

ANNUAL REPORT 1995

INSTITUTIONAL RELATIONS AND DEVELOPMENT SUPPORT

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EXECUTIVE SUMMARY

Last year we introduced the Executive Summary of our Annual Report saying that, after the downsizing in 1993, in 1994 "we learned what can be done and what are the limits to delivery under the new configuration". This year we feel that our report shows that what can be done is substantial; although this, of course, is for the reader to judge. However, we also had some frustrations, especially in mobilizing resources for developing national and subregional training capacities, but we trust that we should take this hurdle in 1996.

INFORMATION AND DOCUMENTATION UNIT

Fifteen projects were carried out in order to improve access to and utilization of information, implement innovations in information handling, strengthen working relationships with national partners and build capacity in information management.

Eleven serial publications were produced including five quarterly bulletins (three of them new this year) and six monthly series of pages of contents. Eleven informational exhibits were mounted in the Library. Staff hosted institutional information exhibits at two national congresses and one international meeting.

Reference staff answered 2,893 queries, loaned 4,600 books, distributed 12,610 photocopied documents and conducted training and orientation for over 500 persons. Database searches increased 377% from 3,072 in 1994 to 14,664 in 1995 as a result of installation of a CD-ROM server on the local area network.

Processing staff acquired more than 3,400 publications for the collection through purchase and exchange. The internal database, CATAL, grew by 14% in 1995 with the addition of 3,664 new bibliographic records bringing the total database size to 26,459.

The trend is toward increased dependance on networked electronic sources for acquisition, access to and delivery of information. Use of Internet was heavy for reference as well as acquisitions. Staff developed a home page for the World Wide Web on the Internet to increase the Unit's visibility and promote its information services.

The implications for the future are continued investments in hardware and software upgrades and staff training in order to keep pace with rapid technological developments. The ease of communication will also result in increased collaboration with national partners and those in other international centers.

COMMUNICATIONS AND PUBLIC AWARENESS UNIT

The Unit made important shifts in its public awareness strategy in 1995. We placed less emphasis on wide dissemination of news releases and more on the development of publications and short videos that CIAT staff can use in their personal contacts with donors and partners.

We continued to be handicapped by the absence of Unit head Thomas Hargrove but made up for this somewhat by relying more on free-lance writers and editors. Numerous staff took part in various professional improvement activities in Colombia and abroad.

The level of scientific publishing was low during the period of this report. But we have a sizable number of projects in process, and the good condition of the publications revolving fund makes us well placed to take on new ones in 1996.

In keeping with the shift in our strategic directions and as a result of Tom's absence, we prepared far fewer news releases than in previous years. Instead, we produced new promotional brochures, an attractive annual report, and a promotional video. A longer video finished late last year on tropical American savannas was broadcast on an educational channel throughout the Spanish-speaking world and will soon be broadcast to an audience of millions by a public television network in the USA.

In collaboration with other groups at CIAT, the Unit developed a prototype CIAT home page for the World Wide Web on Internet. We are now addressing a range of editorial, organizational, and technical issues to prepare for wider participation in this project by Center staff.

With the departure of the project development officer, we accepted responsibility for helping staff prepare project profiles and proposals.

Graphic arts technology has improved quickly in recent years. To continue taking advantage of new opportunities, our staff attended various workshops and exhibits to explore the possibilities of new equipment and to interact with colleagues in Colombia and other countries.

SCIENTIFIC TRAINING, CONFERENCES AND VISITORS

Training of scientists from NARS is co-evolving with the many changes that are taking place in the NARS and in CIAT.

The demand for training in biotechnology is extremely strong, so much so that, for the second consecutive year, CIAT's biotechnology training capacity has been stretched to the limit.

The Biotechnology Unit held the Second Course on Biotechnology for the Conservation of Agrobiodiversity. The Rice Program held the Second Workshop on Rice Improvement with

Anther Culture. The Biotechnology Unit will hold before the end of the year a course requested by PROCISUR to transfer the amplified fragment length polymorphism, AFLP, methodology to agricultural biotechnologists of Southern Cone countries.

These courses are examples of CIAT implementing its emerging function as a technology bridge between the technology-rich North and the biodiversity-rich South, and between private industry and the NARS.

The demand for crop-related training is clustering in discrete fields--breeding and genetics, crop protection, and biotechnology--and is being met through individualized training programs. Of 51 trainees received this year (until 1 November) in individualized programs, thirty-three percent were trained in breeding and genetics, 20% in crop protection (entomology and pathology), 29% in biotechnology, while the remaining 18% were trained in four different fields (physiology, pasture quality, agronomy, and cassava production).

CIAT, as a member of a novel training consortium, has embarked on its first major group training event in resource management research: the Postgraduate Course on Research and Development for Sustainable Agricultural Land Use in the Neotropics. It aims at developing a regional cadre of scientists familiarized with a systemic research approach to agricultural sustainability issues.

Seven workshops held for the exchange of information and experiences among NARS and CIAT scientists, and for the standardization of research methodologies represent a new generation of NARS capacity building which responds to the maturity of our research partners and colleagues in the region.

Training of researchers from industrialized countries has remained within similar boundaries as in previous years. Training of undergraduate Colombian students, by contrast, has dropped for the second consecutive year. Analysis of the causes will be conducted forthwith.

In addition to the seven workshops reported above, there were another six conferences, four of them of a consultative-participatory planning nature. This reflects the new way of doing business both as part of CIAT's operational strategy and of the CGIAR's integration across IARCs.

The yearly flow of visitors continues staying fairly constant throughout the 1990s at slightly over 200 groups and 3,000 persons.

DEVELOPMENT OF NATIONAL AND SUBREGIONAL TRAINING CAPACITIES AND OF TRAINING MATERIALS

The Section for Training Capacity Development and Training Materials (TCDTM) has further elaborated the model of developing national and subnational training capacities. Working with and for PROFRIJOL it developed mutually complementary training materials which now serve the full chain trainers->trainees->farmers. It also developed a set of instruments to monitor the job performance of the trainees.

Intensive efforts were made to market the TCDTM's products and services. Unfortunately the results have not been highly successful so far and the TCDTM is suffering a financial crunch. However, there are reasonable expectations to overcome the difficulty in the near future.

INFORMATION AND DOCUMENTATION UNIT

This report covers highlights of projects by output area, trends in information services, constraints affecting information processes and future directions. Workload statistics for information services and database production as well as a list of publications and exhibits are found in Annex 1.

I. HIGHLIGHTS OF PROJECTS

In a planning exercise in early 1995, Unit staff identified four high priority output areas: 1) Improved access to and utilization of information; 2) Innovations in information; 3) Collaboration with partners; and 4) Capacity building. Major accomplishments for each area are summarized below.

Output 1 - Improved Access to and Utilization of Information

The Unit undertook 3 activities to improve the accessibility and quality of internal databases and collections and stimulate increased use of information services.

Quarterly Bulletins Improve Access for Partners - Three quarterly bulletins were launched in 1995 to share access to CIAT information resources on commodity and resource management research with national partners. The **Bibliographic Bulletin on Forages**, **Bibliographic Bulletin on Beans** and the **Bibliographic Bulletin on Tropical Acid Soils** join the **Bibliographic Bulletin on Cassava** which was launched in 1994. These bulletins cover the grey or informal literature derived from the region that complements the formal literature found in commercial database services. All documents referenced are indexed in CIAT's databases and available for consultation in the Library. The latest issue of each bulletin will also be available on the Internet through CIAT's World Wide Web and Gopher servers.

Database of CIAT Publications - A database of CIAT-authored publications will help us provide quick response to requests for bibliographies for institutional and program annual reports, lists of refereed publications for the ORPA Committee, donor queries and others. This database, which has more than 4,500 records, many with abstracts, includes publications authored by CIAT staff in external sources, publications published by CIAT, references to publications by external authors that use CIAT methodology or germplasm (useful for measuring impact), and references to publications by external authors who publish in CIAT publications. The database is fully searchable and will soon be available on the local area network.

Unification of Internal Databases CATAL and CINFOS - The Unit conducted a feasibility study on the merger of its two major bibliographic databases--CINFOS with more than 40,000 references with abstracts to the literature on cassava, beans and tropical forages and CATAL

with more than 26,000 references to publications and papers on all topics in the collection. The two databases will be merged in order to provide one point of access for all bibliographic information, on any subject, available in CIAT's Library.

Output 2 - Innovations in Information Handling

The Unit continues to commit a large share of its resources to the application of new information technologies for improved organization and retrieval of scientific information. Increased access to information reduces the unit cost to provide it. Major headway was made in improving access to electronic information resources through networks.

Installation of a CD-ROM Server and Local Area Network - A CD-ROM server was installed to provide CIAT staff desktop access, via the local area network, to external and internal databases in the Library--in all, access to more than 20,000,000 references to publications in the agricultural, biological and environmental sciences. A database acquisition of note was **Current Contents on Compact Disc** which provides weekly updates to the tables of contents and abstracts of more than 4,000 scientific journals. The Unit invested substantial staff resources in organizing seminars and individualized training for CIAT scientists in how to efficiently use the network.

