

CORN TALK NEWS

PENNSYLVANIA MASTER CORN GROWERS ASSOC., INC

Corn Growers, Partners Urged To Expand Investment

ST. LOUIS, Mo. — Corn growers and their partners in the corn industry need to expand their investment of time and resources in value-added agriculture in order to survive into the year 2020, according to the findings of Corn Vision 2020. The executive summary of the year-long strategic planning research project was released recently.

Corn Vision 2020, cosponsored by National Corn Growers Association (NCGA) and Pioneer Hi-Bred International, Inc., gathered 37 corn industry experts to identify the major trends which will shape the corn industry over the next 30 years and to recommend growth strategies.

"Corn Vision 2020 is the latest NCGA project to tap the expertise of a wide variety of specialists to help the association stay ahead of developments," said Randy Cruise, a farmer from Pleasanton, Neb., and chairman of the NCGA board. "The grower-leaders of NCGA already have a strategic plan in place. We'll use the insights gained from Corn Vision 2020 to increase corn profitability and usage."

Specifically, the panelists recommended that NCGA:

- Target affluent and populous Asia as the greatest export opportunity for corn in the form of value-added meats, milk, and eggs.

- Develop a value-added industry based on products of high quality, competitive price and unique features to replace shrinking export markets and diminishing government price supports.

- Join with U.S. livestock producers in measuring U.S. and foreign consumers' needs in order to more quickly develop desirable product traits and to take responsibility for the quality and safety of products.

- Recommend major public and private resources to research to prevent further erosion of the U.S.'s edge in production research by shifting towards agronomic efficiency and environmental compatibility, and utilization research by devoting at least 50 percent of effort to the commercialization of high-value industrial products which consume major quantities of corn.

- Make certain that policy makers consider risks and benefits as well as human and economic impacts in all regulations.

- Broaden NCGA's dialogue to include nonagricultural decision-makers and then developing individualized strategies for each audience which could influence the corn industry.

- Encourage corn growers to develop their individual strengths and then partner with other specialists to fill the gaps in their expertise.

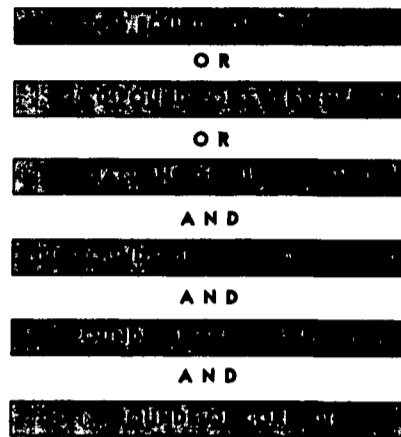
More important than these specific policy recommendations were the panelists' advice that NCGA focus program and policy development in five broad areas as events unfold over the next 30 years. The five are understand that corn is a renewable, engineerable raw material for industrial products; communicate corn's role in the U.S. economy to consumers and policy makers; partner through mutually beneficial contracts with experts; reinvest with government and the private sector in utilization research in particular; and lead the entire industry in anticipating and taking maximum advantage of national and global trends.

"The goal of Pioneer has always been to help farmers make a better living. We realize that it is increasingly difficult for any individual to master the broad range of trends which shape the corn industry. That's why Pioneer saw Corn

A typical bushel of corn weighs 56 pounds and contains approximately 72,800 kernels. Most of the weight is the starch, oil, protein and fiber, with some of it from natural moisture.



WHAT CAN BE EXTRACTED FROM A BUSHEL OF CORN?



Source: Corn industry sources

Vision 2020 as an opportunity to extend its long-term support of NCGA's leadership," said Connie Christensen, director of marketing for North American operations for Pioneer in Des Moines, Iowa.

Corn Vision 2020's emphasis on leadership reinforces NCGA's current efforts to:

- Shape public policy in the price support and environmental titles of the Farm Bill and

through Ag for NAFTA.

- Build horizontal and vertical coalitions such as the Degradable Plastics Council and the Corn Research Evaluation Committee.

- Educate farm and non-farm audiences through projects such as the school curriculum, "Corn - A National Renewable Resource" and proactive media relations about new markets for corn, such as

ethanol, 100 percent cornstarch packing peanuts, and corn-based picnic cutlery.

