SOYBEAN CYST NEMATODE IN NORTH CAROLINA

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A cyst-forming nematode of the genus Heterodera has been found parasitizing soybean (Glycine max (L.) Merrill) in Southeastern North Carolina. Examination of soybean roots from small areas where the plants were severely stunted and chlorotic (Fig. 2), revealed the presence of numerous lemon-shaped female nematodes attached to the roots (Fig. 1). Soil samples from infested areas were found to contain several thousand cysts per pint of soil. Males were also very numerous.

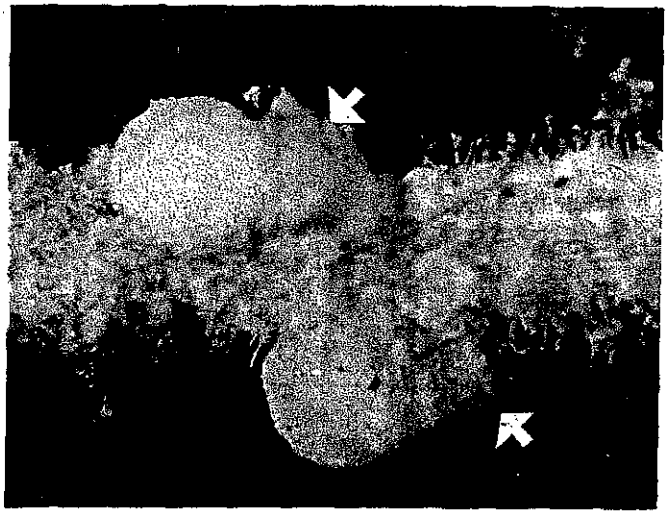

FIGURE 1. Soybean root showing attached female nematodes. Note egg masses (arrows) attached to the females. Approx. 37.5 x. (Photograph by Dr. C. J. Nusbaum).

This nematode has been tentatively identified as the soybean cyst nematode, Heterodera glycines Ichinohe, 1952[2, 3]. Two other Heterodera species are known to attack legumes -- the pea cyst nematode, H. göttingiana Liebscher, 1892, and the clover cyst nematode, H. schachtii trifolii Goffart, 1932. Mature cysts of the soybean cyst nematode can be distinguished from those of the pea cyst nematode by the presence of dark bodies (brown knobs) at the posterior end. These are absent in the pea cyst nematode. The clover cyst nematode apparently does not attack soybeans[4].

Investigations on the morphology and biology of the nematode, including field and laboratory experiments, are in progress. A survey is also being conducted to determine if the nema-

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[2] Ichinohe, Minoru. 1952. On the soybean nematode Heterodera glycines n. sp. from Japan. Magazine of Applied Zoology 17: 1-4.

[3] Specimens were sent to Mr. A. L. Taylor, Section of Nematology, Plant Industry Station, Beltsville, Maryland, for identification.

[4] Gerdemann, J. W. and M. B. Linford. 1953. A cyst-forming nematode attacking clovers in Illinois. Phytopath. 43: 603-608.

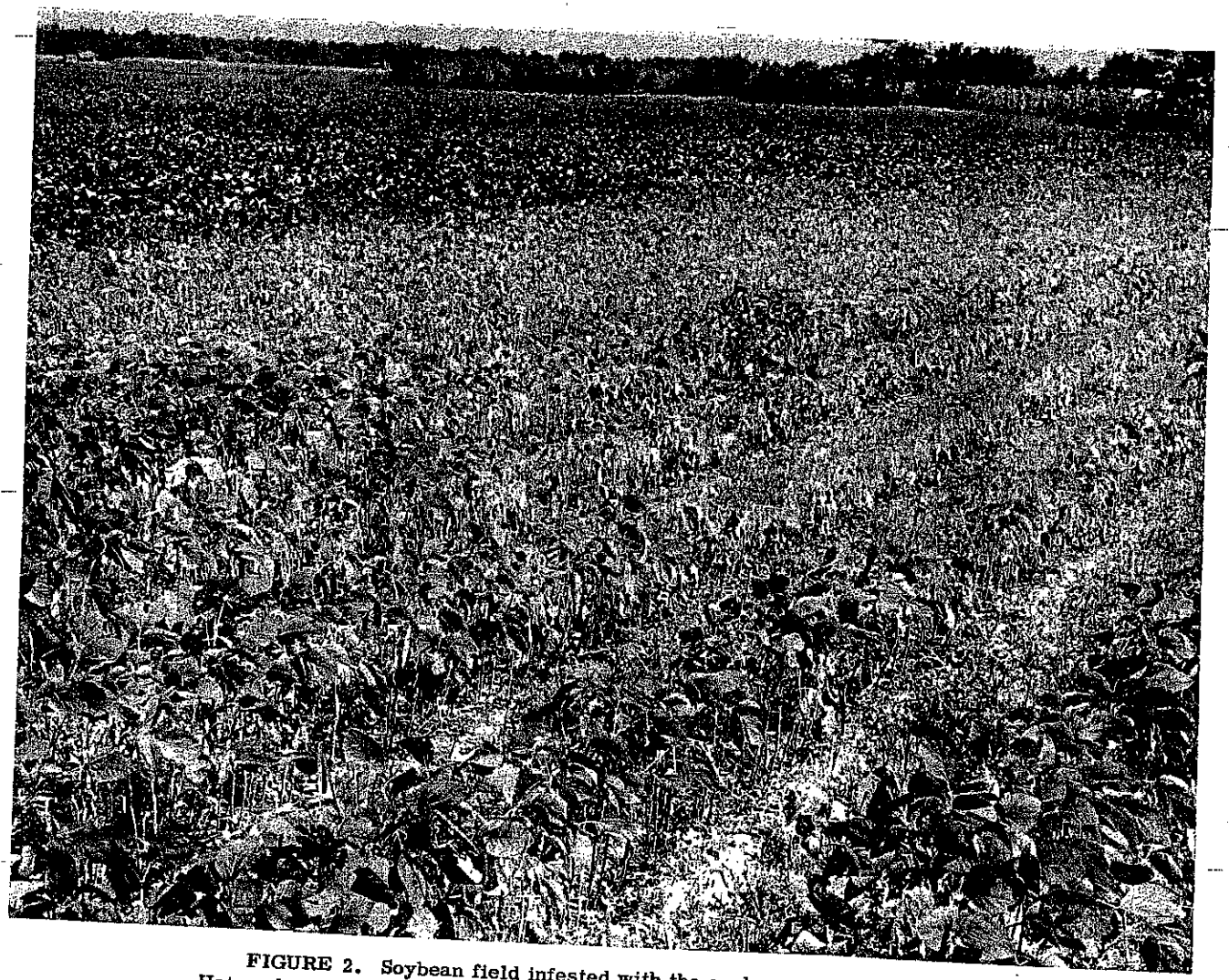

FIGURE 2. Soybean field infested with the soybean cyst nematode, Heterodera glycines. (Photographed by Mr. Ralph Mills).

tode is widespread in North Carolina. The known distribution of this species is Japan (Hokkaido, Honshu), and China (Manchuria)[2]. It has not been previously reported as occurring in the United States.

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FIGURE 2. Soybean field infested with the soybean cyst nematode, Heterodera glycines. (Photographed by Mr. Ralph Mills).