Personal Bibliographic Software - The Unit acquired a network version of PRO-CITE, personal bibliographic reference management software. The Unit will help CIAT staff build their own databases to manage reprint collections and make more efficient use of literature search results from other databases. The software is available to CIAT staff on the local area network.

Home Page Development for CIAT Presence on Internet - To promote broader awareness and use of CIAT information resources, the Unit participated in the development of a CIAT Home Page for the World Wide Web on the Internet. A student intern in library and information science was contracted to develop a prototype home page for the Information Unit. The prototype CIAT Home Page, which includes a page on information products and services, was made publicly available in October.

ARIEL Document Image Transmission - An innovation of particular note is the installation of Ariel, software that allows for scanning and sending or receiving of documents via the Internet to or from another library anywhere in the world. The Unit pilot tested this software in a cooperative agreement with Iowa State University and now uses the software for fast delivery of articles from Ariel libraries in Europe, the United States and Latin America. This software has major implications for improving resource sharing with our NARS partners.

Search Interface - The Unit developed a revised version of Nexus, a user-friendly software application to facilitate searches in databases produced in Micro CDS/ISIS. The application was presented at the 1st International Congress of CDS/ISIS in Bogotá in May 1995. The Unesco-developed software, Micro CDS/ISIS, is used by developing countries worldwide. The Unit shared version 1 of its customized application, available in English, Spanish, French and

Italian, with libraries and information centers in more than 175 institutions in 32 countries. At this time, the revised version is undergoing a technical evaluation by five institutions in Italy, France, Cuba, Colombia and Peru after which it will be publicly released.

Internet Access - The Internet has had a major positive impact on the provision of information services. Unit staff have accessed many reference tools online in lieu of purchase of printed publications. The Unit has also achieved greater economies and improved response time in acquisition of documents by using a combination of electronic mail and access to online databases and order services directly via the Internet.

Output 3 - Collaboration with Partners

Collaborative information projects with CIAT's partner institutions result in greater sharing of resources and better quality information.

Kellogg Funded Grey Literature Project - Through a grant from the W. K. Kellogg Foundation, the Unit is coordinating a three year project in collaboration with NARS partners in Bolivia, Brazil, Colombia, Costa Rica, Honduras, Nicaragua and Venezuela, as well as other international institutions such as IICA/CATIE, FAO and IFPRI, to recover the grey literature on managing acid soils in the hillsides, savannas and forest margins ecosystems. The project is completely complementary to CIAT resource management research, in particular, to the hillsides and MAS consortium research agendas. Its main objectives are to improve access to NRM literature, improve networking with NARS and build local capacity for modern information management.

Directory of Directories Database on Natural Resource Management - Twenty-eight Colombian institutions participated in this collaborative project, coordinated by the Unit, to produce a joint bibliographic database of directory-type reference sources on institutions, research projects, contacts, training programs, networks, databases and information centers on natural resource management and the environment in Latin America. The final database of 521 references was distributed to all participants.

Collaboration with Cassava Biotech Network and UNDP EsCAPP Project - In collaboration with the Cassava Biotechnology Network and the UNDP supported project on biological control (CIAT/IITA), Unit staff compiled a database with more than 25,000 bibliographic references on cassava. The references were derived from databases at CIAT and IITA as well as from five commercial databases and will be published on compact disc along with full-text publications and other reference information on cassava biological control.

Collaboration with ICRAF on African Highlands Initiative Project The Unit sent 2,600 bibliographic references and abstracts from the CIAT database, related to commodity and resource management in Ethiopia, Uganda, Rwanda, Kenya, Tanzania, Burundi and Madagascar, to ICRAF to integrate in a database in support of the ecoregional project "African Highlands Initiative".

Output 4 - Capacity Building in Information Management

The Unit shares its knowledge and experience in information management with other information specialists and institutions in the region seeking orientation and training.

Internship Program in Library and Information Science - Two students from the Universidad de Antioquia completed internships in the Information and Documentation Unit in fulfillment of their undergraduate degree. One student developed a prototype home page for the CIAT Library for the World Wide Web on the Internet. Another student is assigned to the Kellogg project on recovery of grey literature in natural resource management.

Collaboration with CORPOICA in Project Development for National Training - Collaborated with CORPOICA to develop a project for funding by Colciencias that will build national infrastructure for managing agricultural information in Colombia. CIAT will participate in training and support efforts to ensure that the information compiled will be shared with the world through the AGRIS/CARIS system of the FAO.

II. TRENDS IN PUBLIC SERVICES AND INFORMATION PROCESSES

Public Services (Tables 1-7)

The most dramatic change occurred in database searches (**Table 1**). For the period 1991 to 1994 there were consistently about 3,000 searches per year, mostly from standalone CD-ROM databases located in the Library. The figure jumped to 14,664 in 1995, a 377% increase. This is a result of installation of the CD-ROM server in February 1995 which allows for desktop "self-service" access to 11 Library databases directly from CIAT offices connected to the local area network. As a result, demand for training in database access has more than doubled in 1995.

The Library's internal databases were the most heavily searched (6,270 searches). This indicates frequent consultation of the collection and improved quality of indexing. The commercial databases on CD most consulted were AGRIS and CABI followed closely by AGRICOLA, Current Contents and BIOSIS (**Table 2**).

The demand for photocopied documents from the collection also increased to 12,610, up 33% from the 9,486 copies distributed in 1994 (**Table 3**). This increase is to be expected given the increase in database searches. Greater access to secondary database creates more demand for the source articles. Demand for documents from CIAT researchers, trainees and undergraduate students (37% of all requests) doubled--an indication of the effect of access to networked databases. Nevertheless, demand for documents from external researchers, who do not have direct network access, also doubled. The demand from other libraries (for researchers) also increased 24% over 1994. Clients in Colombia continue to request nearly half the documents (**Table 4**). These figures show that the collection remains relevant, despite cancellation of 900

journals over the past five years (**Table 10**). While 4,230 documents were copied for CIAT staff from the collection, only 800 requests, or 19%, had to be ordered from external sources because they were not available in-house.

Technical Processes (Tables 8-10)

Acquisitions statistics for journals, books and photocopies remained fairly constant with the figures from 1994 (**Table 11**).

The Unit made a large financial investment in upgraded multi-user subscriptions for existing CD-ROM databases and also purchased a new network subscription to **Current Contents** to compensate for cancelled journals. The amount spent on CD-ROM subscriptions, \$54,723, was twice that of 1994 (**Table 9**). This reflects the Unit's transition to networked access to information resources via the local area network. Special one-time funds were allocated to the Unit to help with the hardware and software upgrades necessary to make this transition complete.

The Unit benefitted from its exchange agreements with other institutions. More than 1,800 journals, 140 books and 700 documents were received free of charge as a result of these cooperative agreements. About 130 of these documents were transmitted to CIAT as images by institutions in the United States and Europe over the Internet using ARIEL software. Other Internet resources were used for verification of document references prior to ordering.

The most significant trend in Technical Processes is the growth of analytical or indexed entries in the database, CATAL. For the past two years 66% (2,411) of all bibliographic records produced for the database were analytics. This means detailed subject indexing at the more specific level of journal article, paper or book chapter. This adds significant retrieval value to a database and makes it a more valuable research support tool. The impact can be seen in the high number of searches in this database during the past year.

The CATAL database grew by 14% in 1995 reaching a total of 26,459 records. In all, 53% of the documents processed for the database relate to commodity research: cassava

(12.5%), beans (19.3%), forages (17%) and rice (4.4%). Another 47% relate to acid soils and other natural resource management topics relevant to CIAT research.

The Unit continues to support the collaborative AGRIS database of the FAO by inputting references to CIAT publications. Input dropped slightly from 429 to 406 in 1995. This is a direct result of reduced publishing activity by CIAT.

III. CONSTRAINTS

Increased demand for new information services is our greatest challenge. Decreased purchasing power due to constant inflation of materials and personnel costs is the biggest

constraint. In 1995, the Unit purchased **Current Contents** in order to provide timely access to the contents of journals which have been cancelled and to substitute for new subscriptions to some of the more expensive journals.

The increased dependence on electronic information services requires a financial commitment to new hardware and software and constant upgrades of both. It also means greater investment in telecommunications and access charges.

Further, the conversion to electronic information services requires a substantial investment in retraining of Unit staff as well as clients. Staff must be able to manipulate and make efficient use of a wide range of electronic working tools and resources and communicate this to the users.

IV. FUTURE DIRECTIONS

In 1996, the Internet will play a major role, not only as a complement to in-house resources, but also as a vehicle for wider and less costly dissemination of CIAT information to partners. The Internet will also serve as the conduit for conducting CIAT information business such as planning and carrying out projects, ordering and receiving digital images of documents, interactively searching catalogs and databases in other institutions and publishing electronically.

The Unit will conduct an exhaustive search for an integrated library system that takes full advantage of innovative information technologies and helps us to more fully achieve our goal of efficient and effective information delivery.

Collaborative information projects with partners will increase, in particular, with the CGIAR system, as we look for greater economies through inter-Center sharing of resources.

