



# **Cereals and Ag Development: For the Health of It!**

## **Q & A Transcript**

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**Presenter:**

**Curtis L. Weller  
Jefferson Science Fellow / USAID**

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*Male:* Thank you, Doctor Weller, we'll now open it for Q and A. Just as a little bit of ground rule. When you ask a question, please state your name and organization before asking a question and we're going to try to alternate between the online audience who I invite to ask questions via the chat window and our in person audience. And so with that, I open the floor to questions.

*Audience:* Max Rothschild, USAID. Curt, really interesting talk. You concentrated on human's as the consumers of these grains, these cereals. Have you given some thought to the fact that we probably need to think about cereals being used by both humans and livestock and how those interactions may be difficult to obtain the preferred situation in both cases?

*Male:* Have I given thought to that? Yes, I've given thought to it but Zachary would only allow me 35 minutes to talk, so...No, I think what you're alluding to, Max, is well, if anybody's been listening to NPR this week, they've been talking about meat in the diet. And you know, pros and cons relative to that, you know, and so that's a whole raging debate and I consciously did not bring that up as a part of that because you know, one, I just wanted to focus more on the human side of it. If I touch upon – see, there's a number of different aspects I could look at as far as livestock feeding versus human feeding. Some of the – in some respects, the nutrition, the understanding of nutrition, cereal consumption as it relates to feeding livestock or animal is far in advance some of that understanding of what you have relationships say between cereals and human, you know, the health aspect. But at the same time, typically, for animals, what you've done is tried to have the least amount of feed for the greatest amount of gain. So therefore you want to try and put – pack as much energy in to get it as much conversion – you know, to lower – to get your higher conversion rate. So – but for humans, some of the things that we want that we consider bad or lower that conversion rate, would probably be a good thing for humans to have into their diets.

Give classic example. Tannins. Tannins and sorghum. People have said, “Well, for feeding animals, tannins are bad because it slows down starch digestion or energy uptake.” Well, gee, would that be a good thing or a bad thing for humans? It might actually be a good thing. So therefore, if we're trying to base some of the feeding requirements or recommendations for humans upon what we know from animal studies, it's almost we should go counter to what we're doing in that regard. Does that – no, I've thought about it.

*Audience:* Hi. I'm James Lyngrom from the USDA. You talked a little bit about the resiliency or the – like flexibility of certain crops like in different time scales, different, you know, conditions, cold, over wintering issues. Could you talk or comment on any thoughts you've had about how cereal production or cereal consumption will be impacted, especially like in Sub-Saharan Africa, with climate change?

*Male:* Yes, it will. I'm not a crops specialist. I'm more of a processing. You give it to me, and I'll process it. All I can say is from my standpoint are we overlooking some of the African based crops from the standpoint of where they are in the world. You know, some of the things that they've seen over a period of time. What are the dollars that are being invested in – if we compare dollars invested in the big three versus the dollars that are invested in research versus the rest to me, I haven't seen numbers. I'd like to be able to get them. I don't know if I could. But you know, what's the difference in dollars invested and how does that translate to some of the things that you've seen here? To me, you know, it's a no brainer. I know from France. There's a big research program that's just recently got started in France where they're looking specifically at some of the cereals in Africa as far as to try and maybe flush out some of these things as it relates to climate change. Some of the nutrients that are available. Not a lot of time and effort has been spent, you know. It's just been small programs that are just continued on as it relates to some of these other. Rye, at one time, 40 percent of the bread in Europe used to be made from rye. Well, it's a small percentage now. What was that change? Was it part of a climate? Was it part of a just changes in dietary habits? Was more effort put into wheat research versus rye research? I don't necessarily have an answer for that, you know? Those are some of the things that I see.

*Male:* We have a question from online.

*[Inaudible female without microphone]*

*Male:* As far as why obesity – was it obesity or the BMI's in Egypt, I have no idea. That stuck out and I never really tried to track down and understand that. As far as whether I would promote growing native things in certain – well, I think to some

degree, in different parts of Africa, subsistence farmers, to some degree, already do that. If we're trying to maybe ramp up, if you're trying to look at things that would be beyond subsistence where you have more than, you know – if we're going to be moving to more of an urban population, you're going to need more than just subsistence. You know, somebody's going to have to produce at a larger, closer to commercial, scale. So therefore, if you're going to have those natives more native, then that would potentially be a – I guess, my way of thinking, we don't necessarily know enough about some of these others. I don't think we've necessarily tapped into the potential to fully understand that.

