

Developing seed for organic corn

Key Points

- Martenses contend that seed corn needs to be better adapted for organics.
- Inbreds require higher fertility to perform best under stress.
- Margaret Smith, Cornell plant breeder, is the technology leader of this project.

By KARA LYNN DUNN

AS noted in this issue's cover story, the New York Farm Viability Institute is funding a two-year project to develop hybrid seed corn better adapted for organic corn production in the state. Mary-Howell and husband Klaas of Martens Farms, Penn Yan, N.Y., are working with Margaret Smith, Cornell University plant breeder.

"We need seed adaptable for the area where it'll be grown," reiterates Mary-Howell, who also manages the Lakeview Organic Grain feed mill.

"Organic farmers need modern corn breeding in our hybrids to advance yield, disease resistance, standability and quality. This project is developing hybrids uniquely suited to New York."

Building better organic hybrids

The process is no different than for conventional hybrids, as Smith explains: "Two likely parent plants — typically inbred and weak on their own — are



PHOTO BY SPENCER TULLIS

DESIGNER CORN: Klaas Martens and Margaret Smith check the organic corn variety trial at Martens Farms.

crossed to create vigor in hybrid offspring. Subsequent selection and pairings increase yield, stalk and root strength, stability, and quality in the hybrid seed."

"Inbred corn plants need higher fertility under stress than we ever imag-

ined," adds Klaas. "To overcome the drought effect on the hybrids' weak-rooted parent plants, I doubled the rate of application of composted chicken manure with excellent results."

"Weed control and maintaining fertility consistently challenge organic growers. Providing a high level of the proper fertility to a crop enhances its competitiveness," he says. "That, in itself, makes weed-control efforts much more effective. If [2007] is any indication, then supplying much higher fertility will help us solve many production problems, including the weeds," he notes.

The time needed to breed quality seed is why funding from the New York Farm Viability Institute and others in the public sector is so important, says Klaas. "State and federal tax dollars make possible this early-stage on-farm research that moves the state of the science forward."

As more New York growers bring organic field-corn seed to the commercial market, the project will assess the economics of organic seed production. For more information, contact Smith at 607-255-1654; e-mail mes25@cornell.edu.

Dunn writes from her farm in Mannsville, N.Y.





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