

NCGA Consider Corn Challenge II – Webinar Transcript

(View the recording here: <https://9sig.co/2RWgBZB>)

Speakers:

Jim Bauman, *VP of Market Development, NCGA*

Sarah McKay, *Director of Market Development, NCGA*

Nathan Danielson, *Principal, BioCognito*

John Hannon, *COO, Vertimass*

Kevin Andrews, Ph.D., *Senior Program Manager, NineSigma*

Moderator: Jonathan Jakischa, *NineSigma*

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Jonathan Jakischa: Good morning everyone and welcome to the NineSigma webinar for the [NCGA Consider Corn Challenge II](#). My name is Jonathan Jakischa from NineSigma, and I'll be your host and moderator today. Please note that this webinar is being recorded. The recording and transcription will be made available on the NCGA Consider Corn Challenge page.

Let's review our agenda for today. After I introduce our speakers, they will discuss the project in greater depth. Then we'll take some time addressing your questions during a live Q&A session, followed by a brief summary of project information, including how to get more information or assistance. As we proceed through today's presentation, please feel free to ask your questions at any time. We'll keep track of your questions and respond to them during the Q&A portion of the webinar.

Should you need any information or assistance outside of today's webinar, please feel free to contact the NineSigma Provider Help Desk at phd@ninesigma.com. If you didn't get that email, don't worry. I'll have that information for you again later on in today's webinar. At this time, I'd like to introduce our panelists for today.

First, from NCGA, we're joined by Jim Bauman, VP of Market Development and Sarah McKay, Director of Market Development. Next we have representatives from BioCognito and Vertimass. First from BioCognito, we have Nathan Danielson, Principal, and from Vertimass, we have John Hannon, Chief Operating Officer. From NineSigma, we're joined by Kevin Andrews, Ph.D., Senior Program Manager. Everyone, thank you very much for joining us today. We're looking forward to an informative presentation from you all. We'll begin with Sarah McKay from NCGA. Sarah, could you please give our attendees an overview of the NCGA?

Sarah McKay:

Thank you. First, we wanted to share a little bit about our background and who National Corn Growers Association is. We are a grassroots organization of 40,000 members from across the United States. We're a federation of our state corn grower associations and through this network, we represent the interests of all 300,000 corn farmers in America. NCGA's mission is to create and increase opportunities for our corn growers. From our perspective, one of the best ways we can create these opportunities is to continue to develop new markets for the corn we produce now and into the future. Next slide please.

In 2015, NCGA developed a strategic plan. As part of this plan, we developed and emphasized a renewed vision for American corn production, and that is to sustainably feed and fuel a growing world. To meet this vision, we set a strategic objective to establish at least three new uses for a minimum of 75 million incremental bushels by 2020. Accomplishing this task fell upon the growers and staff who make up our Feed, Food, and Industrial Action Team who are also sponsoring this challenge. Now to tell you a little bit more about our motivations, I'll turn to Jim Bauman.

Jim Bauman:

We often hear, why this challenge? To state it simply, US corn farmers need new sources of demand to meet their growing production efficiencies. The chart on the screen illustrates our annual carryout, where the remaining annual volume of corn once demanded was extracted from production. As you can see, corn farmers continue to produce at a level that exceeds demand, leaving us with a carry out. More recently approaching the 65 million metric tons to almost 70 million metric tons.

US farmers are the most productive and sustainable producers of corn in the world and are in a strong position to support new uses of corn while continuing to exceed demand in which there are some customers like animal agriculture, food, and ethanol.

Next slide. More importantly, U.S. corn farmers continue to do more with less. In the last 10 years total production has grown by 12% while on 4.4% fewer harvested acres, thanks to a production yield that has grown by 17%. The overall result is an affordable, sustainable, and abundant feed stock for corn customers. Once again doing more with less.

As we engaged our partners at NineSigma for the second Consider Corn Challenge, the first step was to once again decide how to focus the contest. Historically the U.S. corn crop has been split into four primary markets. The largest being domestic livestock feed, followed by biofuel, exports, and the smallest piece of the pie being food and industrial products. Continued growth within these traditional markets is crucial for U.S. corn farmers. However, corn production efficiencies have outpaced these traditional markets and are forecasted to continue to exceed demand in the future.