*Male:* Another question's from in room.

*Audience:* Norma Allewell, Bureau of East Asia and the Pacific State Department. Thanks for a great talk. It brought together so many different, interesting topics so I actually have many questions and I'm just sitting here trying to think which two to ask. So one of the things I wondered about was if there were trends in the United States in terms of what we're growing towards healthier grains. And then secondly, I hadn't thought that with global climate change, there's the opportunity, perhaps to shift to the grains that are grown in other parts of the world that are hotter and dryer, that are, in fact, more healthier. I'm wondering how conscious the big grain corporations are in terms of what's good for us and what the opportunities are.

*Male:* The – as far as trends within the United States relative to – I know that I have not seen numbers, so I can't really tell you for sure, Norma. I know that there are pockets within the United States where different grains are grown more as specialty type grains and so those are more trying to meet niche markets. Look at Bob's Red Mill. I would anticipate a fair amount of that is actually being sourced – of his products – are being sourced out of the US. Different parts of the US.

*Audience:* It is a niche and that's perhaps not a strong enough response. We're just nibbling at what's possible, so to speak.

*Male:* Well, it's niche, but I would assume that it's gotten bigger, you know, in terms of – Bob is just one example. There are other ones out there in terms of some of these different grains. I know that some large processing companies, if you look at like – I can name names but I know like three different, say, traditional flour milling companies have gotten into other specialty grains. So yeah, there's recognition, there's a consciousness with some of these processing companies that there are some potential for these. And they're trying to advocate those because there is – you know, there's – and I didn't include it in this presentation but – well, there were a couple of different whole grains type of – you know, there's a whole grains council in the US. There's a Grains for Health Foundation that's based out of Minnesota. Europe has got something – I think it's called Grains for Health. But these are kind of foundations and these are groups that are looking at this whole grain. And you know, I would invite you to maybe go look at some of their websites for different information cuz they will begin to – may address that.

On the second, as far as you know – and I assume you're talking about some of the larger grading companies of the world as it relates to if there's a representatives from those folks in the room, I would love them to answer that question cuz I don't feel I'm in any position to answer that.

*Male:* We have a question from online.

*Female:* Elser Culler from the American Society of Mechanical Engineers asks, “What kind of cultural barriers in developing countries are there to increasing consumption of currently minor grains?”

*Male:* Well, you know, to some extent, these minor grains are in some of the developing countries. So culturally, I don't know if necessarily it would be that huge of a jump. But I think some of that gets into policy issues in terms of what crops have been subsidized for different inputs. There are some policy decisions that would – it's probably more of decisions that are being made on the policy aspect, you know, either from a regional or from a country versus many cultural type things.

*Audience:*

Thank you again for a great lecture. And a very informative one, yes. I noticed from a couple of the slides you presented that some grains are a lot more nutritious and that included, like, millet, barley, sorghum. They're also more resilient to climate change. They're more resilient to drought and things like that. And you also mentioned that those were primarily consumed in Africa. And you indicated that the body mass index of the Africans, Sub-Saharan Africans, was also very good to excellent. You indicated that the cholesterol level also was very good compared to ours here. You indicated by contrast that we consume more maize in this country and also mentioned that maize consumption in Africa is on the increase. So that seems to me to be that Sub-Saharan Africans are going in the wrong direction. They're not increasing output of their nutritious grains that would keep them healthy and they're about increasing intake of maize. Is that because it's difficult to improve the yield from sorghum, barley and these are the grains or process them? Or is it because they just think that maize is better? Is it wrong education or why do you think so?

