



## Zea's Wild Roots

For the last few years there has been big midsummer outbreak of disease on corn (*Zea mays* or maize) in the U.S. caused by a mold-like fungus. Derrick Hernandez and Maria Santini are students trying to understand the disease and come up with ways to fight it. They are hopeful that wild corn from Central America, called teosinte will be able to resist this fungal disease.

Last summer Maria and Derrick went to Mexico to study teosinte in the field. They had many adventures, and both got sick. Now we pick up the story back at home, later in the year, when Maria, her husband Marcus, and Derrick are having dinner together.

"As long as we've known each other, I've never asked. How did you two meet?" Derrick asked Marcus as the dinner got underway.

Between bites, Marcus replied, "I met Maria while working with OXFAM, a hunger relief organization. We were volunteers."

"Remember stuffing all those envelopes and making all those calls?" Maria said as she flashed Marcus a smile.

"I sure do. Hey Derrick, you'll be interested in this. When we were at OXFAM, corn crops were being lost in Africa due to some virus." "Really? Which one?" Derrick asked.

"Maize streak virus," Maria added. "And get this. It turned out that one of the teosinte species was resistant to the virus. Through plant breeding they were able to make corn hybrids resistant, too, and that offered real hope in Africa. That's when I knew I was going to become a corn breeder."

"That's a great story," Derrick said. "Do you know how come I decided to study corn diseases? I have this uncle in Kansas who has a big farm - 700 acres. He grows corn on most of it, as cattle feed. He tells the story of how, in the early 70's, Southern corn leaf blight hit so hard that his glorious green fields died in a matter of days. He really had to struggle for a few years to make up that loss. And it wasn't only his farm. He just couldn't understand why every field in the county was affected."

Maria nodded her head knowingly and said simply, "Weather..."

*Margaret Waterman and Ethel Stanley.*  
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<http://bioquest.org/lifelines/zeaimplement.html>