TABLE 1. PUBLIC SERVICES SUMMARY

	1991	1992	1993	1994	1995
Database Searches					
Online	22	8	13	14	4
Internal databases	852	761	438	1,029	6,270
CD-ROM	2,320	2,233	2,379	2,029	8,390
TOTAL	3,194	3,002	2,830	3,072	14,664
Reference Questions Answered	1,941	3,778	5,043	3,208	2,893
Publications Loaned	4,991	6,855	6,148	5,241	4,600
Documents Photocopied	25,758	18,308	21,554	9,486	12,610

	1991		1992		1993		1994		1995	
	Events	Persons	Events	Persons	Events	Persons	Events	Persons	Events	Persons
Training	20	156	30	139	18	60	14	46	43	118
Exhibits	4	509	3	166	4	1,700	26	780	14	1,361
Visitor Orientation		326		283		483		434		390
TOTAL	24	991	33	588	22	2,243	40	1,260	57	1,869

TABLE 2. BREAKDOWN OF SEARCHES IN CD-ROM DATABASES

	1995
AGRICOLA	1,478
AGRIS	1,976
BIOSIS	1,178
CAB	1,849
CURRENT CONTENTS	1,228
FSTA	326
GEOBASE	337
TROPAG	18
TOTAL	8,390

TABLE 3. DISTRIBUTION OF PHOTOCOPIED DOCUMENTS BY REQUESTOR

	1991	%	1992	%	1993	%	1994	%	1995	%
CIAT Researchers	14,616	56.74	8,843	48.30	11,474	53.2	2,877	30.32	4,230	33.55
CIAT Trainees	987	3.83	1,656	9.05	1,916	8.9	55	0.57	259	2.06
CIAT Undergraduate Student	--	--	299	1.63	2,874	13.3	102	1.07	201	1.60
Trainees	--	--	--	--	--	--	311	3.27	435	3.45
Researchers	3,698	14.36	2,566	14.02	1,478	6.8	929	9.79	1,867	14.81
Agri-Professionals	392	1.52	388	2.12	400	1.85	229	2.41	259	2.06
University Lecturers	329	1.28	340	1.86	450	2.08	281	2.96	596	4.73
Post-Graduate Students	285	1.11	2,946	16.09	2,094	9.7	301	3.17	262	2.08
Undergraduate Students	2,351	9.13	345	1.88	340	1.57	2,326	24.52	1,830	14.52
Librarians/Documentalists	2,181	8.47	846	4.62	348	1.6	1,664	17.54	2,363	18.74
Agro-Industrialists	906	3.52	9	0.05	28	0.13	67	0.70	48	.38
Agri-Producers	--	--	70	0.38	134	0.6	3	0.03	5	.04
Administrators							39	0.41	2	.02
Others	13	0.05	--	--	18	0.08	302	3.18	253	2.01
TOTAL	25,758		18,308		21,554		9,486		12,610	

TABLE 4. DISTRIBUTION OF PHOTOCOPIED DOCUMENTS BY GEOGRAPHIC AREA

	1991	%	1992	%	1993	%	1994	%	1995	%
Area										
L A C (not Colombia)	2,667	10.35	1,719	9.39	1,062	4.92	817	8.61	1,552	12.31
Colombia (not CIAT)	7,640	29.66	6,404	34.98	5,042	23.39	4,925	51.92	6,157	48.83
CIAT	14,616	56.74	9,202	50.26	14,348	66.56	3,348	35.30	4,579	36.32
Africa	244	0.95	330	1.80	283	1.31	41	0.43	30	.24
Asia	208	0.81	47	0.26	23	0.1	78	0.82	74	.59
Developed Countries	382	1.48	605	3.30	785	3.64	133	1.40	101	.80
Other Countries	1	0.00	1	0.01	11	0.05	144	1.51	117	.93
TOTAL	25,758		18,308		21,554		9,486		12,610	

TABLE 5. GEOGRAPHIC DISTRIBUTION OF PUBLICATIONS SUBSCRIPTIONS

	1991	%	1992	%	1993	%	1994	%	1995	%
PAGES OF CONTENTS										
L A C (not Colombia)	173	34.60	93	23.97	130	32.8	144	34.86	121	35.00
Colombia (not CIAT)	107	21.40	96	24.74	100	25.30	120	29.05	131	37.87
CIAT	119	23.80	114	29.38	82	20.70	80	19.37	18	5.21
Africa	83	16.60	74	19.07	67	16.90	56	13.55	59	17.06
Asia	16	3.20	7	1.80	11	2.80	11	2.66	15	4.34
Developed Countries	2	0.40	4	1.03	6	1.50	2	.48	2	.58
TOTAL	500		388		396		413		346	
BIBLIOGRAPHIC BULLETIN										
LAC (not Colombia)	201	44.37	242	48.79	232	47.8	211	48.06	218	49.10
Colombia (not CIAT)	74	16.34	112	22.58	115	23.8	79	17.99	93	20.95
CIAT	123	27.15	88	17.74	85	17.5	95	21.64	78	17.57
Africa	41	9.05	37	7.46	31	6.40	31	7.06	32	7.21
Asia	–	–	3	0.60	3	0.6	5	1.13	5	1.13
Developed Countries	–	–	14	2.82	19	3.9	17	3.87	18	4.06
Other Countries	14	3.9	–	–	–	–	1	0.22		
TOTAL	453		496		485		439		444	

(Cont.)

TABLE 5. GEOGRAPHIC DISTRIBUTION OF PUBLICATIONS SUBSCRIPTIONS (cont.)

	1995	%
BEANS BIBLIOGRAPHIC BULLETIN		
LAC (not Colombia)	153	40.48
Colombia (not CIAT)	38	10.06
CIAT	23	4.09
Africa	112	29.63
Asia	25	6.62
Oceania	1	.27
Developed Countries	26	6.88
TOTAL	378	
CASSAVA BIBLIOGRAPHIC BULLETIN		
LAC	126	40.39
Colombia	51	16.35
CIAT	20	6.41
Africa	60	19.23
Asia	51	16.35
Oceania	4	1.29
Developed Countries	49	15.71
TOTAL	312	
FORAGES BIBLIOGRAPHIC BULLETIN		
LAC	153	59.77
Colombia	67	26.18
CIAT	3	1.18
Africa	10	3.91
Asia	3	1.18
Developed Countries	23	8.99
TOTAL	256	
TROPICAL ACID SOILS BIBLIOGRAPHIC BULLETIN		
LAC (not Colombia)	139	35.28
Colombia (not CIAT)	49	12.44
CIAT	32	8.13
Africa	33	8.38
Asia	32	8.13
Oceania	1	.26
Developed Countries	108	27.42
TOTAL	394	

TABLE 6. DISTRIBUTION OF APPLICATIONS IN MICRO CDS/ISIS 1995

REGION	CIAT SEARCH INTERFACE	UNION CATALOG OF SERIALS-IARCS*
AFRICA	2	—
ASIA	—	—
EUROPE	7	—
LATIN AMERICA	14	7
NORTH AMERICA		—
TOTAL	23	7

* Application developed by ICRISAT; CIAT is distributor for Latin America.

**TABLE 7. OPERATING BUDGET AND ACQUISITION EXPENDITURES
1991-1995 (current dollars)**

Year	Operating Budget	Total Acquisitions	% Budget
1991	191,902	157,632	82.14
1992	209,082	150,894	72.16
1993	214,190	155,085	72.40
1994	212,618	177,085	83.28
1995	253,032	206,302	81.54

TABLE 8. BREAKDOWN OF ACQUISITIONS
1991-1995 (current dollars)

Year	Subscriptions	Books	Total Acquisitions
1991	142,777	14,855	157,632
1992	136,405	14,082	150,487
1993	130,410	24,675	155,085
1994	140,784	36,301	177,085
1995	179,712	26,590	206,302

TABLE 9. BREAKDOWN OF SUBSCRIPTIONS
1991-1995 (current dollars)

Year	CD Subscriptions	Journal Subscriptions	Total Subscriptions
1991	14,455	128,322	142,777
1992	27,308	109,097	136,405
1993	21,519	108,891	130,410
1994	27,827	112,957	140,784
1995	54,723	124,989	179,712

TABLE 10. JOURNAL SUBSCRIPTIONS CANCELED 1990-1996

YEAR	No. CANCELED	VALUE
1990	521	50,000
1991	119	30,000
1992	103	25,000
1993	68	15,645
1994	7	3,560
1995	57	22,111
1996	25	6,228
TOTAL	900	\$152,544

TABLE 11. TECHNICAL SERVICES SUMMARY

ACQUISITIONS	1991	1992	1993	1994	1995
Journal Subscriptions					
Purchase	622	541	521	520	*519
Exchange	1,552	1,742	1,598	1,732	1,809
Sub-total	2,174	2,283	2,119	2,252	2,328
Books					
Purchase	391	419	601	1,116	**525
Exchange	1,402	865	509	627	140
Sub-total	1,793	1,284	1,110	1,743	665
Photocopies					
Purchase	1,635	1,294	441	74	115
Donation	1,813	530	709	684	681
Sub-total	3,448	1,824	1,150	758	796
Others ***					
Purchase	8	45	24	4	17
Exchange	8	5	9	5	—
Sub-total	16	50	33	9	17
TOTAL	7,431	5,441	4,412	4,762	3,806
* 37 were ordered as working tools for programs with programs funds. ** 407 were ordered as working tools for programs with programs funds. *** Includes non-print media.					

