

931-0560

PO-AAQ-515

ISR-37853

92

SIEVE and SPOT Trials--Ecuador,  
Colombia and U.S.A.

José Bravo

ISR-81-3

August/September 1980

International Soybean Program, INTSOY

College of Agriculture  
University of Illinois at Urbana-Champaign  
113 Mumford Hall  
1301 West Gregory Drive, Urbana, Illinois 61801 U.S.A.

College of Agricultural Sciences  
University of Puerto Rico, Mayaguez Campus  
Mayaguez, Puerto Rico 00708

1

International Soybean Program, INTSOY  
University of Illinois at Urbana-Champaign  
University of Puerto Rico - Mayaguez Campus

Trip Report--Ecuador

NAME: José A. Bravo, Assistant Agronomist

PERIOD OF TRAVEL: September 3-6, 1980

PURPOSE OF TRIP:

1. To observe characteristics of varieties in SIEVE and SPOT trials.
2. To assist in selection of varieties from SIEVE to SPOT and from SPOT to ISVEX.

ORGANIZATION AND PERSONS CONTACTED:

INIAP Guayaquil, Boliche and Pichilingue

Ing. Gilberto Guzmán, General Director of INIAP  
Ing. José Lainez, Director, Boliche Experiment Station  
Ing. Eduardo Calero, Coordinator, Soybean Program  
Ing. Eduardo Maldonado, Agronomist, Boliche  
Ing. Raúl Cacelen, Agronomist, Pichilingue

RESULTS AND ACCOMPLISHMENTS:

After a protocol visit to the director of INIAP (Ing. Gilberto Guzmán), I went to Boliche Experimental Station located 26 kilometers east from Guayaquil. The Boliche Station has an area of 200 hectares, a minimum and maximum temperature of 19.8°C and 25.2°C, respectively, annual precipitation of 741.1 mm and 82 percent of relative humidity.

While there I had the opportunity to visit with Ing. José Lainez, director of the Boliche Experimental Station. SIEVE and SPOT trials were planted (July 4) at this station and they were between R4 and R5 stage. Besides SMV no other major disease problems were observed. A low infection of leaf roller (*Hedylepta, indicata*) was observed in most of the plots. Plants were much shorter at Boliche than in Beaumont as we expected.

Five kilograms of seed of the cultivar INIAP 301 (Ecuador) were brought to be increased for ISVEX 1981. Most of the soybean commercial production takes place in the area of Boliche and Pichilingue. The three major limiting factors in commercial soybean production are weeds, viruses, and seed quality.

FOLLOW-UP ACTION

1. Discussed with Dr. Judy the possibility of INTSOY sending some money to INIAP Boliche in order that they have money to pay air freight bill for seed to be sent to INTSOY.
2. Sent to Ing. Maldonado copies of Soybean Diseases I and II, common soybean insects and a copy of stages of soybean development.

(Over)

2

3. Assist Dr. Judy in the selection of varieties from SIEVE to SPOT and from SPOT to ISVEX.

#### ACKNOWLEDGEMENTS

I want to thank Ing. Calero and Ing. Maldonado for all their assistance during my visit to Ecuador.

International Soybean Program, INTSOY  
University of Illinois at Urbana-Champaign  
University of Puerto Rico - Mayaguez Campus

Trip Report--Colombia

NAME: José A. Bravo, Assistant Agronomist

PERIOD OF TRAVEL: September 6-11, 1980

PURPOSE OF TRIP:

1. To observe characteristics of varieties in SIEVE trial.
2. To assist in selection of varieties from SIEVE to SPOT.
3. To bring seed of ICA-L-109, Tunia and Caribe to be increased for ISVEX 1981.

ORGANIZATION AND PERSONS CONTACTED:

ICA, Palmira and ICA Montería

Ing. Gilberto Bastidas, Coordinator  
Dr. Jorge Victoria, Plant Pathologist  
Raul Varela, Botany  
Fulvia Garcia, Plant Pathologist  
Jaime I. Pulido, Plant Pathologist  
Ramiro de la Cruz Urdinola, Plant Physiology

RESULTS AND ACCOMPLISHMENTS:

After talking with Ing. Bastidas about the problems and inconvenience of seedling seeds from Colombia, we recommend that INTSOY should establish an agreement with CIAT to send seed from CIAT to USA and from USA to Colombia. The main reason for that type of arrangement is to accelerate and facilitate sending seed from Colombia to USA, therefore better quality seed will be received in USA from Colombia.

Colombia has two planting seasons called Semester A and Semester B. In Semester A, they plant in early March and harvest in June; in Semester B they plant in early September and harvest in December.

The annual precipitation in the Cauca Valley is around 1,050-1,100 mm. The precipitation for both semesters is the same (+ 500 mm). In Semester B, the rain is well distributed from September to December but in Semester A rain is not well distributed. The total acreage of soybean planted in Colombia is around 65,000-70,000 hectares per year.

SIEVE trial was planted on July 16, 1980 under irrigation at ICA, Monteria. Most of the plants were between R4 to R5 stage. The plots were in excellent condition indicating a good crop husbandry.

Five kilograms of seed of the cultivars ICA-L-109, Caribe and Tunia were brought to be increased at Isabela, Puerto Rico for ISVEX 1981.

