strongly that every generation should add something to the company instead of just coasting, and there wasn't much room to expand in Holland so we looked for somewhere else in the world to start it. We went to a conference in Prince Edward Island, Canada, where they farm a lot of mussels on the ropes. Spoke to a company from Maine, and found out Maine is really well suited for aquaculture, but at the time, very few people were doing it. And so there's advantages to being on the leading edge of a growth because you can help make sure that regulation happens and happens . . . and helps to avoid some of the pitfalls that we've seen with the regulation over in Holland. And so it's—you can kind of help work with the state to figure out what's happening with aquaculture, where's it going. What pitfalls can we avoid, and how do we not make an unintended mistake.

MF: And so are there differences in the—either the regulatory climate or the market climate between doing this work in Maine and doing it in Holland.

[0:02:09.9]

AD: I was 14 when we left Holland, so a lot of this is kind of just family knowledge, but double-check the accuracy. But it seems like in Holland there are um . . . Aquaculture, because it's been going on so long, is less tightly controlled than it is over here because they know what's happening and there's less changes happening. So, in Holland there are—there is—they don't have the public trust. They have some form of public trust notion, but it is you can actually *own* subtidal land if you if you buy it from the state. There was only a few years where you could do that, but it was very expensive. And so it's seen much more as an integral part of the traditional fisheries and farming, where here in Maine it's much more the new thing, and, and for a lot of peoples, comes across as quite scary, where it's just a matter of kind of getting to know what agriculture is, what you do, and where you go. And so that's kind of the—as far as the regulation—regulatory environment they're, they're playing catch up here and figuring out where the right balance lies between allowing businesses to support the coastal communities while not allowing any bad players to come in and wreck it for everyone else. There's a lot more dynamicness [sic], if that's a word, to, to the industry in Maine.

MF: Yeah and what about your like, your style of farming? Is it different from the way other mussel farmers in Maine work?

[0:03:45.4]

AD: Yes. Yes, we are actually the only farm in North America to farm mussels on the bottom, that we know of. So most mussels are farmed by hanging them on a rope hanging them on either a long line or a raft, and look after them. What we do is we take an area that is effectively devoid of much life—there's actually an organism count that you can't exceed to get a lease—and create a artificial mussel bed there by moving mussels that wouldn't have survived there as like tiny grains of sand, is that tiny, tiny seed, and putting it there once it is big—has a hard enough shell that it will survive, and remove it from some of the intertidal zone where you run a big risk of ice scarring and ice damage and storm damage. And so then you, then you protect it from predators you cite them correctly for good growth rate densities and you can you can take care of them there and harvest them later.

MF: And is that the style of farming that you that your family does in Holland?

AD: Yes. Yep, that's what they've been doing since they were using sailboats and wheelbarrows.

MF: And what are what are some of the advantages to doing it that way rather than on a rope.

[0:04:51.3]

AD: Biggest advantage for me personally, is flavor. The—so, rope cultured mussels give a really pretty mussel, and it works really well but, they are always growing in the top of the water column where you have a lot of the same plankton coming by; where when you're on the bed, you get all the minerals from the seabed. And so you get a much deeper flavor profile than, than you do in the top of the water column. It's easiest to think about, for people that don't do mussels, as the difference between the flavor of like corn fed beef versus venison. There's a much deeper flavor profile to the bottom culture mussels.

MF: Like gamey.

AD: Not even gamey, it tastes . . . Sometimes, honestly, compared to—compared to bottom culture mussels, rope culture can be a bit bland. It's—they taste like whatever you put them in, where you get the actual flavor of mussels from from the bottom culture ones.

MF: Huh, interesting. And so where—what town you do this in?

AD: Let's see, our processing facility's in Trenton, Maine. We've got... see, everything's in the water bodies between it. We've got one lease that's in the water body of Lamoine, one that's in [inaudible] of Bar Harbor, we've got one in Sorrento, and I'm not sure exactly which town owns Flanders Bay, and we've got one out by Deer Isle. So we've got five leases kind of spread geographically to reduce the risk of bacterial and biotoxin closures.