NCGA's farmer leaders believe that the bio-based chemicals industry represents the strongest potential source of new demand for US corn. The combination of

evolving consumer preferences, advances in processing technology, combined with a modern production of corn positions corn extremely well for this particular challenge.

Jonathan Jakischa: Great, thank you Jim. Sarah, As Jim mentioned, NCGA ran a previous version of this challenge. Could you tell some of our listeners about the outcomes for that first challenge?

Sarah McKay: Absolutely. As mentioned, this will be our second Consider Corn Challenge. [The first one](#) launched in June 2017. We announced the winners at Commodity Classic in February of 2018.

We had 33 submission from eight countries. Our \$150,000 prize pool was split between our six winners, with each receiving \$25,000. On the screen you'll see a list of our winners last year and a little bit about who they are. After winning the Consider Corn Challenge, many of our winners received further investment offers, went on to receive additional series funding, and others are gearing up for pilot plant trials.

To tell you more about their experience, the last Consider Corn Challenge, and where they are now, I'll turn it over to John Hannon from Vertimass.

John Hannon: Yes. Good morning. There are three things I thought I'd mention about the contest that we found very fascinating. First was why did we apply? The Vertimass technology is very interesting. It converts ethanol into hydrocarbons. So we saw this as another way to potentially increase corn demand, by bypassing the blend laws.

The idea was to convert ethanol and make more ethanol, convert it to other hydrocarbons such as gasoline, diesel, and jet fuel. That in turn, by bypassing the ethanol blend law, would allow you to make more corn in the United States. We did, just from a general standpoint. We think this kind of growth is huge and so we thought, number one, that we fit very well into the contest. That's one reason why we applied.

Secondly was we thought the application that we worked on was very good in regards to honing your story, honing your technology, really to make it as simple as possible. So anyone not familiar with the field could understand it. So we thought that was a nice way to go after this.

Those are the two main reasons why we liked it. Of course, the funds were great as well.

We were impacted by the award. Internationally, as well as nationally in the United States, it helped us talking to more ethanol producers, and kind of opened a lot more doors than we would expect. I think this was a filtering process for that. As well as internationally. We've talked to folks in Brazil, who

are interested in converting their ethanol into jet fuel, for example, and the one thing that they do state is, "Hey, we saw you on this National Corn Growers Association, as a winner." It's really opened up a lot of doors, kind of give us a little bit of notoriety.

I think, finally, the outcomes of the award have really been using the cash prize to travel around to these potential clients (who) are interested in the technology, and that's been a great way to pay for this networking and travel, so. That's kind of what I think about the award. It's very worthwhile and as you can see in my quote, we saw this as a wonderful opportunity to showcase the technology and our vision of it. It really helped us network more and open more doors than otherwise we would have been able to do.

Jonathan Jakischa: Great, thank you John. Turning back to Sarah from NCGA, we've heard about NCGA and the first Consider Corn Challenge, could you tell our listeners about this newest challenge?

Sarah McKay: Absolutely. So why The Consider Corn Challenge II? We know that we're not alone in this belief about a new, renewable future. There's a significant number of researchers, like you, that are out there looking at new ways to produce primary chemical building blocks. What we are asking for is researchers to share their ideas through this open innovation format. We launched this challenge on October 30th, and we ask you to submit your proposals by March 20th.

At that point, we will have a panel of industry experts evaluate the proposals and help us select the idea that wins. We will publicly announce the winners at BIO World Congress in July of 2019.

Now I'll turn it to Kevin Andrews with NineSigma to tell you more about how to participate in the challenge.

Kevin Andrews: Thanks, Sarah. So as far as your participation ... there are a couple of assumptions for your proposed approach. You should use one of the core components in this diagram. Can be either the corn kernel or any of its co-products.

The other one is you have to already have demonstrated your proposed technology at laboratory scale, producing at least milligram quantities. You have to already be working on your approach. You're not going to just submit a concept. It has to be something in progress.

And, as far as your response, you'll receive better scores for the following: potential for rapid commercialization, largest volume of corn used, empowering technology that provides access to a new market, fourth, demonstrable team history of success developing a path to commercial or industry scale for other projects, fifth, the team has to potentially identify matching funds of support or

potential commercialization partners. Lastly, providing a concise but impactful description of all of the above.