(Over)

4

FOLLOW-UP ACTION:

1. Discussed with Dr. Judy the possibility of establishing an agreement with CIAT to export and import soybean seed from Colombia to USA and from USA to Colombia.
2. Assist Dr. Judy in the selection of varieties from SIEVE to SPOT and from SPOT to ISVEX.

ACKNOWLEDGEMENTS:

Appreciation is expressed to Ing. Bastidas and his colleagues for their attention and time they spent with me during my visit to JCA.

International Soybean Program, INTSOY  
University of Illinois at Urbana-Champaign  
University of Puerto Rico - Mayaguez Campus

Trip Report--Florida and Texas

Florida

NAME: Jose A. Bravo, Assistant Agronomist

PERIOD OF TRAVEL: August 28-30, 1980

PURPOSE OF TRIP: To visit with Dr. Kuell Hinson, USDA breeder, located at the University of Florida in Gainesville and get acquainted with his breeding program.

ORGANIZATION AND PERSONS CONTACTED:

University of Florida

Dr. Kuell Hinson, USDA Breeder

Mr. Azlan, graduate student from Malaysia

Mr. Ponciano Pérez, graduate student from Mexico

Mr. Luis Salado, graduate student from Argentina

RESULTS AND ACCOMPLISHMENTS:

The total acreage of soybeans planted in Florida is around a half million acres, being Centennial the most-grown variety in Florida. Other important varieties grown in Florida are Bragg, Braxton, Bragsoy, Cocker, Cobb, Hutton, McNair 77, and McNair 78. Planting season starts in early June through July, with July being the month in which the bulk of planting takes place.

After discussing the soybean research program with Dr. Kuell Hinson, we went to visit the West Farm (160 acres) west of the main campus in which most of the research takes place. We went throughout his material resistant to Velvet Bean Caterpillar, SMV and nematodes. He also had some research using narrow leaf type soybeans with the purpose of increasing the number of seeds per pod in the commercial varieties and therefore increasing the yield.

During this visit, I had the opportunity to meet three of Dr. Hinson's graduate students--Mr. Azlan from Malaysia, Mr. Luis Salado from Argentina, and Mr. Ponciano Pérez from Mexico.

Mr. Azlan was studying the inheritance of a gene that causes a delay in flowering in soybean. He thinks the delay in flowering is caused by a single recessive gene and was using the back cross system to introduce the lateness trait to other cultivars. This gene caused 22 days of delay in flowering when the cultivar is planted during July under Florida conditions. In other words, when this gene is introduced to a group VII cultivar, it behaves as a group IX cultivar.

(Over)

6

Mr. Luis Salado is a former soybean research project leader at Regional Experimental Station in Famailla, Argentina. Mr. Salado was studying the seed nitrogen sink ratio on three commercial varieties and five high protein lines. The objective of his study was to find out how much nitrogen the plant allocates on the seed at different pod-filling stages.

Mr. Ponciano Pérez was studying the genotype environmental interaction of soybeans adapted to Florida when planted under Florida and Tampico, Mexico conditions. The objective of his study was to determine which characters they should look at in Florida if they want to select soybeans for Tampico, Mexico conditions.

He also asked me about the possibility of using INTSOY facilities and personnel in Puerto Rico to advance one generation of his hybrid seed from F1 to F2.

FOLLOW-UP ACTION:

1. Discussed Mr. Salado's request with Dr. Judy. The request was turned down because it does not fall within the objectives established by INTSOY. Nevertheless, information about the private winter nursery established at Belize where he can have his F1 seed planted was sent to him.
2. A request for seeds from the donor parent with delayed flowering gene was made to Dr. Hinson to be observed in Puerto Rico environment.

ACKNOWLEDGEMENTS:

Appreciation is expressed to Dr. Hinson and his graduate students who generously gave their time and attention during my visit.

Texas

NAME: José A. Bravo, Assistant Agronomist

PERIOD OF TRAVEL: September 1-3, 1980.

PURPOSE OF TRIP:

1. To observe characteristics of varieties in SIEVE and SPOT trials.
2. To assist in selection of varieties from SIEVE to SPOT and from SPOT to ISVEX.
3. To bring seed of INIAP 301 to be increased for ISVEX 1981.

ORGANIZATION AND PERSONS CONTACTED:

Beaumont Agricultural Research and Extension Center

Dr. J. Craigmiles, Director, Texas A&M University Research and Extension Center at Beaumont  
Dr. J. W. Sij, Plant Physiologist  
Dr. N. G. Whitney, Pathologist  
Dr. C. C. Bowling, Entomologist  
Dr. Mike Maxey, Seedman  
Dr. Smith, Acting Director, Texas A&M Experiment Station

1

RESULTS AND ACCOMPLISHMENTS:

After a delay on finding the record books and plots, I got into the SIEVE plots. The reason of the delay was due to absence of INTSOY cooperators, Mr. Peter Bagley, who resigned his job. In spite of no INTSOY cooperators, the plots were clean and clearly identified. Plants were between R2 and R4 stage, therefore was a little early to make a good evaluation.

According to Dr. Whitney, the three most important diseases in order of importance are Anthracnose, Pod Stem Blight, and Purple Stain. The most important insect pests are velvet bean caterpillar and stink bug.

FOLLOW-UP ACTION:

Assist Dr. Judy in the selection of varieties from SIEVE to SPOT and from SPOT to ISVEX.

ACKNOWLEDGEMENTS:

Thanks to Dr. Craigmiles for his kind assistance during my visit to Beaumont Extension Center.