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ANNUAL REPORT OF THE CROP NEMATODE RESEARCH & CONTROL PROJECT (CNRCP)

September 15 - December 31, 1984

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Dr. Robert Altman, Project Manager, USAID, met with Dr. Sasser and other members of the local IMP team in Raleigh on Tuesday, September 11, 1984, to discuss the new contract just received from USAID, "Crop Nematode Research and Control Program." Kerrick Hartman discussed the proposed screening for resistance program; Cathy Carter, the aspects of technology transfer; and Jim Noe, the cropping systems research. A checklist of activities to be completed during the period October to December 1984 was drawn up. The accomplishments achieved in each of these areas over the last three months are outlined below.

Technology Transfer

On October 11, 1984, letters were sent to approximately 160 developing-country scientists informing them about USAID's new project and the services available to them. These scientists were invited to contribute research notes and other pertinent information to the first issue of the International Nematology Network Newsletter scheduled for publication in December 1984. Over ten scientists responded almost immediately with contributions for the newsletter. The first issue was compiled and submitted for printing during the third week of December. Publication and mailing are to take place in early January (see enclosed draft of newsletter). In addition to the 160 scientists originally contacted, 70 more have expressed an interest in receiving the newsletters. These additional scientists have significantly enlarged our network of nematologists.

A brochure describing the new project has been designed and printed. It covers the goals, rationale, and research emphasis of the new project as well as a description of available for-hire services. This brochure will be mailed in conjunction with the first issue of the newsletter.

J. N. Sasser, C. C. Carter, and K. M. Hartman have written a paper describing a standardized method for screening plants for resistance to root-knot nematodes. This publication will be made available to our cooperating scientists in developing countries with the hope that the screening procedure will become more uniformly carried out. In this way, a basis for comparison of plant resistance will be established. The paper is in press at this time.

The book "An Advanced Treatise on Meloidogyne" is in the paste-up stage and is scheduled for publication in February or March of 1985.

A list of ten topics for possible nematode-management extension brochures has been compiled. These bulletins will cover basic subject areas such as what is a nematode; how nematode damage can be recognized; how a soil or root sample is taken; implementation of management methods like crop rotation, resistant varieties, nonhosts, soil sterilization, and production of clean planting stock; economic

damage assessment; and linking up with available identification services. Such basic publications will be made available to cooperating scientists for translation into native languages and use among local farmers.

Screening For Resistance

Screening for resistance of 56 varieties of Desmodium ovalifolium from CIAT and 45 lines of chickpea from ICRISAT was completed in September. Desmodium was evaluated for resistance to M. incognita (races 1 & 3), M. arenaria (race 1), M. javanica, and M. hapla; the chickpeas for resistance to M. incognita (races 1-3), M. arenaria race 2, and M. javanica.

As of November 1984, 70 varieties of bean have been evaluated individually for resistance to Meloidogyne incognita (all 4 races), M. arenaria (both races), M. javanica, and M. hapla (see copy of report dated 11/19/84 sent to Dr. Robert Altman).

Screening trials currently in progress include those for 324 potato accessions from the Inter-Regional Potato Introduction Project (IR-1) and those for 272 lines of triticale, 30 lines of durum wheat, and 213 lines of barley from CIMMYT. These tests are scheduled for completion in January 1985.

Cropping Systems Research

Dr. J. N. Sasser and Dr. J. P. Noe visited Jordan during the period November 26-30, 1984, to discuss possibilities of collaborative cropping systems research. Dr. Noe presented details of a cropping systems research proposal during a visit to the Jordan Valley.

Contacts have been made with network cooperators in Jamaica and Costa Rica for similar research. A visit to those countries is planned for February.