(Cont.)

TABLE 11. TECHNICAL SERVICES SUMMARY (Cont.)

INDEXING/TOPIC	1991	1992	1993	1994	1995
Cassava	601	477	420	329	458
Beans	1,027	651	715	512	705
Tropical pastures	985	657	299	707	617
Rice	1,338	703	157	271	180
Acid Soils					164
Other topics					1,540
TOTAL	3,951	2,488	1,591	1,819	3,664
INDEXING/DOCUMENT TYPE					
Journals	221	137	138	58	108
Books	1,424	565	498	584	551
Analytics					2,411
Others	900	994	1,096	2,598	594
TOTAL	2,545	1,696	1,732	3,240	3,664
OTHER DATABASE ACTIVITIES					
Input to AGRIS(FAO)database	174	514	533	429	406
Retrospective conversion	7,883	3,400	300	4,361	1,143
Input to CATAL database	10,325	5,096	2,032	3,118	3,664

TABLE 12.

**PUBLICATIONS AND EXHIBITS OF THE
INFORMATION AND DOCUMENTATION UNIT 1995**

SERIAL PUBLICATIONS

Bibliographic Bulletins

Boletín Bibliográfico/Bibliographic Bulletin.— No.109-112 (1995).— Cali, Colombia: Centro Internacional de Agricultura Tropical. Quarterly.

Forrajes/Forages Boletín Bibliográfico/Bibliographic Bulletin.—Vol.1, No.1-4 (1995).— Cali, Colombia: Centro Internacional de Agricultura Tropical. Quarterly. ISSN 0121-8840

Frijol/Beans Boletín Bibliográfico/Bibliographic Bulletin.— Vol.1, No.1-4 (1995).— Cali, Colombia: Centro Internacional de Agricultura Tropical. Quarterly. ISSN 0121-8859

Suelos Acidos Tropicales/Tropical Acid Soils Boletín Bibliográfico/Bibliographic Bulletin.— Vol.1, No. 1-4 (1995).—Cali, Colombia: Centro Internacional de Agricultura Tropical. Quarterly. ISSN 0121-8875

Yuca/Cassava Boletín Bibliográfico/Bibliographic Bulletin.—Vol.1, No.3-4 (1994); Vol.2, No.1 (1995).— Cali, Colombia: Centro Internacional de Agricultura Tropical. Quarterly. ISSN 0121-8883

Pages of Contents

Páginas de Contenido.— Cali, Colombia: Centro Internacional de Agricultura Tropical. January-December 1995. Monthly. (6 series)

Agropecuaria General/General Agriculture. ISSN 0120-4408

Economía Agrícola y Desarrollo Rural/Agricultural Economics and Rural Development. ISSN 0120-4467

Fisiología Vegetal, Genética y Biotecnología/Plant Physiology, Genetics and Biotechnology. ISSN 0120-4416

Pastos, Producción Animal y Nutrición/Pastures, Animal Production and Nutrition. ISSN 0120-4440

Protección de Plantas/Plant Protection. ISSN 0120-4424

QUICK BIBLIOGRAPHIES

Estadística en Epidemiología Agrícola: Métodos y Aplicaciones. Referencias seleccionadas 1989-1994. No. 39. 1995. 42p. 193 Refs.

Métodos Estadísticos Aplicados a Ecología e Investigaciones Ambientales. Referencias Seleccionadas 1987-1994. No. 40. 1995. 56p. 222 Refs.

INFORMATION SHEETS

Intercambio de Publicaciones. September 1995.

ELECTRONIC PUBLICATIONS

Home Page for Information and Documentation Unit in CIAT's Home page in the World Wide Web in Internet. Initiated October 1, 1995.

PUBLICATIONS EXHIBITS IN THE LIBRARY

Use and Management of Savannas. November 1994.
Design and Evaluation of Agricultural Projects. December 1995.
Traditional Agriculture. January 1995.
Agriculture in the Hillsides. February 1995.
Intellectual Property Rights in Plants. March 1995.
Post Harvest Technologies. April 1995.
Statistical Methods Applied to Agriculture. May-June 1995
Insect Resistance in Plants. July 1995.
Participatory Research. August 1995.
Biotechnology and Biodiversity. September 1995.
Slash and Burn and Deforestation. October 1995.

INFORMATION EXHIBITS AT SCIENTIFIC CONGRESSES

10th Symposium of the International Society for Tropical Root Crops, Salvador, Bahía, Brazil, November 14-18, 1994.

Primer Congreso Nacional sobre Biodiversidad, Cali, December 4-7, 1994.

XXII Congreso de la Sociedad Colombiana de Entomología (SOCOLEN), Bogotá, July 26-28, 1995.

THE CIAT COMMUNICATIONS AND PUBLIC AWARENESS UNIT

January to October 1995

MISSION

To effectively communicate CIAT research results, accomplishments, and challenges, through print and electronic media as well as personal contacts to various target audiences. Most CIAT communication falls into one of two categories:

Scientific communication: Directed primarily to increase communication among scientists in developing countries of the tropics but also among researchers in developed nations as well as educators and extension specialists.

Public awareness. Promotes a positive image of CIAT, which in the donor countries is intended to encourage funding and in partner countries to help maintain a favorable working environment.

STRATEGY

The Communications Unit made an important shift in its public awareness strategy this year, mainly in response to changing circumstances around the Center but also because of our staffing situation.

From 1992 to 1994, the Unit's public awareness activities focused mainly on the mass media. We provided a sizable volume of written and visual materials to the press and helped the press report on CIAT activities. This strategy was based on a perception that the funding crisis of that period demanded a broad appeal for support directed at the general public mainly in donor countries. Greater awareness of the importance and impact of the Center's work, it was believed, would eventually lead to increased pressure on donor agencies to halt the erosion of funding for CIAT and other CGIAR centers.

By the second half of 1994, donor contributions to the system, while not improving much, had at least stabilized. This was due in large part to an innovative and dynamic campaign of renewal launched by CG chairman Ismail Serageldin. The main lesson we drew from this experience was that, given a compelling message and effective communication tools (employed both through personal contacts and the mass media), a small group of influential individuals can have a significant, immediate impact on donors' attitudes and decisions.

On this basis, we gave less emphasis to the preparation of news releases and more to the development of attractive brochures, an annual report, and other materials that better enable CIAT directors and staff to carry their message directly to donors and partners. This strategy was designed to reinforce the Center's program for raising special-project funds. For that purpose we tried to target our products carefully to reach particular donors with specific messages at appropriate times.

STAFF DEVELOPMENTS

While continuing to prepare and promote news releases, we were severely handicapped in this effort by the continued captivity of unit head Thomas Hargrove. Before he was kidnapped in September of 1994, Tom devoted a large portion of his time to training other staff in news writing and to placing news releases in the media through personal contacts with reporters. In Tom's absence it was impossible to maintain this activity at its previous level.

One public awareness position remained vacant this year. We used the funds for this position to cover the costs of our *practicantes*. These are students at local universities, who require 6 months of practical experience to receive their degrees. During most of 1995, we had two *practicantes*, one responsible for internal news publications and the other for providing communications support to the office of Human Resources. In September we contracted a third *practicante*, a student in computer science, to help with technical aspects of developing a CIAT home page.

We continued to use free-lance writers and editors, particularly for English language documents, publications, and videos. Simon Chater, an experienced science writer, worked with us for 6 weeks on the annual report, and we hired out various smaller jobs and parts of a proceedings to local English-language editors. We contracted a journalist employed by CSIRO to travel with CIAT staff in Southeast Asia and report on their work in the Australian media. David Mowbray, a videographer with good contacts at IDRC, produced a video on IPM for us and is working on another about PROFRIZA. At the end of his visit to CIAT, Mowbray gave a 2-day course in video production for six of CIAT staff.

We programmed a number of other professional improvement activities as well. In March one of our science writers attended a workshop on media relations in Atlanta. In July another member of our staff attended the annual meeting of the International Federation of Science Editors in Barcelona. Our translator took part in a workshop at a university in Cali. Other such activities focusing on graphic arts are described in a subsequent section.

SCIENTIFIC PUBLICATION

Ten scientific publications were released from January through October 1995 (Table 13), eight of them in Spanish. Six were serial publications and the remainder manuals or proceedings. Seventeen scientific publications are now in progress, two of which are serials (Table 14).

CIAT promoted its publications through an exhibit at the Colombian Entomology Society meeting; the proceeds from publication sales amounted to about US\$1,200. Last year we took part in several such events, most of which catered to the general public. Now, we participate only in meetings designed for agricultural specialists, where we can expect book sales to at least cover direct costs.

Publications Revolving Fund. The Publications Revolving Fund had a balance of US\$87,935 at the end of September 1994. Modest growth of the fund over the last 2 years is encouraging, but we are almost certainly underutilizing this resource as a consequence of the relatively low level of scientific publishing at CIAT.