- Initiate and promote new uses research and commercialization through NCGA's corn utilization conferences and the Corn Utilization Research Database as well as its integral role in the establishment of the New Uses Council and the Alternative Research and Commercialization Council.

THE WORLD OF CORN A COMPREHENSIVE LOOK

Wasp Can Help Control Corn Pests

Linda McCandless
New York State
Agricultural Experiment
Station At
Geneva, Cornell

The newest good guy in the war being waged between the ears in the cornfields of New York may be a tiny parasitic wasp from China.

Cornell University researchers believe the release of tiny wasps that attack and kill the eggs of the European corn borer holds great potential for the sweet corn industry in controlling one of its major pests.

Cornell entomologists Tony Shelton and Michael Hoffmann are determining the best species of *Trichogramma* to release in commercial cornfields and the most cost-effective way to artificially rear massive quantities of the tiny wasps.

"So far, the use of *Trichogramma ostriniae*, a species imported from China by some of our colleagues in Massachusetts, has provided the best results," said Shelton, who has been involved in integrated pest management (IPM) research on sweet corn for more than 15 years.

In an attempt to permanently establish the wasps in New York, researchers have released four million of them over the last three years.

"If the wasp becomes established, it would continuously help control European corn borer at no expense to the growers," said Hoffmann, who has been working in cooperation with the U.S. Department of Agriculture.

"Scouts could sample the fields and, if the number of corn borers exceeded a threshold, then the wasps could be released rather than insecticide applied."

As part of a multifaceted management approach, Shelton has also been testing the use of commercially available Bt (*Bacillus Thuringiensis*) in a spray which is applied to corn foliage.

Larvae that ingest the bacteria stop feeding within a few hours and die. Bt is not harmful to beneficial insects in the field and allows for the introduction of natural enemies, such as wasps, which parasitize or consume Bt survivors. The current research builds on a proven program of pest management developed over the past decade at the Agricultural Experiment Station in Geneva by the New York Sweet Corn Unified Management team — or SCUM, as they like to call themselves.

With a little more than \$125,000 invested in research and extension efforts, the team of entomologists, extension agents, and plant pathologists

has managed to reduce pesticide use and save the processed sweet corn industry an average of \$500,000 per year.

"Industry-wide adoption of proven IPM programs has already reduced the number of aerially applied insecticides in processed sweet corn fields by 30-70 percent," said team member Shelton. Unlike the case with most vegetable crops, it is the corn processors — and not the growers — who control the use of insecticides in the fields.

More than 90 percent of the New York industry is controlled by two companies, Comstock Michigan Fruit of Rochester and Seneca Foods of Marion, N.Y. In the past, processors would routinely spray all corn when it reached the early green tassel stage and then continue weekly treatments until harvest.

"The reason we were able to make such an impact on the industry as a whole is because so few make the decisions for so many acres," said Shelton, who was first asked to develop a pest management program for insects by sweet corn processors in 1981. "Growers who were using three to four sprays per field back in '81 are now down to an average of one."

The IPM package approach helped minimize the number of

applications of insecticide. According to company spray records from 1990-1993 collected by IPM Coordinator Curt Petzoldt, growers who utilized IPM techniques averaged 0.9 to 1.3 insecticide sprays per field per year, a reduction of 55-65 percent, or well over 100 tons of insecticide that would have been applied to New York cornfields. Assuming a cost of \$10 per acre spraying costs, and saving two sprayings per acre per season, that amounted to \$1.8 million savings in insecticide costs over a three year period.

Even after subtracting increased scouting, pheromone trap purchases, and trap monitoring that average \$3.18/acre, or \$314,800 over 3 years, savings still amounted to \$1.5 million, or \$500,000 per year. The road from documented research to industry implementation is long.

"The current research in parasitic wasps and Bt is still in the early stages of development," said Shelton. "It took nearly 10 years for us to develop the current IPM program, test and demonstrate its effectiveness, and then get the sweet corn processors to adopt our recommendations on a wholesale basis. In the research business, that is really a very short time."