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Soybean Mosaic Virus Experiments
in Puerto Rico

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International Soybean Program, INTSOY

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International Soybean Program (INTSOY)
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Trip Report - Isabela, Puerto Rico

Names of Travellers: Robert M. Goodman, Associate Professor, Plant Pathology
Jane E. Polston, Assistant Plant Pathologist (Virology)

Dates of Travel: 1 February - 6 February 1981

Itinerary:

- 1 February - Travel from Urbana, IL to Isabela, PR
- 2 February - Assemble equipment and materials for inoculation, inspect field.
- 3 February - Inoculation of 3 SMV strains
- 4 February - Inoculation of 3 SMV strains
- 5 February - Inoculation of remaining strain
Visit with Dr. W. C. Stearn, José Bravo,
Dr. Julia Mignucci, Dr. Paul Hepperly
- 6 February - Travel from Isabela, PR to Urbana, IL

Purpose:

To inoculate plants for an experiment in which the incidence of soybean mosaic virus transmission through seeds is tested in a variety of tropical soybean cultivars.

Summary of Accomplishments:

One possible avenue for reducing the incidence of soybean mosaic virus (SMV), a seedborne virus, in tropical soybeans would be to develop soybean lines which transmit the virus at very low rates or not at all. Investigations in this area were begun at Illinois, using one strain of soybean mosaic virus (SMV-G2) to screen for resistance to seed transmission in tropical soybean lines. This study takes the investigation one step further by testing those soybean lines shown to be resistant to seed transmission of G2 and testing them against the six other known strains.

In early January 1981, eight lines of tropical soybeans, six of which were selected from the initial tests as having resistance to seed transmission, were planted at Isabela, PR by José Bravo. Our trip was to inoculate these lines. The inoculation was approximately 21 days after emergence

(over)

and one week before flowering. Each line was inoculated separately with each of 7 strains of SMV. The trial was replicated 4 times. We inspected all plots and thinned them to about 25 plants/row before inoculation.

In addition to field work, we spent one afternoon visiting with other INTSOY personnel, Dr. Julia Mignucci, Dr. Paul Hepperly and Dr. Chris Stearn. Conversations with Dr. Stearn resulted in a cooperative effort to produce a serological assay for the identification of Rhizobium strains.