

Nitrogen In Ammonium Form May Prove Best For Sweet Corn

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Lancaster Farming Staff
HERSHEY (Dauphin Co.) — Sweet corn needs nitrogen, and plenty of it. But did you know that sweet corn uses nitrogen in ammonium nitrate form the best?

That's because nitrogen in that form allows sweet corn to take it up when it needs it the most, and at the correct rate — from the seven leaf to tassling and finally to silk, according to Dr. Darryl Warncke, crop and soil scientist from Michigan State University.

Warncke spoke about how nitrogen affects sweet corn quality last week during the general vegetables session at the Pennsylvania Vegetable Conference and Trade Show.

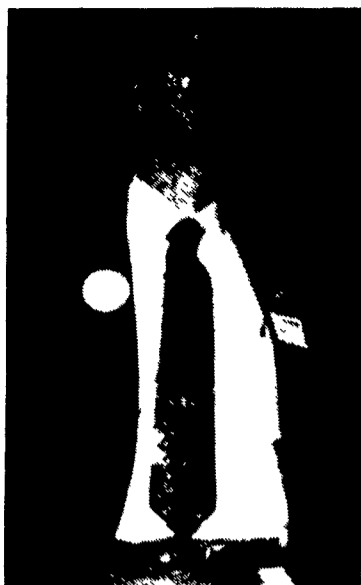
Studies indicate that nitrogen demands for sweet corn are different at various stages of plant growth. The nitrogen uptake is only 6 percent up to the sixth leaf; from seventh leaf to tassle, nitrogen uptake surges to 25 percent; from tassle to silk, 30 percent; and finally, ear development consumes 39 percent of available nitrogen, according to the scientist.

Take leaf samples

The best way to look at sweet corn's nitrogen use is to take leaf samples. But to ensure good yield and quality, growers should examine all stages of growth, and be sure to take regular soil tests and check for nitrogen availability.

Generally, according to Warncke, growers in this area under the clay loam type of soil conditions should strive for about 150 pounds of nitrogen per acre during the growing season. Special emphasis should be placed on getting the nitrogen to the plant when it needs it the most — right after the 6th leaf.

But it's important that the plant not only obtain nitrogen, but the other essential nutrients working



Dr. Darryl Warncke, soil scientist with Michigan State University, spoke about the effects of nitrogen on sweet corn at the Vegetable Conference last week.

in conjunction as well.

Nitrogen stress during ear development may result in kernel shrivel, affecting yield, quality, and taste. Growers should strive for about 150 pounds of nitrogen per acre, but don't exceed 200, because too much nitrogen will cause the plant to assimilate sugars away from kernels and into the leaves. (However, Warncke pointed out that more research is needed into the effects of excess nitrogen on quality of sweet corn.)

Affects protein content

Nitrogen also affects protein content in the ear. It's important for the grower to sample the leaves at tassling or silking to see if adequate nitrogen is going to the plant, according to Warncke.

The following steps will help sweet corn growers:

- Soil test regularly to look at the nutrient levels and growing

conditions for the crop.

- Use 125 to 150 pounds per acre of nitrogen.

- Band 40 to 60 pounds per acre at planting time.

- Sidedress the remainder as late as possible — as close to tassling time as possible.

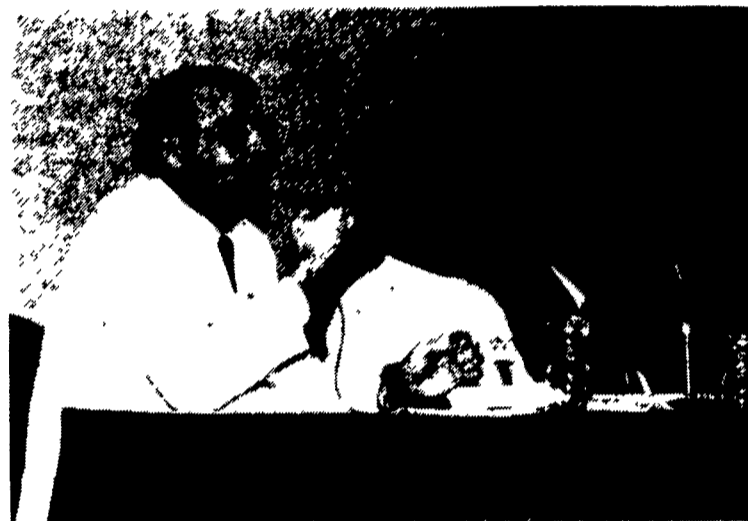
Nitrogen, available at the right times, according to the researcher, will provide good ear development, tip fill, and quality of corn.

Also at the conference, a special sweet corn pest workshop was conducted, which reviewed the major threats to sweet corn growers and ways in which growers can handle them. The workshop was conducted by Steve Spangler and Dr. Shelby Fleischer, entomology department at Penn State.

Additional topics in the general vegetables session on Wednesday included developing biorational insect control options, a panel featuring growers and their experience with photodegradable plastic



Steve Spangler, extension associate, entomology department at Penn State, talks about one of the biggest pests in the Mid-Atlantic — corn earworm — during a special corn pest workshop at the Vegetable Conference.