Translation. The Communications Unit has a small but efficient translation operation that relies on PC versions of EngSpan and SpanAm. These are computer translation programs developed for the Pan American Health Organization. Since October of last year, about 1,300 pages of English text have been translated into Spanish and 680 of Spanish text into English.

Distribution. About 20,650 copies of CIAT serial publications (defined as scientific bulletins published by the Communications and Information and Documentation Units) were distributed over the period of this report. About 22,600 books were sold and another 2,400 distributed free. Of the 1,825 study guides distributed, a little more than 1,000 were sold. We also sold about 75 audiotutorial units. (Table 15).

PUBLIC AWARENESS

News releases and CIAT International. The Communications Unit prepared three press releases in English and six in Spanish. A total of 1,075 copies were mailed, and some releases were disseminated by fax. Distribution was targeted to media in Colombia, Latin America, or industrialized countries, depending on the topic (Table 16). At midyear we thoroughly updated our list of media addresses in Latin America. The greater number of releases in Spanish than in English is largely a consequence of Tom Hargrove's absence from the office.

But there is another explanation as well. We believe that public awareness activities aimed at donors will have greater credibility if we get our cooperators to help develop and deliver the message. One way of accomplishing this is to channel into the media of developing

countries news releases that reflect the views of local research partners about our collaborative work. The clippings can then be collected and used in the correspondence and personal contacts of CIAT staff with donors.

Partly to compensate for Tom's absence, we contracted the CSIRO journalist mentioned earlier. Among other tasks, he prepared two articles on Center projects in Southeast Asia and placed these in development magazines in Australia.

CIAT activities were described in the press at least 105 times, including 31 appearances in the international press. The Center was cited another 69 times (mostly in the Colombian press) in connection with Tom's kidnapping.

Most of our press releases also appear in *CIAT International*, which is published twice a year in English and Spanish and distributed to Center donors and partners as well as the press. In a departure from recent practice, we included several articles written especially for this publication. Unlike press releases, these materials were of interest to the target audience of *CIAT International* but not necessarily to the general public. More than 24,000 copies of this publication were distributed in English and Spanish.

Promotional brochures. This year we published a two-color brochure on the Fondo Latinoamericano de Arroz de Riego and a four-color piece about the Cassava Biotechnology Network. The latter serves as a companion piece to a more general brochure, finished late last year, on biotechnology research and cooperation at CIAT. These items are the first in a series of planned publications that will help Center staff make their case with donors and partners for increased support and cooperation.

CIAT in Perspective. After several years of ad hoc changes, the Center published an attractive annual report, entitled *CIAT in Perspective 1994*. The English edition was distributed in September, and the Spanish edition is almost ready for layout. This publication appears to provide a good point of departure for such reporting over the next several years. The purpose of the annual report is to consistently project a strong image of the Center through targeted distribution to donors and partners.

Videos. We began distributing the English edition of a new video, *Wild Savanna: South America's Frontier of Hope*, and finished the Spanish edition.

Wild Savanna is approximately 1 hour long and is designed primarily for broadcast on television, although clearly we can get further mileage from it through targeted distribution. Because of its length, however, this video is rather unwieldy for Center staff to use in their personal contacts with donors and partners.

In search of more appropriate tools for this purpose, we initiated an experiment this year with much shorter videos on specific CIAT projects. The first product of this initiative is *Every Corner of the Land*, an approximately 14-minute video about an integrated pest

management project for beans in the Andean zone. Supported by a grant from IDRC, the work heavily emphasizes farmer participation in research.

The English edition of the video will soon be available for Center staff to use, and we will begin targeted distribution as well. We also have good early indications that *Every Corner* and a 4-minute video news release based on it will be widely used in Canadian television. The favorable publicity will come at a good time for IDRC, since it has recently suffered deep funding cuts.

Television. Larry Klaas, the producer of *Wild Savanna*, has secured an agreement with the Pacific Mountain Network for broadcast of this video around the end of October. Under this arrangement the video will probably be broadcast several times more over the next 4 years. The first broadcast alone should have an audience of more than 15 million people.

In July the Spanish edition of *Wild Savanna* was broadcast widely throughout the Spanish-speaking world by Televisión Educativa Iberoamericana. CIAT research was also featured occasionally on local and national television programs in Colombia.

Radio. The CSIRO journalist we contracted in May-June did a half dozen interviews about CIAT's work in Asia on national radio programs in Australia.

CIAT On-Line. We suspended this publication in 1995 to allow the person mainly responsible for it to devote more time to scientific publications.

Shareholders in Development. We added one item to this series, which consists of brochures summarizing CIAT's relationships with donor countries. The new brochure, not yet printed, is about CIAT and the UK.

OTHER INFORMATION ACTIVITIES

Late in 1995 the Communications Unit became involved in two activities that lie outside our traditional areas of work.

CIAT homepage. In cooperation with IMNS and the Information and Documentation Unit, we developed a prototype home page, which is now publicly available. Though much remains to be done to improve and expand this product, the prototype gives CIAT a firm toehold in this exciting new area of electronic communication. We are among the four or five centers who have a home page.

To open the way for other CIAT staff to participate in home page development, we are working with others to address various editorial, technical, and organizations issues. One important step was the preparation, in Spanish, of a draft in-house manual on the preparation of hypertext documents for Internet.

Project documents. With the departure of the Center's project development officer in August, the Communications Unit was temporarily assigned responsibility for assisting CIAT staff with the preparation of project profiles, proposals, and so forth. Despite a difficult staffing situation and numerous other commitments, we succeeded in having key project documents ready in time for International Centers' Week.

GRAPHIC ARTS AND PRODUCTION

In 1992 we discontinued traditional photocomposition at CIAT, replacing it with desktop systems. Since then our graphic arts production has undergone a number of important changes. The work that used to take 12 people, often working overtime, is now done by just 5 retrained members of the original group. Granted, the number of books they handle has dropped in the last year or so, but the volume of other items (posters, brochures, etc.) has markedly increased.

To continue taking advantage of rapidly emerging technologies in graphic arts, our staff participated in various workshops, fairs, and exhibits this year. Three of our designers attended a hands-on graphic design workshop sponsored by COMFANDI in Cali. In addition, the head of the Graphic Arts and Production Unit attended Drupa 95 in Düsseldorf, Germany. This is the most important fair in the world for surveying the variety, state, and future direction of graphic arts technology. Another staff member attended a similar but regional event in Chicago, in connection with personal travel to the USA. Our design supervisor visited his counterparts at CIMMYT in Mexico and afterwards attended an international conference at Cancun, where he interacted with top designers from around the world.

These opportunities have had a demonstrable effect on our performance. The numerous thank you notes and generally favorable feedback we receive from CIAT staff suggest that we are making more efficient use of our computer programs and providing better service. In addition, the knowledge and experience gained from workshops and so forth has helped guide our acquisition and improvement of equipment, especially for photography and the prepress stages of production. As a result, we were able to produce *CIAT in Perspective* almost entirely in house, excepting only the preparation of color separations.

Currently, we are exploring with Xerox the means of introducing the Docutex ("print on demand") system in our operations. This technology is revolutionizing the publication of documents for training and dissemination of research results.

In Table 17 we indicate the quantity of work done in graphic arts over the last year.

TABLE 13

Scientific Publications Produced from January to October 1995

Title	Editor
MANUALS	
Adding value to root and tuber crops: A manual on product development	Nathan C. Russell
Problemas de campo en los cultivos de frijol en el trópico	Bill Hardy
Selección recurrente con androesterilidad en arroz	Francisco Motta
PROCEEDINGS	
Biología y agronomía de especies forrajeras de <i>Arachis</i>	Eduardo Figueroa Francisco Motta
SERIALS	
Arroz en las Américas 16(1), abril 1995	Francisco Motta
Arroz en las Américas 16(2), agosto 1995	Francisco Motta
Cassava newsletter 19(1), Feb. 1995	Elizabeth de Páez
Yuca boletín informativo 19(1), abril 1995	Francisco Motta
Pasturas Tropicales 17(1), abril 1995	Francisco Motta
Pasturas Tropicales 17(2), agosto 1995	Francisco Motta

TABLE 14**Scientific Publications in Process, End of October 1995**

Title	Editor	Stage
MANUALS		
Evaluación de tecnología con productores: Ordenamiento de preferencias. Unidad Instruccional no. 2	Francisco Motta	Author revision
Farmer participation in the evaluation of new cassava varieties: A manual	Elizabeth de Páez	Editing
Guía de estilo para publicaciones científicas	Ana Lucía de Román Francisco Motta	Revision by Communications Unit
Introducing elite cassava germplasm from CIAT: A manual	Elizabeth de Páez	Editing
Manejo integrado de plagas del arroz	Francisco Motta	Editing
Manual de secado de yuca	Francisco Motta	Rewriting and editing
Pests, diseases and nutritional disorders of the common bean in Africa: A field guide versions	Nathan C. Russell	Editing (French and Portuguese in translation)
Recurrent selection of male sterility in rice	Nathan C. Russell	Translation
Registro de cruzamientos de arroz: P 1 a P 5617 y CT 5618 a CT 13800	Francisco Motta	In press
Selección recurrente en arroz	Francisco Motta	Editing
Valor agregado a los cultivos de raíces y tubérculos: Un manual para el desarrollo de productos	Francisco Motta	Translation and editing
MONOGRAPHS		
Empobrecimiento y desarrollo sostenible: Un enfoque de sistemas	Francisco Motta	Translation