*Male:*

Thank you for making that observation. Part of the reason, you know, I feel that maybe we're in the situation we're in is because the amount of money that has gone into research and development related to the three major ones versus these minor grains. That's one aspect. But then, if – and this is where I kind of put my engineer's hat on – and I say, “Well, if you're a person that's processing something and you're a person that's looking at storing something and you're a person that's looking at...” Just relates to somewhat of working with the material, the cereal that has the larger kernels or that, you know. And corn or maize has the larger kernels. Historically, it's been larger. So it's easier to handle. From a handling and management standpoint and I think probably that has started the rock down the hill. And so it's just kind of kept rolling. And you know, this is Curt Weller's view of that, you know. And that's one thing that's gotten that rock rolling but is it at some point in time that maybe we step back and say, “Okay, should we really maybe stop this rock or put something in the way of this rock to kind of slow it down and maybe put some of our resources and some of these other things?” And to me, that is the debate that I would hope that we, as a society, would engage in

*Male:*

We have a question from the online audience.

*Female:*

This is another question from Blanca Gonzalez from World Relief and she was interested in the slide you shared on methods of processing and asks, “In terms

of processing, are there certain methods that can enhance the healthiness of a cereal, especially processes that can be done on a small scale even at home?”

*Male:* Sure. The example of – you know, I had up here nixtamalization. That's where you take maize – historically maize has been taken. It's been good in a Lyme solution. Chemical treatment cooking in that Lyme, allows some of the amino acids to be more readily available. Okay, so that makes it more nutritious. Other methods beyond that, at this point in time, there are some things that I think you could look at that as far as fermentation is, which are more or less biological in that regard that do make some of these products, you can do those at home. Do I have the magic bullet or the magic solution for a particular process that should be used at home is going to, you know, what maybe increase income or you know, really be the next greatest thing since sliced bread? No, I don't necessarily have that.

*Male:* We have time for one more question.

*Audience:* Kathleen Curs, nutritionist at DEI Development Alternatives. I had two – well first, I really appreciate the talk. It was a great overview, but it also, I think signals that we're finally going towards where we can talk about agriculture and nutrition and how we can make one work for the other. Because health and agriculture have been so separate that I think it hasn't done us much good on the under nutrition end, now the over nutrition side. The folks that NHI – this is on the American obesity issue – will say, “You can break down the different foods but basically, we eat too much. We eat too many calories.” And so I wonder if you had a comment about the whole cereal consumption, could that prevent obesity? So eating being the same amount if we change the quantity, could it reduce obesity or do we just really have to reduce the overall amount of calories we take in? And then the other one is more a comment on the grains. I think when we list the characteristics; maybe if we could also list the amount of labor it takes at all the stages. Labor to cook it, labor to grow it, labor to – you mentioned the storage a little bit. Because I just think some are much quicker cooking and so then that raises the demand for it. In addition to all the factors that you mentioned, including the research and the real preference for the big three.

*Male:*

Your two comments. The last one, that's interesting, you know? I'll have to think about that one a little bit more about, you know, labor involved. To me that's – boy, there's a lot of intangibles in that, so therefore, you'd have to be making a fair amount of assumptions as one begins to look as far as those inputs in particular is time. As far as – this is probably a more personal philosophy is, eat a lot of things, but don't eat a whole lot of a lot of things. So, you know, diversify your diet and keep your levels low. If we talked about what the USDA recommended there for that 49-year-old female. 2000 kilocalories per day. We're showing the average American over 3,000. That's a 50 percent increase over what they really need, you know? I don't think it takes a rocket scientist to figure out that, you know, we're eating far too much. Whether that's specifically any one thing, eh, you know, probably gets down more to sub groups within the population as far as whether it's refined cereals, whether it's meat products, whether it's more dairy products or whatever.

*Male:*

Well, with that, I'd like everyone to thank Doctor Weller for a great presentation.

*[Applause]*

The presentation as well as the Power Point will be up on Agro Links on the event page, as well as the screen cast of this even will come up in about a week and a half or so, 10 days. And you can hear the audio synced with the Power Point. We'll send out an invite to all those who RSVP'd that let you know when those are available. If you could take a moment to fill out the survey, both those online and in person. We take those seriously to help us improve. You can also give us suggestions and ideas for future Ag Sector Councils. Hopefully, you'll join us for July's Ag Sector Council. We're looking to have a presentation on fisheries and fish livestock. And with that, I thank you for joining us and have a good day.

*[End of Audio]*