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INTSOY/ICA/CIAT Collaboration

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International Soybean Program, INTSOY

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Trip Report - CIAT, Colombia

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April 5-8, 1981

April 5 - Arrive Cali, Colombia, from Lima, Peru, via Bogota, 8:00 p.m.

April 6, 7 - Met W. N. Thompson and M. E. Irwin in Cali. Visited Centro Internacional de Agricultura Tropical (CIAT) in company with Drs. Thompson and Irwin at invitation of Dr. J. L. Nickel, Director General, for discussion and consideration of possible cooperation between INTSOY, CIAT, and Instituto Colombiano de Agropecuario (ICA). Participants in the discussions were Drs. Nickel, Thompson, Irwin, and Howell, plus G. A. Nores, Director of Land Resources Research Division and D. R. Laing, Director of Crop Research Division, CIAT.

CIAT's mandate is for research on the basic food commodities, beans, cassava, and rice, as well as tropical pastures suitable for beef production in acid, infertile soils. It is their concern with the acid, infertile soils that stimulates interest in cooperating on soybeans.

CIAT cooperates with other international centers, most notably with the International Rice Research Institute (IRRI) in a regional rice program. Rice is probably CIAT's best success story. There was a cooperative agreement with the International Fertilizer Development Center (IFDC) effective September 1, 1975. A Memorandum of Intention to cooperate in sorghum research has been signed by CIAT and the International Soybean and Millet Program (INTSORMIL) and is pending signature by the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT).

Dr. Nickel reviewed the program history of CIAT and its present sharp focus on the four commodities named above. There has been antipathy to soybeans for several reasons including: (1) Need to focus on a few well-defined commodities and objectives; (2) Fear among the staff of competition for limited resources; (3) Feeling in CIAT Board of Directors that soybeans are more industrial than food crop; (4) Desire to avoid posing a threat to ICA; (5) Increase in vulnerability of dry beans to virus disease because soybeans harbor the white fly vector.

CIAT's budget next year is expected to be about \$16 million, less than requested but up from the current \$14 million.

Despite antipathy to soybeans, interest continues. Dr. Laing seems to be the most enthusiastic, citing the great genetic diversity of soybeans as compared with dry beans. He sees the most feasible direction to be a strong association of INTSOY-ICA, with CIAT acting in a support capacity. Thus a key question is what will be the priority for soybeans in ICA's long range plan now in development.

Thompson and Howell reviewed the INTSOY program and objectives, particularly our discussions since receiving Dr. Nickel's letter of November 27, 1980, inviting consideration of possible cooperation. We outlined the questions we have as to CIAT's current interest in soybeans, the costs for services and facilities to be provided, and maintenance of INTSOY identity. A special concern of INTSOY is our relationship with the University of Puerto Rico. While recognizing the advantages of association with CIAT and a presence in South America, there are important advantages in our cooperation with UPR. We do not want to give the appearance of dissatisfaction with UPR, nor of posing some sort of threat to UPR. It would be best for INTSOY if any new arrangement in

tropical America be clearly complementary to the Puerto Rico program.

The place of soybeans in ICA national priorities was pursued on April 7 with Ing. Gilberto Bastidas, national leader of beans and soybeans, and members of his staff at the ICA Palmira Station. ICA now has a soybean program under Ing. Bastidas' leadership including extensive experimental plots at Palmira.

Ing. Bastidas seemed favorable to some sort of joint program. There is already a general umbrella agreement between INTSOY and ICA, so it should be easy to make a specific agreement covering individual and joint responsibilities. A separate agreement between INTSOY and CIAT would probably be appropriate as there is already an ICA-CIAT agreement.

Ing. Bastidas envisions a program in which INTSOY and ICA are the more active partners, with CIAT acting as an intermediary or expeditor for movement of seeds, supplies, and personnel into and out of Colombia.

The concept of Ing. Bastidas seems to be compatible with that of the CIAT officials. In brief, an arrangement that would appear to be acceptable to both ICA-Palmira and CIAT would be to obtain office and logistical support at CIAT, and field and laboratory facilities at ICA-Palmira. Dr. Laing outlined CIAT's capability and possible willingness to provide the following:

1. Office space for two senior staff and their support staff.
2. Use of CIAT export-import-quarantine authority for moving seed and other supplies and equipment in and out of Colombia.
3. Use of CIAT Communications such as Telex and direct-dial telephone to the United States.
4. Employment of support personnel by CIAT on contract basis with INTSOY.