Title	Editor	Stage
Fundamentos científicos del cultivo del arroz	Ana Lucía de Román	Corrections (Graphic Arts)
PROCEEDINGS		
<i>Centrosema</i> : Biología, agronomía y utilización	Francisco Motta	Final corrections (Graphic Arts)
<i>Brachiaria</i> : Biology, agronomy, and improvement	Elizabeth de Páez	Final editing
Cassava flour and starch: Progress in research and development	Elizabeth de Páez	Editing
SERIALS		
Arroz en las Américas 16(3), enero 1996	Francisco Motta	Compilation and editing
CASSAVA newsletter 19(2), December 1995	Elizabeth de Páez	Compilation and editing

TABLE 15
Distribution of Publications

Serial Publications

Type of Publication	Quantity
Bulletins	20.649
Pages of Contents	3.610
CIAT International	24.008
CIAT in Perspective	2.000
Press Releases	1.075
Working Documents	352
TOTAL	51.694

Sales of Publications and Audiotutorial Material

Type	Quantity	Total Sales/US\$
Publications	22.613	43.504.4
Audiotutorials	74	6.070.4
Study Guides	1017	1.509.4
TOTAL SALES	23.704	51.084.2

Donation of Publications and Audiotutorial Material

Type	Quantity	Cost/US\$
Publications	2416	6.794.6
Study Guides	809	809.0
TOTAL	3.225	7.603.6

TABLE 16**Press Releases/Boletines de Prensa****January - October 1995**

No.	Title	Writer
PRI-066	Latin America rice growers unite to finance international research	G. Pennington
BPI-066	Países arroceros latinoamericanos pagarán investigación internacional	E. Figueroa
PRI-067	Eminent social scientist to lead CIAT	N. Russell
BPI-067	Distinguido investigador, nuevo líder del CIAT	E. Figueroa
BPI-068	En Caquetá, Nestlé de Colombia apoya ambicioso proyecto para beneficiar ganadería	E. Figueroa
BPI-069	Científico del CIAT recibe premio latinoamericano de biotecnología	E. Figueroa
PRI-070	Andean farmers cut chemical use, conquering fear with knowledge	G. Pennington
PRI-071	En la zona andina científicos y campesinos se unen para combatir abuso de plaguicidas	E. Figueroa
BPI-072	Mujeres agricultoras, eficaz medio para adaptar tecnología	E. Figueroa

TABLE 17
GRAPHIC ARTS PRODUCTIONS

	1990	% Change	1991	% Change	1992	% Change	1993	% Change	1994	% Change	1995
PUBLICATIONS (# prints)	915,588	52.10	1,392,620	(11.39)	1,233,940	(35.24)	799,158	10.88	708,228	25.11	886,075
DUPLICATION OF DOCUMENTS (# prints)	3,045,065	8.02	3,289,293	11.73	3,675,068	(16.44)	3,070,784	24.81	2,370,685	61.67	3,832,791
DESIGNS & REPRODUCTIONS (# prints) *	1,126,615	(64.10)	404,441	(21.27)	318,422	25.76	400,443	139.28	448,496	113.65	958,197
TOTAL PRINTS	5,087,268	(0.02)	5,086,354	2.77	5,227,430	(18.31)	4,270,385	32.94	3,527,409	60.94	5,677,063
PHOTOCOPIES	3,621,573	(4.61)	3,454,556	(31.54)	2,365,073	24.73	2,949,975	13.22	3,340,000	(8.01)	3,072,457
GRAPHIC DESIGN (# of designs)	5,109	(0.96)	5,060	(51.94)	2,432	4.52	2,542	1.97	2,592	19.02	3,085
SUPPLY OF STATIONARY AND/OR BINDINGS	45,948	(22.14)	35,774	(14.15)	30,713	11.21	34,156	16.60	34,839	14.31	39,825
PRINTS IN CALI	98,534	15.39	113,701	(51.04)	55,667	(60.94)	21,742	(100.00)	0	0.00	0
WORK ORDERS	3,985	(3.29)	3,854	(16.09)	3,234	(20.44)	2,573	9.02	2,366	18.55	2,805
SLIDES	51,733	16.83	60,438	10.67	66,889	26.17	84,392	(29.97)	63,796	(7.36)	59,100
PRINTS B/W AND COLOR	5,800	(13.52)	5,016	533.95	31,799	(60.79)	12,468	(0.06)	8,554	45.67	12,461
PHOTOGRAPHIC SESSIONS	230	13.48	261	(2.30)	255	0.39	256	87.50	360	33.33	480

* Involves graphic design

SCIENTIFIC TRAINING, CONFERENCES, AND VISITORS

TRAINING

Training of scientists from NARS is co-evolving with the many changes that are taking place in the NARS and in CIAT. The following are features to be highlighted. Detailed tabular information on numbers of trainees, field of training, and geographic origin of trainees is presented in Annex 3.

1. The NARS' demand for training in biotechnology is extremely strong, so much so that, for the second consecutive year, CIAT's biotechnology training capacity has been stretched to the limit.

The Biotechnology Unit held the **Second Course on Biotechnology for the Conservation of Agrobiodiversity**. The main aim was to strengthen Latin American institutional capacity to apply biotechnology to the conservation and sustainable use of biodiversity, in congruence with the Convention on Biological Diversity.

Seventeen participants came from nine countries. The profile of these participants is quite different from CIAT's traditional partners, reflecting different institutional loci for biotechnology as compared with more traditional agricultural research. Many of them are biologists, and most of them come from Universities. Also most of them are women (59%).

In this course CIAT implemented its emerging function as a technology bridge between the technology-rich North and the biodiversity-rich South. Further, the Center deployed some of its unique competencies such as bringing GIS and biotechnology to bear jointly on agrobiodiversity issues.

The event was co-funded by CIAT, the Organization of American States, ICETEX, COLCIENCIAS, and CIP, showing innovation in resource mobilization and a generous contribution of Colombian institutions to human resources development in the region (by covering some costs of non-Colombian participants).

The Rice Program held the **Second Workshop on Rice Improvement with Anther Culture**. This was a follow-up event for the participants of the first workshop held last year. The main aim was to transfer the technology of anther culture, developed at CIAT, to national rice improvement programs.

The two workshops were co-funded by the Rockefeller Foundation and by CIAT.

This is a good example of how CIAT develops advanced research methodology and subsequently transfers it to NARS.

It is also an example of CIAT's flexibility and creativity in designing such activities. Firstly, to be accepted to participate in the workshop it was a requisite that from each country there should be a team of a rice breeder and a tissue culture specialist (not necessarily from the same institution), in order to bring together the two sets of skills that are needed for successful application of anther culture to rice breeding.

Secondly, having held the first workshop at CIAT to teach the techniques, the second one actually was a sequence of events held in three countries: Argentina, Uruguay, and Brazil. Here the participants had the opportunity to see how the techniques had been applied since the first workshop, and there was ample opportunity for exchanging experience-successes and difficulties-and for shaping new action plans.

The 21 participants represented not only the three host countries but also Cuba, Chile, Guatemala, Panama, and Venezuela.

The Biotechnology Unit will hold before the end of the year a course requested by PROCISUR to transfer the amplified fragment length polymorphism, AFLP, methodology to agricultural biotechnologists of Southern Cone countries. The method, which is extremely rapid, versatile and reproducible, serves for research on evolution and genetic diversity, gene mapping, tagging, and fingerprinting. It is (at least in part) private property protected by IPR, and CIAT, in this course, assumes again the emerging role of technology bridge, in this case between private enterprise and the NARS.

Fifteen NARS scientists received **individualized training** in biotechnology, 13 in the Biotechnology Unit, and one each in the Beans and Rice Programs.

2. The NARS' demand for crop-related training is clustering in discrete fields—breeding and genetics, crop protection, and biotechnology—and is being met through individualized training programs.

This year (as of 1 November) CIAT received 51 trainees in individualized programs (Table 18). Thirty-three percent of them received training in breeding and genetics, 20% in crop protection (entomology and pathology), 29% in biotechnology (the fifteen trainees mentioned earlier on), while the remaining 18% was trained in four different fields (physiology, pasture quality, agronomy, and cassava production).

Twenty percent of the individualized trainees who started their programs in the present year conducted, or continue conducting, research conducive to M.Sc. (6%) or Ph.D. thesis (14%).

3. CIAT, as a member of a novel training consortium, has embarked on its first major group training event in resource management research: the Postgraduate Course on Research and Development for Sustainable Agricultural Land Use in the Neotropics.