Now, on the next slide, the technical information. So, in terms of approaches that are not eligible. We are not looking for food. We are not looking for applications on sweet corn, and we are not looking for incremental approaches that just sort of bump ... cause a little bump in utilization. We're looking for big impact.

So keep those in mind as you're contemplating a response.

The next slide, your approaches need to meet these key bullets. Please refer to the challenge summary for a full description of the requirements for the challenge.

Next slide. Actually the next two slides outline the elements of your response. It is important that you include all of the requests elements in that non confidential response. If you leave something out, you're at a disadvantage with respect to the other responses. Next slide.

Okay so just quickly have a look at the rest of the submission requirements listed there. Then we'll move to the following slide, which talks about the award.

This Challenge II has an award of \$150,000 that is going to be split equally between three to six winners. Meaning that if there are six winners, they'll each get \$25,000. If there are three winners, that they'll each get \$50,000. The contest will in fact disseminate \$150,000 to the winning pool.

In terms of added funding, there is an opportunity, potentially, that either the NCGA, or state, or other partners could explore additional funding for your entry.

Lastly, the winners are going to be announced in July, on July 8th at the BIO World Congress in Des Moines, Iowa.

Jonathan Jakischa: Okay, great, thank you Kevin.

It's now time for the Frequently Asked Questions. These are questions that are either common to NineSigma Challenges or have already been asked via the NineSigma Provider Help Desk. I'll ask the questions and I'll pass them over to the appropriate respondent to reply to them.

Our very first question in the FAQs. What happens to my IP if I accept a prize?

Kevin, how about you take that one.

- Kevin Andrews: Sure. You maintain ownership of your intellectual property. You're going to grant permission to the National Corn Growers Association the right to examine that intellectual property as they determine the winners for the contest. If you're a winner, you may be asked to sign a non-disclosure agreement with NCGA. Please refer to the terms and conditions for the challenge, specifically section nine.
- Jonathan Jakischa: Okay and actually, before we proceed to our next FAQ, for our attendees, if you have any questions, please feel free to submit them via Q&A chat box. We're coming up on that Q&A portion of today's webinar shortly. So we'll be getting to your questions in just a few moments.
- Our next question I think might be best addressed to the NCGA. Who is going to be the ultimate licensee of this technology? Can NCGA assign the IP to some company? Jim would you like to take a crack at this one?
- Jim Bauman: Absolutely. Yeah so as Kevin just stated, the goal of the contest is not to assign any rights to the IP to NCGA or our partners. The goal of the contest is to let NCGA highlight your project, your submission, and help make connections with downstream partners, stakeholders, etc. that may be able to help commercialize your project.
- So, the end of the day, we're just trying to help connect you, bring a little bit of attention via recognition, etc., to your project, but ultimately help you along that pathway towards commercialization, making connections along the way.
- Jonathan Jakischa: Okay. Thank you Jim. I think our next question might be best addressed by NCGA as well. The prize doesn't seem adequate for funding my proposal. How will my proposal be funded?
- Sarah, would you want to take a chance on this one?
- Sarah McKay: Sure thing. So we recognize that the prize pool may not cover the full cost of implementing the proposal submissions and implementing the ideas, but the value in this Consider Corn Challenge, in addition to the prize, is as you heard from John, the value that we bring when it comes to making connections and also helping with notoriety and bringing some media attention and connections out of winning this challenge.
- Jonathan Jakischa: Great, thank you Sarah. For our last FAQ, I think we'll turn back to Kevin Andrews from NineSigma. Kevin, would a list of commercialization partners, and why they would be a good fit, be important?
- Kevin Andrews: The short answer is yes. Please include that in your response.
- Jonathan Jakischa: Okay. Very succinct. Thank you Kevin.

Nathan Danielson: Just to add one other thing to all of these, this is Nathan Danielson, the reason that we wanted to do this at BIO is that we think that, that will put the winners in front of a number venture capital and other stakeholders in this industry. So it should give a really nice opportunity to actually meet with people who can further your project, either through funding or through strategic means.

Jonathan Jakischa: Great. Thank you very much for that add-on.