MF: And what's the name of the company?

AD: Hollander and DeKoning mussel farms.

[0:06:22.5]

MF: Okay. And what kinds of issues do you see in those communities, or what kinds of changes have you seen in those communities since you started working?

AD: When we started, we were the evil foreign people wanting to come and rape, pillage, and plunder, and everything was all very scary. But as we've kind of been working it's . . . Honestly, any local opposition is completely disappeared, because what we're doing isn't very scary. It's not particularly impactful. It's fully sustainable. So over time it has become more and more acceptable, and people are more and more interested in the actual process of aquaculture, where

when we moved here it was either unknown or had a bad reputation. And so it's kind of—we've been able to be kind of brand ambassadors for the aquaculture industry.

MF: What kinds of things do you like about those communities?

AD: I... Of course it has its pluses and minuses, but I really like the independence of of Maine. Every every community acts like it could exist if the rest of the world disappeared overnight. And it's kind of—it's a very small, tight knit, when something goes wrong everyone bands together and doesn't matter if you like each other or not. On the water, everyone will help everyone if it's needed. And I really like that kind of the close knit community side of it.

MF: But you mentioned that at the beginning it sounds like there was some resistance because you weren't—like, because you were from away and very far away. How did you break through that?

[0:07:50.7]

AD: Yes. Mostly just outreach. It was—invite anyone that wants to come out onto the boat and see what we're doing. It's—a big part of it, of the resistance, was we were far away, and our boat is bigger than the standard mussel boat because we need to move large volumes of seed, and basically having a bigger boat is the only way to economically do it. And so it was this really big boat coming in and fishing an area which natural, kind of human instinct is “big boat big damage,” it's the way it goes. But most of it was invite them out on to . . . Like, if there was local clamming opposition we would invite them out when we were seed fishing on the flats, then we'd all go walk the flats afterwards and show like . . . We custom built our drag to not take any of the bottom, to just take the mussels off the top. And using a bunch of knowledge from back—from back in Holland. And by that it's kind of a listen to their concerns, find out if they're well-founded or if they are even willing to be convinced that it's not, if they—of course if they're flat out principally against that you can't convince anyone. But take the people that are open to talking, talk with them, show them what you do, and in the end, time is one of the biggest things that helps heal any bridges. And like you come across them.

MF: And so clammers were concerned that you were—that you would tear up the clam beds?

AD: Yes, they'd had some trouble with the wild mussel fishery coming in and and having people irresponsibly fishing a certain—certain areas and causing damage to other species around. And so there was some concern that we were coming in with—we were a bigger boat doing what—and small boats had done damage. And so that was a . . . Kind of having to overcome that. The drag's the same size, and we actually have a better designed drag for doing that.

MF: And what about lobster fishermen? You come into any kind of conflict with them by—because you're on the bottom and obviously their traps are on the bottom.

[0:09:47.1]

AD: Not, not really, to be honest. Occasionally you get someone that, I mean we haven't had it in years, but we had a few times where someone thought that we ran over one of their traps because one of their traps came up dented. But funnily enough all of them have the pointed mark of a V-hulled boat and we're flat hulled. So that kind of shows that, and we can show them on the GPS tracks that we haven't been near it. The mussels, fortunately, like to grow in relatively muddy bottom, which lobsters do not like. And we have a pretty good relationship with lobstermen 'round our area that the ones that fish near our leases, we will communicate with them when we're harvesting, planning on harvesting each section of the lease. So like the lease we tend to harvest in winter, in summer is full of traps because what used to be just dead mud now has a thriving ecosystem which actually draws in the lobsters. So it's almost like we're shooting ourselves in the foot there, but we don't need that one in the summer anyway, so they can keep harvesting it.

MF: So you're using your business, your aquaculture has made the bottom more amenable to other species.

