

How researchers found corn cyst nematode

CHESTERTOWN, Md — A corn cyst nematode has been identified in soil from four cornfields on one farm in Maryland's Kent county. This nematode, a microscopic worm has never before been reported in the Western Hemisphere.

How it came to be in the fields of Maryland is not known.

"We do not know at this time how destructive the pest will be," Krusberg says, "because no one in this country has had any experience with it. The infestation appears to be widespread and heavy in all four fields sampled."

"We will be conducting research studies to find out as much as possible about the nematode this summer," Krusberg continued.

He explained that soil will be sampled in adjoining fields and on adjoining farms radiating out from the original location, to see how widespread the infestation is. The scope of the survey will go as far as time, facilities and personnel will allow.

"We have obtained permission of the farmer to establish research plots to test corn cultivators for resistance to the nematode, to determine what other plants serve as hosts for the pests, and to test nematicides for its control," Krusberg said.

Even though this particular nematode has never been reported in the Americas, it might have been here for many years since corn originated in Central America.

H. zea might still not have been isolated and identified except for a series of related events and some careful laboratory work by researchers at the University of Maryland. The original soil samples containing this corn cyst nematode were collected as part of survey partially supported by Mobil Chemical Company with the

cooperation of Roger W. Roth.

James Milliken, Kent County extension agricultural agent, submitted the soil sample to Krusberg's laboratory as part of the special Delmarva cooperative nematode survey. Krusberg thought there might be nematodes in the sample, but he expected to find the previously reported soybean cyst nematodes.

When Sandra Sardanelli, nematode assay laboratory manager, began to examine the soil samples, she did indeed find cyst nematode larvae. But they did not look like the expected soybean cyst nematodes.

"We knew it was something we had not seen before," she said, "because it did not fit the description of soybean cyst nematode and then we learned that the fields had been planted continuously to corn for many years."

Krusberg and Michael Groff, of Maryland's Department of Agriculture, then resampled three of the four fields and all the samples yielded the same cysts.

Sardanelli began to look for possible answers to the problem. but since this particular nematode was never reported here, she was not aware of descriptions of it in the literature. She and Krusberg took their specimens to A. Morgan Golden, nematode taxonomist at the U.S. Department of Agriculture Nematology Laboratory in Beltsville.

Having been in India and having valid specimens from India in his possession, Golden was able to make positive identification of H. zea.

How the nematodes got to Maryland is still a mystery, but it is known that the tiny worms can be carried from place to place in small amounts of soil. Windblown dust or water-borne silt can carry cysts containing live eggs and

larvae from one place to another.

Even small amounts of soil eaten by birds and passed out through the digestive tract can carry live cysts. It is even possible for small particles of soil in seed lots to carry viable cysts.

Cyst nematodes can be particularly troublesome because of their high rates of reproduction and the resistant cyst.

One female nematode can produce hundreds of eggs which hatch in the soil and the larvae begin to feed on crop roots. But before the female dies, her body will enlarge greatly retaining large numbers of eggs and larvae. The female's body wall then hardens into the cyst which gives the pest its name, and the young are protected for periods up to several years.

While little is known about this particular nematode, Krusberg notes that several cultural practices can be used against nematodes in general.

Crop rotations help keep populations in check because some nematodes thrive only on specific hosts. Cyst nematodes can survive in the soil for several years, but breaks in continuous monocropping (corn after corn, for example) helps cut down the population.

Resistant cultivars, either those occurring naturally or ones produced by crossbreeding or selection from large populations,

can tolerate fairly heavy infestations without economic loss.

And certain chemical nematicides can reduce populations. However, because of the high repopulations capability of nematodes, chemical control must be timed accurately and the results checked carefully to make

sure that the pest numbers are sufficiently reduced.

"No one knows for certain how much damage this particular pest will cause," Krusberg concludes, "but because it has been isolated and identified, we can be on guard against it."

Jersey club to seek top unregistered cows

COLUMBUS, Ohio — Approximately 60 agents have been approved by the Board of Directors of The American Jersey Cattle Club to seek out unregistered purebred Jerseys for Genetic Recovery enrollment.