Okay, ladies and gentlemen, for our attendees, we are now proceeding to our Q&A portion of today's webinar. If you have a question, this is an excellent opportunity for you to get your questions answered directly by our speakers today. As I mentioned, you can ask your questions via Q&A chat box. If you think of a question outside of today's webinar, don't worry. We'll have some information in upcoming slides about how you can get information back from our panelists.

If we don't get to your question during today's webinar, again, don't worry. All the questions that are asked during today's webinar will be included with the transcript. So even if you don't hear your question answered live, it will be answered. You'll be able to get that information.

So with that in mind, we'll begin with our very first question.

First question, is it possible to submit more than one idea?

Kevin, I think we'll hand that one over to you.

Kevin Andrews: The answer is yes. In doing so, please use slightly different title for each response, so we can tell them apart. In fact, it's helpful if you include in your title, number one and number two, for example.

Jonathan Jakischa: Great, thank you Kevin.

Our next question I think might be best addressed by representatives from NCGA. Is there a preference for usage of one fraction of the kernel over a different fraction?

Jim Bauman: Sure, I'd be happy to answer that.

No, as long as we're looking at total incremental grind, increasing total incremental grind for our growers, that's our goal. Growing that volume of corn that's being utilized, whether that's through the kernel, well I should take that back, the preference is for the kernel, but as far as how that kernel is being fractioned, et cetera, that's really up to the submission. The really growing demand for the corn kernel. Now, while we are also open to stover and other things, there's a slight preference given for corn kernel utilization.

- Jonathan Jakischa: Great, thank you. Our next question stays with the NCGA team. Do you prefer a more mature, ready for commercialization technology, or are all approaches of interest, regardless of maturity? I think you touched on that a little bit.
- Sarah McKay: Yeah, this is Sarah, I'll take it. We are open to all stages. You have heard it mentioned that it has to have been produced already at a laboratory in the milligram level, but we're open to all phases and pathways along the journey to commercialization.
- Jonathan Jakischa: Okay. In a previous slide you mentioned significant market demand, could you give an explanation as to what you mean by significant market demand?
- Jim Bauman: Sure, I'll take that one. We're talking about significant market demand. We're not talking about hundreds of bushels or thousands of bushels. Ideally we're looking for tens of thousands, hundreds of thousands, or even millions of bushels of demand for U.S. corn growers. Each year our production continues to increase through yield growth alone at about 150,000,000 to 200,000,000 bushels of corn each year. That's just through the growth of the yield curve. So we're looking for projects that will help whittle that amount down.
- That's not to say that there's not some great smaller users of corn out there, but this contest is really focused on those that have the potential to move that needle.
- Jonathan Jakischa: Okay. Our next question has just come in. It's talking about IP. Is it mandatory for the winners to work on the commercialization of their idea? Is it okay if the participant sell his or her IP after winning?
- Jim Bauman: Yes. The answer to that would be yes. We are here to help on that pathway to commercialization, but once again, since the ownership of the IP remains with the submitters, or those who submit the project, if there's pathway there for them to want to sell that IP to another company that helps get it to commercialization, we support that as well. One again, that's one of the potential pathways that comes out of the media, or the notoriety that comes from winning this contest. It's helping to make some of those connections
- Jonathan Jakischa: Okay, great.
- Our next two questions actually deal with the development and development partners. Our first question, are you interested in approaches that do not currently have development partners?
- Jim Bauman: Yes, we're definitely noticing those approaches as well. We realize that especially the earlier phase of new uses development, you may not have fully vetted out that process as far as who you want to partner with. It's a great opportunity for the contest to fit there as well. There's also an opportunity for

NCGA and/or a Corn state association partners to potentially become one of those partners on that pathway as well.

So there's lots of options. Once again, it's really about getting information about your idea out to a broader audience, giving it the recognition that it deserves, and then helping make those connections along the pathway to commercialization.

Jonathan Jakischa: Okay, Jim building on what you just said about options being available, the next question is will NCGA be able to identify possible commercialization partners? Is that an option that exists?

Jim Bauman: Absolutely. As we've already touched upon a little bit, NCGA does some direct investment, as do our state corn associations, but more importantly we do have a network of VC partners and industry partners out there that have a history of investing in this area. So, depending on the project, we're able to help steer some of those conversations, make connections, and ultimately try to set the landscape that allows you to be successful moving forward.