5. Import vehicles (project and personal) under CIAT license and administer project vehicles through CIAT system.
6. Payroll administration for INTSOY personnel under appropriate fund transfer arrangements.
7. Other logistical support as required.

As to field and laboratory facilities at ICA-Palmira, Ing. Bastidas and other staff members appeared amenable. Although there was no discussion of specifics such as field acreage, greenhouse space, and laboratory requirements, the station would seem to have quite a bit to offer. Laboratories are limited in their equipment, but are spacious.

Ing. Bastidas suggested an arrangement whereby costs of joint ICA-INTSOY projects would be financed 50-50. Those of sole interest to INTSOY would be charged 100 percent to INTSOY, and those of sole interest to ICA charged 100 percent to ICA. We did not discuss specific rates of land or other charges.

We were fortunate that the Director General of ICA, Dr. Baldomero Cleves Vargas, and the Research Director, Dr. Jaime Navas, both from Bogota, were attending a meeting at CIAT. We were able to discuss possible soybean cooperation with them in an informal, extemporaneous setting. Dr. Cleves comes from the Llanos area in eastern Colombia where acid infertile soils occur. Both he and Dr. Navas responded quite favorably to the idea of increased ICA-INTSOY cooperation. Colombia imports about 120,000 tons of soybeans for oil. There is potential for 200,000ha of soybeans in the Llanos in rotation with upland rice on soils with pH of 4.5-5.0. They have identified germplasm adapted between savanna and marshy areas. The rice/soybean rotation, with soybeans planted in October, is seen as fitting the production system.

Machine harvesting methods are needed due to competition with cotton for labor.

Soybeans would also be compatible with paddy rice in the Tulima Valley (east of the Cauca Valley) and on the north coast. About 240,000ha on the north coast are idle during half the year.

In summary, Dr. Cleves stated that ICA needs specific programs that will fit into national priorities. They are interested at the national level in various aspects of soybeans. Ing. Bastidas agreed to provide us a copy of the soybean chapter of the ICA long range plan.

We met with various members of the CIAT staff to learn more about the resources that might be available and what the costs might be to INTSOY.

Information as to current costs of certain services was provided by A. V. Urquhart, Controller:

Office - \$41 M²/year

Laboratory - \$54 M²/year

Greenhouse - \$48 M²/year

Land at Quilichao - \$388/ha (general preparation, irrigation, etc. included, but not weed control, fertilizer or other project costs)

Auto lease, if project buys the vehicle, \$2500/year (maintenance, insurance, gasoline, etc.)

Mr. Urquhart advised that Colombia has an excess of foreign currency. There is, therefore, a 4-month delay in changing dollars to pesos. Immediate conversion is possible, but incurs a 5 percent penalty. It would be advantageous for INTSOY to use CIAT's money transfer capability rather than attempting to manage this problem separately. CIAT has

experience in working with other organizations in which fund transfers occur, so an arrangement with INTSOY would not be a departure from previous experience.

Dr. Fritz Kramer, head of Communications Services explained CIAT's capability for publications, library, etc. They can do all steps in editing and publication, although color reproduction, hard back binding, and at peak times other work is obtained commercially. There is a library abstract service, with a team assigned to each commodity group, which monitors literature continuously. All CIAT publications are issued in Spanish and English. The library has a good selection of periodicals and other publications, but is concentrated on the four commodities of the CIAT mandate. We did not find some standard references on soybeans, nor some INTSOY publications which we thought had been sent to CIAT. It may be that individual recipients did not place the publications in the library. A copy of INTSOY publications should be sent to the CIAT library, in addition to copies that may be provided to individuals.

The training and conference programs of CIAT were explained by Dr. Fernando Fernandez, Coordinator. CIAT finances research for M.S., and Ph.D. degrees, but considers the M.S. training the most important. CIAT cannot fund course work of degree candidates. Thesis research is ordinarily planned by a University graduate faculty member and a CIAT counterpart. Students must be identified with a country program and have a high probability of continuing with it after completion of the degree. Visits of University faculty in connection with thesis supervision are not funded by CIAT. Short courses are held in each of the major commodity areas, some more than one time a year. There is a tendency toward combining short courses and subsequent internships.

Participants are funded from a central scholarship pool derived partly from the CIAT core budget and partly from country grants for specific courses. Interns from developed countries are financed by sources other than CIAT. A factor that frequently limits enrollment in short courses and determines how many interns can be accepted is availability of individual or family housing. There are excellent housing and recreational facilities at CIAT, but housing is used to capacity much of the time. This was a principal reason that CIAT was unwilling to accept the INTSOY short course in 1980.