[0:10:51.9]

AD: We have no hard proof of it, but anecdotally, if you have a—part of the way the leasing process works is if there is a significant existing fishery, you cannot get a lease there. And so there were very few lobster traps on—the lease I'm talking about is off Hadley Point in Bar Harbor. When we started, and when we first got that lease 12 years ago now I think? There were very few lobster traps there, not much going on it was kind of just dead mud. And now it is very full in summer. It's actually probably the most trapped area in the top end of our bay.

MF: And why do you think that is you're creating habitat down there?

AD: Creating habitat, creating life. It's—the mussels bring in the worms, then the green crab come in after the worms, and the barnacles come in, and you get the fish coming in after the various animals. Lobsters follow, it's—what used to be kind of, when you go diving on a site where you're looking for a lease, what you're looking for is muddy bottom that doesn't have anything there. Basically, you need current and food characteristics that get a bit more complicated, but you don't want anything down there because you want to be able to start from a clean slate and just start out from that. And so you know what that looks like for you before you get the lease, and then when you go over a healthy mussel bed, of course it needs to be a really thriving mussel bed but when you go diving on it, it's amazing to see the type of life; there's animals, and fish and, and various crustaceans everywhere. That just creates like . . . It's like creating an artificial reef, that there's food, then suddenly everything will follow the food.

[0:12:28.1]

MF: And so you're actually physically going down there to survey the—excuse me, to survey the area?

AD: Before we got scuba gear we used cameras on cables, but now I've got scuba certified it is looking at it yes. And most of it's quite shallow, so at low tide you can go round with the skiff on a good, a good calm day and you can see the bottom.

MF: And then how do you pull the muscles up?

AD: We have a, we have a custom built box drag that my dad and I designed. So mussel biology, they are filter feeders. And so when the mussels filter the water, especially when they're right by the seabed, there's a bunch of fine silt particles in it and the mussels basically kind of goop this together and spit it out, it's called pseudo feces. Now if you have a very healthy mussel bed, there's a lot of feeding activity going on, so all that spitting out, the muscles kind of keep climbing up on top of it. So when you, when you've got the adult mussels, you've got the actual seabed, your harder sandier layer.. And then you've got this fine goopy mud that's kind of a yellowy color oftentimes, between the mussels and the bed. And so if you have a drag that you designed with a cutter bar, it has basically a flat bar sticking it—sticking forward. And by fine tuning your cable length and boat speed you can kind of set how high up that flat bar runs above the actual bed and you can shave right through that pseudo feces layer without ever digging into the bottom and you still take all the muscles off the top. Then you've removed the protective coating above them above the pseudo feces so they can wash away, and you start back with a completely clean slate with absolutely nothing changed.

MF: And that's that's what the mussels like when they're settling down.

[0:14:05.6]

AD: Yes exactly. They kind of—and then they all can kind of clump to each other because you want them—mussels like to hold on things with their byssal threads, but for practicality reasons you want them to be holding onto each other, not any substrate. Because for one thing, if you take this, if they're holding onto the substrate, you can't help but take the substrate up when you harvest them. And when they're harvested, when they're grabbing onto each other they keep climbing and creating that good pseudo feces layer allowing for harvest without damaging anything.

MF: Hm, interesting. And so all of this, all of the considerations of the biology are don't—don't plant the, the rope growth method and all, because their—all of their pseudo feces is just sort of dropping in the water column?

AD: Yep, and can actually cause trouble because you, because . . . This is where I'm not an expert on rote culture, but they've had trouble with anoxic zones underneath rope culture if there's not enough current. If there's enough current in the rope culture area that doesn't cause trouble but because you have, if you think if you have a rope, you've basically got a 50 foot tall stack of mussels. So on kind of a footprint, you've got a lot of muscles on a small footprint, and so the pseudo feces can't wash away. We use a much larger area but we don't go vertically up. So you've got a much larger division of it.

MF: Interesting. What about issues of concern to you in the communities where you work, whether it's waterfront access or tourism or cultural changes?