Jonathan Jakischa: Okay, very good. Thank you Jim.

Staying with the NCGA, if selected as a winner, who would we demo the technology for?

Jim Bauman: It really depends on the submission and the project's focus. If it's a technology for example, like Vertimass, you're looking to partner with ethanol producers as your feedstock or your conversion. There's obviously opportunity to work with ethanol plants that we can get you in contact with that have those demonstration situations.

Like I said, it really depends on what the feedstock is being used, and what the bio chemicals that's being produced as far as what that demonstration opportunity looks like.

Also, the winners, if you're selected as one of the winners, there may be an opportunity at the award announcements to further discuss some details about your submission as well.

Nathan Danielson: The one thing I would say, is we aren't expecting through the submission process to see actual ... there's not an actual demonstration component to it. There is the option to put in a video if you'd like to show your process. We'd be very interested to see that. Then just whatever validation of scale, process, et cetera you can put into your proposal is going to be very helpful, but there is not a demonstration, per se, component to it at the time of the contest. At the time of the evaluation.

Jim Bauman: Thank you Nathan. Great point about the video. That's definitely been beneficial for those that have submitted in the past. It helps explain very easily to the judges as far as individual processes.

Jonathan Jakischa: Nathan, Jim, thank you very much.

Our next question has just come in. Can you give an example of proposals which provide only incremental improvements for established commercial processes. I think the submitter is trying to understand how they can determine whether or not their technology is an incremental improvement or a game changing technology. Can you guys speak to that a little bit?

Jim Bauman: I'll take a stab at it. I'm sure Nathan might jump in here as well, but one that pops to mind off top the head, is small improvements in the fermentation of corn to ethanol. That process is already getting close to theoretical max as far as the efficiency conversion there. So there wouldn't necessarily be a lot of benefit to corn farmers by improving that efficiency as far as converting corn to more ethanol.

Another one, along the same lines, is any project that potentially replaces existing products from corn. So that could be a corn based chemical today. You have a new process that basically produce, replaces on a one to one basis. Once again, not interested in those types of submissions.

Ideally we're talking about more than ... we're talking about projects that use more than 10s, 100s, or even 1,000s in bushels of corn. We're talking about tens of thousands, hundreds of thousands, or even millions of bushels of corn. Those are the types of projects that we're really interested in.

Nathan, anything you want to add to that?

Nathan Danielson: You know the one thing I would say is on changes to processes. If you can make the case that your change to a process will change the economics in such a way that it will make the product much more competitive, hence bring in more corn to be ground, that would be really interesting.

So to the degree, if you do have ... Jim mentioned ethanol. If you had something in the ethanol process or something for chemical that is going to change its ability to reach the market place, or in the case of a chemical, if you have a second process that may setup where downstream users can go from a producer one or a producer two, and all of a sudden, you know there is diversity in the market place. Those are, I think those would be interesting as well. It's just making that case that there's something about your product, or your process, and your invention that will make corn more exciting for the downstream users. Sometimes that may just be a second approach to a chemical.

We do need that case made. If it's just displacing a bushel for a bushel of corn grown, that's not going to be interesting.

Jonathan Jakischa: Nathan, Jim, thank you very much.

Our next question, are there specific new markets that are considered more valuable than others?

Jim Bauman: I think-

Go ahead Nathan.

Nathan Danielson: I would say on this, we are very interested in looking at new industrial chemicals. So, polymers, solvents, things of that nature, probably are of greatest interest. Again, the last time we ran this, we were impressed with the range of really interesting uses, so at the end of the day, what we're trying to do for the growers is to use more of their corn. So, if you've got something that doesn't fit perfectly into a bucket, as long as it uses a significant amount of corn, it's going to be of interest.

Jonathan Jakischa: Great. Jim, was there anything that you wanted to add there?

Jim Bauman: No, Nathan covered that perfectly.

Jonathan Jakischa: Fantastic, then we will move on to our next question. Our next question is, "Will NCGA fund non-USA based projects?"

Jim Bauman: Yes, since the contest is open globally, we are open to those submissions outside the US. Ultimately the goal is that ... I guess there should be preference in the submission that has potential pathway in how it may impact US corn, also demand for US corn, but we realized that the US is not necessarily the only country in the world that has scientists and/or innovators that are looking into ways to convert corn into bio-based chemicals.

