

# Progress reported in controlling corn borers

NEWARK, Del. — In the wake of last season's heavy outbreak of first brood European corn borers in corn, a lot of Delaware growers and industry personnel are wondering about the likelihood of similar outbreaks in the future. One question many of these people are asking is: "What are entomologists at the University of Delaware doing to help predict these outbreaks and improve control of the corn borer?"

"Plenty," is the reassuring answer from Extension pest management specialist Mark Graustein, who reports that researchers in the University's department of entomology and applied ecology are coming up with some promising ideas on how to lick this serious pest.

According to Graustein, the department has long considered the ECB one of Delaware's major crop pests and has directed research efforts towards its control.

At present about two-thirds of its current research on crop pests is devoted to the ECB.

This research (which is funded through the Delaware Agricultural Experiment Station) approaches the problem of corn borer control from several directions: biological, chemical and cultural practices, as well as the development of techniques for predicting ECB populations in corn and peppers.

For example, he cites the work of Dr. Paul P. Burbutis, a bio-control entomologist who has conducted research on control of ECB in peppers since 1958. More recently Burbutis and his colleagues have discovered a native parasite of ECB eggs. The researchers are presently studying the feasibility of using this parasite as a biological control of the ECB.

Tackling the problem from another direction, Burbutis,

insect ecologist Dr. Charles E. Mason, and Dr. Steven D. Skopic (an authority on animal periodicity on loan to the department of entomology from the School of Life and Health Sciences) are studying techniques for interrupting diapause (the hibernation stage) of overwintering ECB's. The same researchers have initiated a new project this year which involves the cooperation of 13 states. This project will investigate the possibility of genetically controlling the ECB. In 1978 this team also conducted a study to determine the potential yield reduction caused by various population levels of the ECB on corn at different planting dates and different insecticide treatment dates.

Similar research on the timing of corn plantings and insecticide treatments as these affect ECB infestation levels was initiated by economic entomologist Dr. Lewis Kelsey in 1975. His

research over the past four years has contributed the ECB, reports Graustein. Kelsey's work has determined which insecticides and rates of application provide effective control, as well as the optimal timing of insecticide applications. It has also provided information on the influence of planting date on subsequent borer infestations and on predicting the severity of infestations based on the spring ECB population, borer development, weather, phenological events (such as the leafing out of trees), and planting date.

Furadan is one of the most effective and widely used insecticides for corn insect control in Delaware. In 1978 Kelsey conducted research to determine whether the apparent beneficial effects of this chemical are the result of ECB control, soil insect control, nematode control, or suppression of the

whole pest complex. He has also investigated the effects of control treatments in conventional vs. no-till corn, as well as irrigated vs. non-irrigated corn.

Last Summer Graustein himself established demonstration plots on eight different farms in the state in an attempt to determine, under commercial growing conditions, how the timing of corn planting dates and insecticide applications

affect yield. He also wanted to find out whether corn planted in Kent and New Castle counties responds to corn borer infestations in the same way as that grown in Kelsey's Sussex county test plots.

Graustein plans to report on these various corn borer control projects at the Delmarva Corn Technology Conference, which will be held at the Convention Hall in Ocean City, Md., Tuesday, December 12.

## Public hearings slated for natural gas use

WASHINGTON, D.C. — Three public hearings on implementing the agricultural priority section of the recently-enacted Natural Gas Policy Act will be held during December. Secretary of Agriculture Bob Bergland announced recently.

The hearings, which will begin at 9:30 a.m. each day, will be held Dec. 11, at the Freer Gallery auditorium here; Dec. 14, at the Senator Hotel, 12th and L Streets, Sacramento, Calif.; and Dec. 18, at the Holiday Inn O'Hare/Kennedy, River Road and Kennedy Expressway, Chicago, Ill.

The department's Office of Energy, directed by Weldon Barton, will conduct the hearings.

The Natural Gas Policy Act gives priority protection against cutoff to agricultural users of natural gas, when the gas is essential for full food and fiber production. The act stipulates that essential uses of natural gas shall be for agricultural production, natural fiber production and processing, food processing, food quality maintenance, irrigation pumping, crop drying and the production of fertilizer, agricultural chemicals and animal feed and food.

Under the legislation, signed by President Carter Nov. 9, Secretary Bergland must determine the specific users and amounts of gas to be protected by the agricultural priority against cutoff. He must then certify those users and amounts to the Department of Energy by February 1979.

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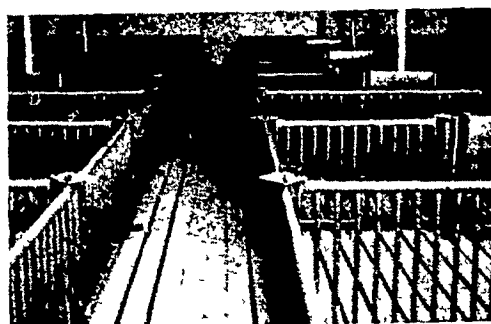
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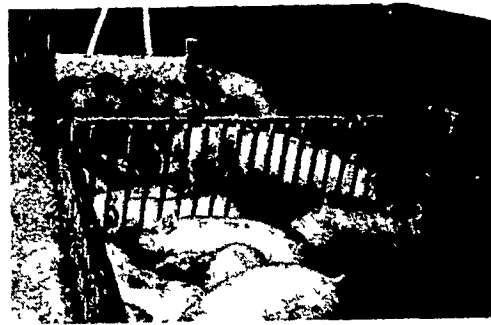
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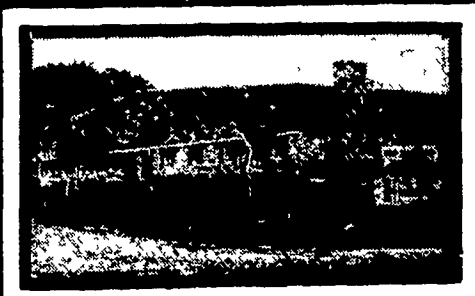
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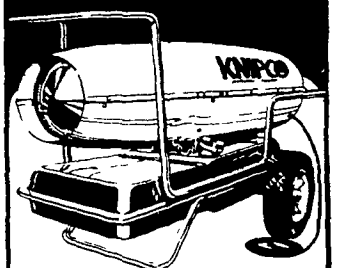
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