[0:15:35.7]

AD: Waterfront access and tourism are always a concern. We end up finding places that we can easily get to our leases and most of it's public access beaches. Fortunately there are quite a few boat ramps up our way because we harvest by putting the tote in the skiff and then bringing the skiff into a boat ramp. The tourism is always—it's a little bit of a balance game because in general, especially around Bar Harbor area, there are some very, very rich people that have summer houses there, and they don't want to see anything happening when they're looking at the front lawn. So that's that's a bit of a balancing act of trying to be as unobtrusive as possible. But yet we still have to get our work done. And so that's kind of a potential area of concern. The moment honestly, aquaculture is booming in the state and that is really good for everyone. The—of course, it comes with its own issues where if any industry grows too fast you're likely to get people making mistakes, and if anyone makes a mistake all of us are impacted by it 'cause it taints the name of aquaculture. And that's, that's kind of a concern, making sure that the new people coming into the industry have the support they need, have been—know how, have the financial capability to weather something bad without cutting corners. And so that's where it takes the small companies are, of course, at the highest risk of going bankrupt, but they can also be the highest risk of various ecological problems 'cause for a lot of people if—it takes time before—you've got to work for a long time before you get your first paycheck with aquaculture. And in that time, if you start running out of money, it becomes awful tempting to cut corners. Where kind of as a, as an established business you, you can weather anything bad that happens.

MF: Right. What about toxins and red tide and that kind of thing you occasionally hear about. Does that, does that, does that create a problem for you?

[0:17:36.7]

AD: Yes. And that's probably tied to the warming waters but that's—they haven't proven full causality for that, and that can cause a huge problem for us, and it is actually one of the reasons why we're expanding into other forms of aquaculture that wouldn't [sic] be less affected. Because there's absolutely nothing you can do about it, and we would that our—one of the mitigation strategies is having geographically dispersed leases so if Frenchman Bay gets closed, we move to Blue, to harvest on the Blue Hill Bay and back and forth like that. But on the events where you, either for bacterial closure for high rain events, or for biotoxins closures, you can sometimes get most of the coast shut down. And that—you are not working then and that's a very expensive shutdown. But that's, again, it's part of the business.

MF: Yeah. What about—you mentioned that the industry is growing very quickly in Maine. Is there a concern that the supply will swamp the demand?

[0:18:31.7]



AD: No. There's . . . You could, you could feed all the protein needs for the United States off the Gulf of Maine if, if it was farmed. I'm not saying I'd want to see it farmed at that at scale, but the appetite for seafood in the world is so big and it's only growing. It is—you would need every bay full of farms to even be able to touch just the US's appetite for seafood. I mean an example for scallops: Maine harvests, comparatively to most other states, a tiny amount of sea scallops. But we still harvest, I think it was 500 thousand pounds of meat a year. We buy in more for scallops that are farmed in Japan, in Maine, than we harvest ourselves. The market for seafood is truly humongous.

MF: So you're, you're safe. You can, you can keep growing, everybody else can keep growing and . . .

AD: Yep. Oysters would be the only one I'd worry about market saturation with such a niche market, and that is growing faster than most other species. But as far as mussels go we haven't even scratched a corner. We are, we are probably less than 5 percent of the U.S. market as a state, and could grow plenty. Most of it comes in from Canada.

MF: Hm, I mean I suppose oysters, too, don't have that same flexibility to be frozen or precooked.

[0:19:48.8]

AD: Yeah it's a very, it's a high—it's a high expense, very niche market is the big thing with oysters. Although marketing, they've done a lot of good work with marketing very small farms compared to each other. And that's that's helping, but over the last few years they've started to see price fluctuations based on supply because it's almost growing exponentially it seems like every other week someone is applying for a new oyster lease.

MF: Hm, I just have to keep an eye on the time so we don't stop anybody from continuing.

AD: Yeah, no problem.

MF: But what about just stories, things that you've... Things that have happened to you or that have happened to your family that you would want to pass along to future generations?