Jonathan Jakischa: Okay. Our next question, for the individual that submitted this question, if I don't quite get the intent of your question, please feel free to resubmit the question and we'll try to get to it again and get you the information that you're looking for.

This particular question I think is going to whether or not this would be something of interest to the challenge. I would be interested in organic byproducts extracted from corn, particularly chiral chemicals. Is that something that would be within the scope of the contest? Again, for the people who submitted that question, if I'm missing the intent of your question, please let us know.

Nathan Danielson: I'm happy to take this one, Jim and Sarah. That would be absolutely interesting. That's one of those things that I think could drive corn by improving the process, economics, and obviously chirality and getting chiral molecules has the potential to have very big benefits for producers. So, absolutely.

Jonathan Jakischa: Okay, very good.

We do seem to have slowed down a bit in the questions coming in. I think we've got maybe one or two more questions. So we'll go ahead and go through those. As those questions are coming in, for our attendees, as I said, if you have questions, please avail yourself of this excellent opportunity to get your questions answered. Likewise, if you think of a question outside of today's webinar, on an upcoming slide here, we'll have information about how you can request additional assistance.

Okay, our next question ... to Jim from NCGA, will NCGA consider joining an already existing pilot effort of corn to bio-based chemicals?

Jim Bauman: Yes. The contest is open for the entire development pathway. So if you are closer to that pilot phase or closer to commercialization, definitely interested in hearing about those projects as well. We, once again, we realized that the prize money may not be the biggest prize out there, it may not necessarily be what drives that pilot process forward, by any means, but once again, the connections, the publicity, that comes from potentially winning this contest, would definitely be beneficial, I think, to a project that's even in the pilot phase.

Jonathan Jakischa: Okay.

Our next question actually jumps back a little bit. Regarding non US projects. For the representatives from NCGA, are you prepared to say how many non US projects you have funded?

Jim Bauman: So, based out of last year's competition, there would have been out of the six winners, there was one that had both a US and a European presence. So, I guess in that situation, I'd say there was one that was an outside the US company. So yeah we have a history at least of being open to those and the winner's pool. Once again, the key there is in your submission, sharing how your process could positively impact corn grind in the US field corn industry.

If it's a process that's only specific to a specific corn industry outside the US, probably not as exciting to us, but if it's a new process that can help grind additional corn in the US, then definitely something that's interesting to us.

Nathan Danielson: And I think it should be noted, too, that we did not have a whole lot of proposals outside the US. I believe we had either three or four. So the outside of the US ones had a pretty high level ... a pretty high hit rate.

- Jim Bauman: Good point.
- Jonathan Jakischa: Jim, Nathan, kind of just off the top of my head here, if a proposed technology was not really all that different, but it represented access to a new market, for NCGA, would that be something of interest? You said really technologies, but an existing market, but what if it were a market that NCGA typically doesn't have access to? Would that be something of interest?
- Jim Bauman: I think it would be of interest, but there has to be some pretty detailed explanation for why the new approach may work for this new market. If it's the same technology that's been around for quite a while, and it's more just having a connection in that market, not quite as maybe interesting as a technological tweak that does make it more interesting for that new market.
- Nathan, I don't know if there's anything else you want to add to that?
- Nathan Danielson: No I think that sums it up.
- Jonathan Jakischa: Okay, great.
- We've gotten a few more questions coming in. What if I'm not selected as a winner for this challenge? Will NCGA will help find funding, or could NCGA help find funding?
- Jim Bauman: Absolutely. The answer to that is definitely. We've actually did that with last year's submissions as well. Following the announce of the winners, we went back through all of the submissions and worked as hard as we could to help make connections, make introductions, for those submissions as well. And also review them to see if there were some NCGA or state partners maybe interested as well. So, by no means, if you're not one of the announced winners, doesn't necessarily mean that there's not efforts under way to help try to make some connections as well.
- Jonathan Jakischa: Okay. This next question kind of goes to information included in a response. Is it up to the participant to predict the market value for a proposed solution? A follow on is what if the participant is unable to do so given the resources and/or data that is currently available?
- Jim Bauman: So yes, we do have a preference that the submitters at least take a stab at what the market potential may be for their product. Realizing that they may not necessarily be perfect in that estimation. The key there is providing enough details as far as how they built their estimation for their market potential. So that we can back into that. Also, and Kevin...actually I'll refer to you, if there's specific questions along those lines. Because I can't remember, did NineSigma provide a little bit of support in that area as well?
- Kevin Andrews: Not in the last contest.