It should be noted that ICA-Palmira provided housing for 16 participants for INTSOY and that the course was conducted in ICA facilities. ICA is currently upgrading its facilities for conference support.

The CIAT seed unit headed by Johnson Douglas is concerned with research and training in seed certification, technology and processing. The unit has laboratories, instructional area, and a small seed processing facility. This unit is funded by a 5-year grant from the Swiss Government. CIAT may ask for funds to incorporate the seed unit into the core budget.

The seed unit conducts short courses and issues a quarterly newsletter. Its coverage of crops is not limited to the four commodities of the CIAT mandate.

We also visited Dr. Peter Graham, microbiologist in the Bean Program. He has met Chris Stearn of INTSOY/Puerto Rico and is aware of his work. He indicated some interest in cooperation on problems of common interest, but would not encourage a proposal to move Stearn's program to CIAT as he feels the facilities are nearly fully used at present.

In a final session with Drs. Nickel, Laing, and Nores it was indicated that CIAT "expects to hear" from INTSOY. CIAT does not feel

any urgency and recognizes INTSOY's need to consider its priorities. They understand our concern about relationships with Puerto Rico. Dr. Nores stated that CIAT will eventually have to think about soybeans. They do not want to overlap INTSOY programs and, therefore, will continue to have interest in INTSOY plans. The CIAT Board of Directors is beginning to ask questions about their intentions with respect to soybeans, but management wants to continue the present program until 1987.

It seems clear that any new soybean program at CIAT and ICA will require new funding. CIAT lacks funds or mandate for soybeans, and ICA is seriously underfunded. Thus while the climate for a joint program seems reasonably cordial, it appears that CIAT and ICA are looking to INTSOY for initiative. The issue for INTSOY is the same as before the trip: What priority do we give to a new program in Colombia that has potential for assisting other countries in Latin-America as well, probably with some clear emphasis on the acid, infertile soils, and shall we proceed to develop a proposal and seek funds.

April 8 - Travel Cali to Urbana. Arrive 9:30 p.m.

Summary and Conclusions

There is interest in CIAT and ICA in a three-way cooperation with INTSOY on soybeans. CIAT seems to be willing to provide office space and various administrative services. Likewise, ICA seems to be willing to provide plot land and laboratory space at Palmira. Probable costs of these services to INTSOY were reasonable.

An INTSOY program in Colombia should not displace the existing program in Puerto Rico. Therefore, a new purpose or activity would characterize an INTSOY Colombian program. CIAT is specifically interested in work related to acid, infertile soils.

It will be necessary to obtain funding for such a program. CIAT and ICA are waiting for a move or proposal from INTSOY. The material and scientific resources at CIAT and ICA are favorable.

Persons Contacted at CIAT and ICA/Palmira

John L. Nickel, Director General, CIAT
Douglas R. Laing, Director Crops Division, CIAT
Gustavo A. Nores, Director Land Resources, CIAT
Fernando Fernandez, Coordinator of Training & Conferences, CIAT
Fritz Kramer, Head, Communications, CIAT
Andrew Urquhart, Comptroller, CIAT
Johnson Douglas, Head, Seed Unit, CIAT
Peter H. Graham, Microbiologist, CIAT
Art Van Schoonhoven, Entomologist, Coordinator, Bean Program, CIAT
Francisco Morales, Virologist, Bean Program, CIAT
Jaime Pulido, Entomologist, ICA
Fulvia Garcia Roa, Entomologist, ICA
Oscar Ochoa B., Seed Certification, ICA
Danito Valencia G., Vertebrate Pests, ICA
Alvaro Parra Castro, Soil Scientist, Soy & Cotton, ICA
Francisca Varon de Agudelo, Plant Pathologist, ICA
Raul Varela Gonzalez, Physiologist, Soil Microbiologist, ICA
Orlando Agudelo, Agronomist, Soy, ICA
Alonzo Ramirez Velasquez, Soil Scientist, ICA
Gilberto Bastidas R., Agronomist, ICA, National Leader, Beans & Soybeans
Elmar Wagner, Soil Scientist, Brasilia, Brazil

ICA Officials Attending CIAT Review

Baldomero Cleves Vargas, Director General, ICA, Bogota
Jaime Navas, Research Director, ICA, Bogota