The agents qualify these animals for type and production, according to Eugene P. Barton, Superintendent of Records of the Columbus, Ohio based association.

The Genetic Recovery program was instituted in 1975 to identify superior unregistered purebred Jerseys and record their offspring by registered bulls in the AJCC Herd Register. Since the program's adoption, more than 35,000 Jerseys have been enrolled.

All AJCC Area Representatives and official type Appraisers, plus the Columbus-based staff, are approved to qualify these animals

and to help dairymen get their unregistered Jerseys enrolled in Genetic Recovery.

An additional group of dairymen, active or retired, Extension personnel and industry associates is now actively seeking out pockets of unregistered Jerseys throughout the country.

These people work on a commission basis with the AJCC to get animals identified, qualified and enrolled.

Persons wishing to have their unregistered purebred Jerseys enrolled in Genetic Recovery are encouraged to contact the AJCC office for the name of the agent located nearest to them.

Call or write: The American Jersey Cattle Club, P.O. Box 27310, Columbus, OH 43227 Phone 614/861-3636

CITY OF LANCASTER BOROUGH OF SEWERS

Would like to lease agricultural land for sludge application. Land must be within 10 miles of Lancaster and be available May - Oct. for 1 or several months.

For Details Call
Bob Bruce
717-291-4811

DAIRYMEN

BEFORE YOU BUY A HEAT EXCHANGER

Stop & Compare
A

KE FREE PREHEATER

WHICH FEATURES:

- Removable stainless steel coils
- 2 1/2" cleanout hole
- Can hookup 1 to 4 compressors
- Non Rusting Galvanized Tank
- No water run-off

★ Ideal Units For Diesel Operated Compressor.

★ No Charge on estimate for set-up.

For Additional Information Write or Call
K.E. PREHEATER CO.
505 E Woods Dr., Lititz, PA 17543
(717) 626-5996

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

Sales Rep Gerald Shenk

★ Dealer Inquiries Invited ★

ATTENTION FARMERS

FARM EQUIPMENT HAVE DIESEL FUEL INJECTION PROBLEMS?

DON'T WAIT — Make your repairs now. Get your money's worth and know what you are getting when you buy fuel injection service.

Call:
MILLER DIESEL INC.

6030 Jonestown Rd.
Harrisburg, Pa. 17112
717-545-5931



ACCREDITED DEPENDABLE SERVICE WITH 24 YEARS EXPERIENCE

CONTROL WEEDS IN ALFALFA WITH

BUTYRAC-200

Apply 2 to 4 weeks after alfalfa emerges. Controls broadleaf weeds in seedling or established legumes. This remarkable selective action — killing many broadleaf weeds without affecting certain broadleaf crops — has been proven by research men and commercial growers throughout the country.

We are distributors for a complete line of



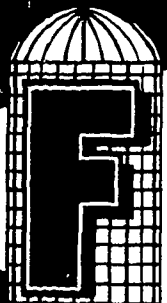
WEED KILLERS

P. L. ROHRER & BRO., INC.

Smoketown, PA

Ph: 717-299-2571

MASTER-MATIC SILO SYSTEM



FICKES
SILO COMPANY, INC.

NEWVILLE, PENNA. 17241

Please send information on Fickes Master-Matic Silo System and Silage Master Silos

LAIDIG POW-R-SWEEP auger unloads high moisture grain that won't free flow!

(even ground ear corn)

Laidig bottom unloaders do just that! Unload grain from center to wall all round the base. POW-R SWEEP auger makes a 360° cycle. Prevents bridging, reduces spoilage and frozen masses. Ruggedly built for low maintenance. Wide choice of model sizes. Adjustable unloading speeds. Dependable parts and service if and when needed.



Easy to install in new or standing sealed silos



P.O. Box 7
Newville, PA 17241
Phone 717-776-3129



Please Send me information on Fickes Silos
 Please send me literature on Silo-Matic Feeding Systems
 Please send me literature on Bottom Unloader Systems

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
PHONE _____