TABLE 18 . INDIVIDUALIZED TRAINING OF NARS SCIENTISTS FOR CROP-RELATED RESEARCH
(Number of trainees)

Commodity emphasis	Field of training				Total
	Breeding and Genetics	Crop Protection	Biotechnology	Others ¹	
Beans	5	3	1	0	9
Cassava	2	2	0	2	6
Forages	0	0	0	5	5
Rice	8	2	1	2	13
Not-commodity specific	2	3	13	0	18
Total	17	10	15	9	51
%	33	20	29	18	

¹ Includes Cassava Physiology (1), Cassava Production (1), Pasture Quality (5), Rice Agronomy (1), and Rice Physiology (1).

This is the first of two courses, funded by IDB, which are aimed at developing a regional cadre of scientists familiarized with a **systemic research approach to agricultural sustainability issues**.

It comprises six weeks of theoretical-practical tuition followed by six weeks of practical research. The twenty-five participants come from relevant institutions throughout the region.

The course is implemented under a consortium arrangement among CIAT, CATIE, and IICA, under CIAT leadership, with participation of other Central American institutions. CATIE is the venue of the theoretical-practical phase. The phase of practical research will be at CIAT for 11 participants and at CATIE for 14 participants.

Five scientists received **individualized training** related to resource management research: two in participatory research, one in ecophysiology, one in soil science, and one in laboratory analysis of soils and plant materials.

4. Workshops for the exchange of information and experiences among NARS and CIAT scientists, and for the standardization of research methodologies have been prominent this year.

Such workshops represent a **new generation of NARS capacity building** which responds to the maturity of our research partners and colleagues in the region.

A large representation of the rice breeders in the region (120 participants) met at CIAT and in Villavicencio to select germplasm for their specific needs, and to analyze and discuss hot issues of rice breeding in the region.

The Fourth Agropastoral Workshop for Acid Savanna Soils was held in Santa Cruz, Bolivia, (the previous three were held at yearly intervals in Colombia, Brazil, and Venezuela). It brought together 53 researchers to discuss the state of the art in agropastoral research, validation of technologies, sustainability indicators, statistical methods and data management, and to exchange experience among countries.

The RIEPT Chapter for Mexico, Central America, and the Caribbean met in San José, Costa Rica, (27 participants) to assess the regional experiences with *Arachis pinto* and to discuss future research needs and strategies for the dissemination of this extraordinary forage and ground-cover legume.

A workshop on the management of cassava genetic resources, held in Cruz das Almas, Bahia, Brazil, gathered 17 specialists who manage cassava germplasm banks. They exchanged experiences, compatibilized methodologies, and strengthened collaborative links.

Another workshop and consultation on *Manihot* taxonomy and conservation among the leading Latin American specialists is taking place at CIAT while this report is being produced.

A large international symposium on statistics in agriculture and environmental research (163 participants) addressed emerging issues such as statistical methods in environmental research and in biotechnology and molecular biology.

And an advanced international workshop on Bean Angular Leaf Spot will be held before the end of November to standardize advanced methodology for the characterization of variation in the causal agent, the identification of new sources of resistance, the tagging of resistance genes, and breeding strategies to obtain durable resistance to the disease.

5. Training of researchers from industrialized countries has remained within similar boundaries as in previous years. Thirty two trainees initiated their individualized programs in the present year; 31% on higher degree thesis research (half of these at Ph.D. level and the other half at M.Sc. level) and 69% on not-degree-related research.

6. Training of undergraduate Colombian students has dropped for the second consecutive year, this time substantially, to only fifteen trainees. Analysis of the causes will be conducted forthwith.

From 1993 to 1994 the number of undergraduate trainees had fallen from 45 to 33. The drop was tentatively attributed to the reduction of operational resources available to CIAT's senior scientists. Now the reduction has become much more conspicuous. We intend to conduct a survey among CIAT's scientists, University authorities, and students to establish to what extent factors on the supply and the demand sides may be at the root of this phenomenon.

7. The proportion of women has been 29% among trainees from NARS, 47% among trainees from industrialized countries, and 53% among Colombian undergraduates.

The proportion of women among 1,067 trainees from NARS over the period 1987-1991 was 18.2%. Compared with this figure, the data of the present year would indicate a substantial increase in the participation of women in CIAT's training. However, the change may also be attributed to a shift to more laboratory-related training (biotechnology and crop protection), fields in which the proportion of women was above average in the 1987-1991 population.

The proportion of women among trainees from industrialized countries and among Colombian undergraduates coincides roughly with the 1987-1991 series, that is, it fluctuates around a 1 to 1 ratio.

CONFERENCES

In addition to the seven workshops reported under #4 above, there were another six conferences, four of them of a consultative-participatory planning nature (Table 51). This reflects the new way of doing business both as part of CIAT's operational strategy and of the

CGIAR's integration across IARCs. It equally reflects the increased transaction costs of the new way of doing business.

The use of the conference facilities dropped from 5,910 hours in 1994 to 5,035 hours in 1995, mainly due to lesser use by CIAT's administration and by less training of trainers courses.

Tabular information on conferences and use of conference facilities is presented in Annex 3.

VISITORS

The yearly flow of visitors continues staying fairly constant throughout the 1990s at slightly over 200 groups and 3,000 persons.

Tabular information on the types of visitors is presented in Annex 3.

DEVELOPMENT OF NATIONAL AND SUBREGIONAL TRAINING CAPACITIES AND OF TRAINING MATERIALS

The Section for Training Capacity Development and Training Materials (TCDTM) concentrated its activities on (1) further elaborating the model of developing national and subregional training capacities, (2) the production of training materials developed in earlier projects, (3) marketing its products and services, and (4) the production of training materials for CIAT Programs, and of some media for CIAT's administration. These activities will be highlighted here. Additional details are presented in tabular form in Annex 4.

1. Further elaboration of the model of developing national and subregional training capacities.

Three new products were developed with and for PROFRIJOL.

- * A set of participatory instruments for monitoring the activities of trainers.
- * Training materials for trainees which complement the materials already produced for the trainers.
- * Training materials for farmers which complement the materials produced for the trainees.

Thus, mutually complementary training materials have now been developed for the full chain trainers-> trainees-> farmers; plus a set of instruments to monitor the job performance of the trainees.

2. Training materials developed earlier were produced for ISNAR, the Ministry of Agriculture of Colombia, and new materials were developed with and for PROFRIZA.

3. Intensive efforts were made to market the TCDTM's products and services with ISNAR, CARDI, the Ministries of Agriculture of Colombia and Venezuela, INTA (Nicaragua), IICA/HAITI, ICRAF, and the Government of the Netherlands.

The results have not been highly successful so far and the TCDTM is suffering a financial crunch. Reasonable expectations are put on a project proposal, submitted to the Government of the Netherlands, to fund a project for developing a training capacity in forage technology transfer attached to RIEPT for Central America, and in bean technology transfer attached to PROFRIZA for Bolivia, Ecuador and Peru. If approved, this project should stabilize the financial situation of the TCDTM.

4. Video training materials and training manuals were produced for the Tropical Forages, Beans, and Hillsides Programs, and for the Biotechnology Research Unit. Some video materials services were also provided to CIAT's administration.

TABLE 19

**RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO RESEARCH
PROGRAM/UNIT AND TYPE OF TRAINING**

PROGRAM/UNIT	TYPE OF TRAINING				TOTAL
	GROUP	INDIVIDUALIZED			
	Specialized Course	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN					
Beans		8		1	9
Cassava		4	1	1	6
Hillsides		2			2
Rice	21	10	1	2	34
Tropical Forages		3		2	5
Tropical Lowlands		2			2
Biotechnology	17	12		1	30
Genetic Resources		1			1
Sustainable Agriculture Land Use	25				25
Others		4	1		5
SUBTOTAL	63	46	3	7	119

PROGRAM/ RESEARCH SUPPORT	TYPE OF TRAINING				TOTAL
	GROUP	INDIVIDUALIZED			
	Specialized Course	Specialization	Thesis MS	Thesis PhD	
DEVELOPED COUNTRIES					
Beans		3			3
Cassava		6	1		7
Hillsides		2	1	1	4
Rice			1	1	2
Tropical Forages		1		1	2
Tropical Lowlands		2	2	1	5
Land Management		7		1	8
Others		1			1
SUBTOTAL		22	5	5	32
TOTAL	63	68	8	12	151

TABLE 20
BEAN RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis PhD	
LATIN AMERICA AND CARIBBEAN			
Bolivia	1		1
Brazil	3		3
Colombia		1	1
Ecuador	3		3
Mexico	1		1
SUBTOTAL	8	1	9
DEVELOPED COUNTRIES			
Germany	1		1
Spain	2		2
SUBTOTAL	3		3
TOTAL	11	1	12

TABLE 21
BEAN RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA					TOTAL
	Breeding	Pathology	Entomology	Molecular Markers	Physiology	
LATIN AMERICA AND CARIBBEAN						
Bolivia	1					1
Brazil	2	1				3
Colombia			1			1
Ecuador	2		1			3
Mexico				1		1
SUBTOTAL	5	1	2	1		9
DEVELOPED COUNTRIES						
Germany					1	1
Spain	2					2
SUBTOTAL	2				1	3
TOTAL	7	1	2	1	1	12