A user's panel on photodegradable plastic mulch was moderated by Dr. Michael Orzolek, horticulture department, Penn State, far left, last week. Next to him, left to right, are Gregory Forry, a grower from Campbelltown, and Robert Trax, a grower from Finleyville.

mulch, growing tips for potato producers, organic materials in vegetable production, and other sessions.

Farmers To Share Advice At Marketing Conference

UNIVERSITY PARK (Centre Co.) — Can farmers make more money selling their products directly to consumers rather than supermarkets or food processors?

Answers can be found at the 11th annual Mid-Atlantic Direct Marketing Conference and Trade Show, February 18-19 in Lancaster, Pa. An optional tour of local farm markets will follow on Saturday, February 20.

"This event will help farmers who sell products directly to consumers — primarily fruit and vegetable growers who run roadside stands or farmers' market stalls — develop a clearer view of their marketing choices," said Jeff Patton, Penn State Cooperative Extension agent in Lehigh County. "Many of the speakers are successful direct marketers who will share their experiences."

The conference will be held at the Lancaster Host Resort just east of Lancaster on Route 30. The event is organized by extension staff from Pennsylvania, Delaware, Maryland and New Jersey, along with farmers and staff from state agriculture departments.

"There's no way farmers can survive on wholesale prices, which haven't improved much during my 30 years of raising crops," said Fred Funk, conference planning committee member and manager of Funk's Farm Market in Lancaster County. "But when we retail products directly, we get new headaches and stiff competition. We need all the in-

formation and inspiration we can get."

Topics to be discussed during the conference include new advertising and marketing techniques, farm market business plans, post-harvest handling, understanding baby boomers, discovering what customers want, and setting up an estate plan.

Trade show exhibitors will include specialty food and beverage producers, retail packagers, promoters, consultants, and produce auction organizers. The show also will feature new resources for farm marketers, including Quaker Foods' "Self-Study Program in Retail Food Store Operations" and the latest reports from the Food Marketing Institute.

Dr. John Stanton, professor of food marketing at St. Joseph's University, will open the conference Thursday morning with an address, "Customer Satisfaction — Where All Paths Begin." He will discuss consumers' food shopping decisions and the need for commitment to customer satisfaction. Following his address, a panel of three farm market managers will share their perspectives on customer service.

On Thursday afternoon, Joseph Anthony, a U.S. Department of Agriculture engineer, will describe how farmers can build a new batch cooling unit with off-the-shelf materials for less than \$1,000.

Thursday evening will feature an ice cream social and farmer-to-

farmer roundtables on personal selling, recycling, dried flowers and ribbons, retaining the farm market image, keeping kids in the business, and services that add value to farm markets.

Friday's highlights include in-depth looks at successful farm markets in Maryland, New Jersey, and Pennsylvania.

"The owners of each market will give an insider's view of their marketing techniques," said Pat-

ton. "A discussion of the issues affecting farm markets will follow their presentations."

Saturday's tour program begins with an address by Dr. Charles Coale, agricultural marketing specialist at Virginia Polytechnic University, entitled "How to Grow a Farm Market." Tour buses then depart for A.L. Kauffman and Son's Farm Market, the Bird-in-Hand Farmers Market, Oregon Dairy Farm Market, Kitchen Ket-

tle Village and the Shady Maple Farm Market.

The conference fee is \$40 for the first participant from each farm market and \$20 for additional participants. A banquet Friday evening costs \$30, while the Saturday breakfast buffet, talk and tours cost \$25.

For more information, contact your county cooperative extension office or call the Penn State Short Course Office at (814) 865-8301.

State Adopts Indemnification Plan

DOVER, Del. — The State of Delaware and the Delmarva Poultry Industry, Inc. signed an historic Memorandum of Understanding that allows compensation to poultry companies forced to depopulate flocks as a result of a catastrophic disease outbreak.

Gov. Dale Wolf witnessed as Acting Secretary of Agriculture Roland Derrickson and Budget Director Michael Ferguson signed the agreement during ceremonies at Legislative Hall. Representatives from the state's eight poultry companies signed the agreement prior to the ceremony.

Representatives from the Delmarva Poultry Industry, Inc.

(DPI), the trade association representing the poultry industry on the peninsula, also were on hand to witness the signing.

The indemnification plan is the third phase of a program launched in 1987 by the Mid-Atlantic Health Council, a group of state officials, university representatives and poultry industry representatives from Delaware, Maryland, Virginia, and Pennsylvania.

The council established a set of procedures to deal with emergency poultry disease outbreaks on Delmarva and in Pennsylvania. The first phases describe provisions for the prevention and eradication of diseases.

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"Our main concern at the time was avian influenza," said Derrickson. "However, the peninsula has experienced outbreaks of pullorum and avian bronchitis since then. The poultry industry is a vital component of the region's agricultural industry and its economic health. Since it is concentrated in a small geographic area, disease can spread rapidly and has the potential of wiping out an entire industry."

The Memorandum of Understanding outlines the responsibilities of the poultry industry, the state and the U.S. Department of Agriculture in the event flocks are destroyed.