Jim Bauman: Okay.

Nathan Danielson: One thing I might say is that the judges we will ultimately have reviewing these documents are going to be experts in the field, and we anticipate that they will have some market knowledge that they'll bring to bear. Certainly that happened last time. So I would encourage people to do their best guess, to show your math, and then to the degree possible, we'll be able to have some analysis and determine if ... even if you're not exactly right on the market side of the market numbers ... pricing, et cetera. I think we can see if it moves the needle in the right direction pretty easily.

Jonathan Jakischa: Okay. It looks like we have just one more question. So we'll go ahead and ask that question. Then we'll proceed to telling our attendees where they can get additional information should they need it.

Our next question I think goes to whether or not a particular approach would be of interest. Submitter says, "We have developed a process for editing tapioca starch to rubber. The question is whether or not using a corn starch added to rubber, that would kind of be in scope for this particular challenge." Again to the attendee who submitted this question, if I've missed the intent of your question, please let us know. If we don't get your information today, we will still include it in the transcript.

Jim Bauman: I think the short answer on that would be yes. So long as they can kind of show what the value of the starch would have, and anticipate what size market they might have. They can use the tapioca numbers. I think the one thing that would be important on this, is if they're not going to demonstrate that they've done actual corn starch, they should do an analysis where they talk about why they believe corn starch would be a good surrogate for tapioca starch in this application.

Jonathan Jakischa: Okay. Alright. So, for our attendees, it looks like we have exhausted all of your questions at this time. With that in mind, I will proceed to our next slide.

Again, as I've said several times, don't worry if you think of questions outside of today's webinar. The next slide will have some additional information for you.

So, to our attendees, what can you do today?

First and foremost, you can visit the [Consider Corn Challenge II webpage](#). The URL is up on your screen there. Click on that page and you'll have access to a whole host of information about this particular challenge. Also, while you're there, if you don't already have a NineSights account, that would be your first step in order to respond. Click in the upper right hand corner, click on the register button, complete the registration process. Once you do that, you are in a position to begin working on your response. Don't feel like you need to complete your response all in one go - the system saves automatically as you're

advancing through the online response form. You can get access to your drafts by your Control Center. You'll find your Control Center in the top row of your page.

So, what happens if you need help outside of today's webinar? Don't worry, we've got you covered. You can contact The NineSigma Solution Provider help desk. Either via email or by phone. The email address is phd@ninesigma.com. In your email let us know what your questions are. If they're technical questions, we will refer them to NCGA. If they're more process related questions, Kevin can answer those.

One way or another, we'll get you the information that you're looking for. Likewise, if you have any questions and you want to give us a call, you're more than welcome to do that. The phone number is area code 216-283-3901. That number again, one more time, is 216-283-3901. Please feel free to reach out to us and let us know what questions or concerns you have, and we'll get you the information that you're looking for.

Last and certainly not least, the submission deadline. **The deadline to submit your response for their challenge is March 20, 2019 at 5:00 PM Eastern time.** That's a Wednesday. Please be sure to submit your response in advance of that time. We can't take any submissions after that time. I strongly encourage you, if you're interested in responding to this Challenge, login. If you haven't already done so, create your NineSights account, and begin working on your response. As I've said, you can work on it in several different periods of time, and come back to your saved drafts, and go from there. You just have to make sure that you've submitted by that 5:00 PM deadline. As I said, we won't be able to take any late submissions.

With that in mind, I'll go ahead and close out today's session. To our panelists from NCGA, BioCognito, and Vertimass, thanks you all very much for joining us. Kevin Andrews, thank you very much as well. The final reminder, today's webinar was recorded. The recording and transcription will be made available on the Consider Corn Challenge II webpage in just a few days.

Thank you all very much for your time today. We look forward to reading your responses. Have a great day!