AD: I think the biggest thing here is when we, when we started here, you had to be truly self-sufficient. If something broke there was no industry to fix it, to support it, you were the weird agriculture people that didn't know. So by that, we've had to do everything ourselves. It's—we're all welders, mechanics, divers, electricians, you do whatever you have to do. I mean just, just actually a couple weeks ago, our main water pump at the facility broke. And so in the middle of February, I have eight dives logged before winter, and I've done twelve dives under ice in the last couple of weeks. It is—you, you have to do whatever you have to do. We've had days I spent all day yesterday breaking ice and you—there is—nature can be a very hard task master in Maine, and you've just got to be harder (laughs)!

[0:21:25.1]

MF: But you think you'll, you'll stay here.

AD: Oh yes.

MF: This branch of the family is gonna stick around?

AD: I'm not going back. My my daughter has a pair of muck boots. We had her—she's almost 2 and we had her sweeping the plant yesterday.

MF: Nice. Would you be happy to see them continue the family business?

AD: Oh definitely. That would be my, that would be my hope of course. Like any multigenerational, it has to be their choice otherwise you lead to all kinds of conflict. But I'm hoping that the business continues to grow and can provide a really high quality of living for them and provide them with a job going on for future generations.

MF: Just have to make sure your kids study something really boring at college.

AD: Or well they better be, they better study something useful enough that they can earn their keep. They can't earn their keep, they're out (laughs)!

MF: Any other concerns or issues or things that sort of spring to mind that . . .

AD: I mean, there's always concerns, but business at the moment, one of the risks—risks that we seem to be seeing is the green crab population has exploded which is creating more pressure on the seed supply for the leases. But it's a, it's any business. Aquaculture is continually evolving and improving. And so one of our current projects is to go for hatchery spat collect—spat, and catch the spat on ropes, grow it out there and get it to the size where it will survive on the bottom, sub-tidally without using any wild spat caught. And that is a—that's a current concern that's causing trouble. But again it's . . . You automate, you make it you make things efficient enough that you can afford to do them financially, and you can overcome almost any problem.

MF: So the problem is that the green crabs eat the, the tiny seeds?

[0:23:13.1]

AD: Mm hmm. Very tiny. Basically the way mussels reproduce on kind of a grand scheme is they're broadcast spawners, so they spawn in their millions and trillions and billions. And they, they get fertilized in the water and float around the water column for a while. At that point a lot of them get eaten by copepods. But still, a humongous amount settle down onto the onto the ocean bed. And when they settle down onto the ocean bed, everything eats them. It's shrimp, crab, fish, lobster, everything eats baby mussels because they're really easy to eat. And so the way the mussels have evolved to deal with that, is they settle in such large numbers that all their predators eat as quickly as they can, and they can't eat all the mussels before some get too big to be eaten. And of course adding a large group of predators like a large amount of green crabs, that

barrier to where they survive gets higher and higher. And so you need more and more natural settlement to see anything come out of it at the other end, which is one of the reasons why you're still getting a lot of mussel set in places like Blue Hill Bay that hasn't had a good wild seed set out on the bottom in years. But on ropes you'll still get a good set because the predators can't get to them there so there's mussel spawn floating around, but they don't get eaten.

MF: So there's plenty of there's plenty of spawn out in the water.

AD: Yes.

MF: But once it settles, then it's, then it's fair game.

[0:24:34.7]

AD: Yeah exactly. And it does get eaten by the copepods in the water column, but that the density of copepods hasn't really changed that much over the years, so it's still able to settle. It's really once it hits the bottom it seems to be that that's where the real cutoff is.

MF: Interesting, I guess similar for clams.

AD: Yeah exactly just like clams! It's most bivalve species have the same problem. Similar for scallops too, actually.

MF: Thank you. This is great!

AD: No problem. I know I don't sound like a standard voice of Maine.

MF: It's wonderful. No. I think that that's exactly what they're going for they want to get, get as much diversity as they can.

[0:25:15.1]