

THE FALL ARMYWORM: A CLEAR AND PRESENT DANGER TO AFRICAN FOOD SECURITY

Speaker: Pedro Sanchez

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Introduction

Ambassador Kenneth M. Quinn

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Just like everybody wants to go to the ceremony, I'm getting calls and emails all the time about—"I've got to have a panel. We've got this terrific presentation." And when that happens, I try to accommodate them when I can. Laureates write to me about that. It's up to..., you know, say, "Oh, I don't have room. I'm always doing something." But we had the program all set, and Pedro Sanchez sent me an email, and so I'm sending him back my answer, "Pedro, come on. You know, the program is set." And then he explained to me what it was about. And I said, "Well, I can't fit a whole panel session in, but I'm going to find a way to give you five minutes to come and tell everybody about "the Fall Armyworm." So I'm looking around for Pedro. There he is, down here. Pedro, come up here. And I said, "I'm squeezing out time," because this is one of our most distinguished Laureates. And you've already lost 30 seconds of your five. No, I'm kidding, I'm kidding. So Pedro Sanchez, the 2002 World Food Prize Laureate.

Pedro Sanchez

2002 World Food Prize Laureate

Thank you. When Norman Borlaug about ten years ago came to one of these meetings and said, "There is a nasty virulent wheat stem rust named Ug99 that can really devastate wheat production in Africa and the Middle East," things happened; because he in his usual way started banging on the floor. And guess what? Ug99 is still around, but it's not a major pest.

Now we have something similar, a similar threat in Africa called "the Fall Armyworm," and three of us Laureates decided that maybe the three of us could raise the alarm about this. So Robb Fraley, the 2013 Laureate, Akin Adesina, the 2017 laureate and myself decided to make a call. And it comes at a time when Africa is doing great, when what you see here is that maize yields have increased now. The curve just changed to a different curve, with a 50% yield increase, which the numbers aren't great, but it's sure the beginning—things have changed.

So the Fall Armyworm in Africa started in January 2016, and I call it "A clear and present danger," we do. It could really reverse the gains already obtained in the last ten years that have been very, very good and product of many people sitting in this room. It's epitome of an invasive species. It's originally from tropical America, and it's been known in the U.S. since

1800s, and I have heard all sorts of anecdotal stories old farmers in the U.S. how the Fall Armyworm devastated the corn crops and many other ones.

So this is the larva that does the eating. The adult is a moth, and that moth can fly a hundred kilometers per night and moves... And it overwinters in South Florida; and it goes all the way to Canada, and there the winter kills it. The trouble in Africa is we don't have a winter to kill it. So it reproduces very quickly and has no dormancy and it feeds on more than 80 species. So we're talking here mainly about corn, but it also includes rice, wheat, sugar cane, vegetable crops and cotton.

It was introduced in West Africa, probably in Nigeria, in early 2016, probably by aircraft. And it's 90% certainty that it is a strain of Armyworm from Florida. Now to disqualify myself, I moved to Florida about a year before that, so I had nothing to do with it. Nevertheless, the household surveys of [inaudible] now shows the tremendous increases in crop losses, about 45% in Ghana, 70% in Zambia in Southern Africa. And what you see here is how quickly it has spread, basically, to all over Sub-Saharan Africa, and Europe is next.

So about 1% of the area planted to corn in Africa is affected now. That's about 300,000 hectares or 760,000 acres; that's only 1% of the area. It's estimated that will increase to affecting 7 billion hectares in 2018, and God knows what will happen in 2019.

FAO is coordinating efforts to produce the field manual, but the consensus... There's a lot of misunderstanding on science. This is what this insect does, and it does it to the whole thing, to the whole field. But the Fall Armyworm has been controlled in the U.S. and Brazil, and there are a lot of Africa-based scientists who are doing already a good job. And there's a sense of optimism.

There are controlled strategies, integrative pest management, which includes biological control, house plant resistance of breeding, specifically transgenic biotechnology, BT corn, which is probably an essential component of it – and it's not that simple also. Insecticides – lots of problems, more negatives than positives. There's a lot of problems with adulteration of insecticides in Africa as well as adulteration of fertilizers. Rapid seed production of tolerant cultivars of various crops are needed and very good agronomy and management.

So a bunch of us, that you can see us tomorrow at an early breakfast, from different parts of the world, have got together and call ourselves the Science Advisory Board on the Armyworm. And we hope to provide the science-based knowledge about this. I am not an entomologist. Those who have known me, you know I'm a soil scientist, but I'm scared to death about this. And so far in about half a year of being bold with it, I have yet to see any mention of it – “Ah, well, it's not that serious” and all that. Hopefully, it'll be controlled; it will never be eradicated. But hopefully, ten years from now we would say, just like Ug99, yeah, it's still there; but it's not a major issue.

I think the fate of African food security really hinges now on this clear and present danger. Thank you very much.

Ambassador Quinn

Okay, Pedro, good job. You've got everybody worried. No, rightfully so, rightfully so.