TABLE 22
BEAN RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis PhD	
LATIN AMERICA AND CARIBBEAN			
Entomology	1	1	2
Molecular markers	1		1
Breeding	5		5
Pathology	1		1
SUBTOTAL	8	1	9
DEVELOPED COUNTRIES			
Physiology	1		1
Breeding	2		2
SUBTOTAL	3		3
TOTAL	11	1	12

TABLE 23
CASSAVA RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING			TOTAL
	INDIVIDUALIZED			
	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN				
Belize	1			1
Brazil	2			2
Colombia		1	1	2
Venezuela	1			1
SUBTOTAL	4	1	1	6
DEVELOPED COUNTRIES				
England	1			1
France	2			2
Germany		1		1
The Netherlands	2			2
U.S.A.	1			1
SUBTOTAL	6	1		7
TOTAL	10	2	1	13

TABLE 24
CASSAVA RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA						TOTAL
	Breeding	Cassava Production	Entomology	Genetics	Physiology	Pathology	
LATIN AMERICA AND CARIBBEAN							
Belize		1					1
Brazil			1	1			2
Colombia					1	1	2
Venezuela	1						1
SUBTOTAL	1	1	1	1	1	1	6
DEVELOPED COUNTRIES	Economics	Utilization	Agronomy	Information documentation	Pathology	Genetics	TOTAL
England				1			1
France	1	1					2
Germany			1				1
The Netherlands		1			1		2
U.S.A.						1	1
SUBTOTAL	1	2	1	1	1	1	7
TOTAL	2	3	2	2	2	2	13

TABLE 25
CASSAVA RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING			TOTAL
	INDIVIDUALIZED			
	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN				
Entomology	1			1
Physiology		1		1
Genetics	1			1
Breeding	1			1
Pathology			1	1
Production	1			1
SUBTOTAL	4	1	1	6
DEVELOPED COUNTRIES				
Agronomy		1		1
Economics	1			1
Genetics	1			1
Documentation	1			1
Pathology	1			1
Utilization	2			2
SUBTOTAL	6	1		7
TOTAL	10	2	1	13

TABLE 26
HILLSIDES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING			TOTAL
	INDIVIDUALIZED			
	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN				
Bolivia	1			1
Ecuador	1			1
SUBTOTAL	2			2
DEVELOPED COUNTRIES				
England			1	1
Norway		1		1
Switzerland	2			2
SUBTOTAL	2	1	1	4
TOTAL	4	1	1	6

TABLE 27
HILLSIDES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA					TOTAL
	Participatory Research	Biotechnology	Sociology	Agronomy	Production Systems	
LATIN AMERICA AND CARIBBEAN						
Bolivia	1					1
Ecuador	1					1
SUBTOTAL	2					2
DEVELOPED COUNTRIES						
England		1				1
Norway			1			1
Switzerland				1	1	2
SUBTOTAL		1	1	1	1	4
TOTAL	2	1	1	1	1	6

TABLE 28
HILLSIDES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING			TOTAL
	INDIVIDUALIZED			
	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN				
Participatory research	2			2
SUBTOTAL	2			2
DEVELOPED COUNTRIES				
Agronomy	1			1
Biotechnology			1	1
Production systems	1			1
Sociology		1		1
SUBTOTAL	2	1	1	4
TOTAL	4	1	1	6

TABLE 29
RICE RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING				TOTAL
	INDIVIDUALIZED				
	Specialized Course	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN					
Argentina	2				2
Belize		1			1
Brazil	7	2			9
Chile	2	1			3
Colombia		1		2	3
Costa Rica		1			1
Cuba	2				2
Guatemala	2				2
Guyana		2			2
Panama	2				2
Trinidad & Tobago		1			1
Uruguay	2				2
Venezuela	2	1	1		4
SUBTOTAL	21	10	1	2	34
DEVELOPED COUNTRIES					
Germany			1		1
U.S.A.				1	1
SUBTOTAL			1	1	2
TOTAL	21	10	2	3	36

TABLE 30
RICE RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA						TOTAL
	Agronomy	Anther culture	Breeding	Genetic transformation	Pathology	Physiology	
LATIN AMERICA AND CARIBBEAN							
Argentina		2					2
Belize			1				1
Brazil		7	2				9
Chile		2	1				3
Colombia	1			1	1		3
Costa Rica			1				1
Cuba		2					2
Guatemala		2					2
Guyana			2				2
Panama		2					2
Trinidad & Tobago						1	1
Uruguay		2					2
Venezuela		2	1		1		4
SUBTOTAL	1	21	8	1	2	1	34

Country of origin	SPECIALIZATION AREA						TOTAL
	Agronomy	Anther culture	Breeding	Genetic transformation	Pathology	Physiology	
DEVELOPED COUNTRIES							
Germany					1		1
U.S.A.					1		1
SUBTOTAL					2		2
TOTAL	1	21	8	1	4	1	36

TABLE 31
RICE RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING				TOTAL
	INDIVIDUALIZED				
	Specialized Course	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN					
Agronomy		1			1
Anther culture	21				21
Physiology		1			1
Breeding		7	1		8
Pathology		1	1		2
Genetic transformation				1	1
SUBTOTAL	21	10	2	1	34
DEVELOPED COUNTRIES					
Pathology			1	1	2
SUBTOTAL			1	1	2
TOTAL	21	10	3	2	36

TABLE 32
TROPICAL FORAGES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis PhD	
LATIN AMERICA AND CARIBBEAN			
Bolivia	3		3
Colombia		1	1
Honduras		1	1
SUBTOTAL	3	2	5
DEVELOPED COUNTRIES			
Germany		1	1
The Netherlands	1		1
SUBTOTAL	1	1	2
TOTAL	4	3	7

TABLE 33
TROPICAL FORAGES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA			TOTAL
	Pasture quality	Agronomy	Germplasm	
LATIN AMERICA AND CARIBBEAN				
Bolivia	3			3
Colombia	1			1
Honduras	1			1
SUBTOTAL	5			5
DEVELOPED COUNTRIES				
Germany			1	1
The Netherlands		1		1
SUBTOTAL		1	1	2
TOTAL	5	1	1	7

TABLE 34
TROPICAL FORAGES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis PhD	
LATIN AMERICA AND CARIBBEAN			
Pasture quality	3	2	5
SUBTOTAL	3	2	5
DEVELOPED COUNTRIES			
Agronomy	1		1
Germplasm		1	1
SUBTOTAL	1	1	2
TOTAL	4	3	7

TABLE 35
TROPICAL LOWLANDS RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING			TOTAL
	INDIVIDUALIZED			
	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICA AND CARIBBEAN				
Brazil	1			1
Colombia	1			1
SUBTOTAL	2			2
DEVELOPED COUNTRIES				
France	1	2	1	4
Scotland	1			1
SUBTOTAL	2	2	1	5
TOTAL	4	2	1	7

TABLE 36
TROPICAL LOWLANDS RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA				TOTAL
	Soils	Ecophysiology	GIS	Agronomy	
LATIN AMERICA AND CARIBBEAN					
Brazil	1				1
Colombia		1			1
SUBTOTAL	1	1			2
DEVELOPED COUNTRIES					
France		1		3	4
Scotland			1		1
SUBTOTAL		1	1	3	5
TOTAL	1	2	1	3	7

TABLE 37
TROPICAL LOWLANDS RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization Area	TYPE OF TRAINING			TOTAL
	Specialization	Thesis MS	Thesis PhD	
LATIN AMERICAN AND CARIBBEAN				
Ecophysiology	1			1
Soils	1			1
SUBTOTAL	2			2
DEVELOPED COUNTRIES				
Agronomy	1	2		3
Ecophysiology			1	1
GIS	1			1
SUBTOTAL	2	2	1	5
TOTAL	4	2	1	7

TABLE 38
BIOTECHNOLOGY RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING			TOTAL
	INDIVIDUALIZED			
	Specialized Course	Specialization	Thesis PhD	
LATIN AMERICA AND CARIBBEAN				
Argentina	1	2		3
Brazil	1			1
Chile	1			1
Colombia	6	5		11
Cuba		1		1
Ecuador	1	3		4
El Salvador	1			1
Mexico			1	1
Panama	1			1
Peru	3	1		4
Uruguay	2			2
TOTAL	17	12	1	30

TABLE 39
BIOTECHNOLOGY RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA					TOTAL
	Biotechnology	Molecular Markers	Molecular Biology	Molecular Characterization	Genetics	
LATIN AMERICA AND CARIBBEAN						
Argentina	1	2				3
Brazil	1					1
Chile	1					1
Colombia	6		3	1	1	11
Cuba					1	1
Ecuador	2	2				4
El Salvador	1					1
Mexico					1	1
Panama	1					1
Peru	3				1	4
Uruguay	2					2
TOTAL	18	4	3	1	4	30

TABLE 40
BIOTECHNOLOGY RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING			TOTAL
	INDIVIDUALIZED			
	Specialized Course	Specialization	Thesis PhD	
LATIN AMERICA AND CARIBBEAN				
Molecular biology		3		3
Biotechnology	17	1		18
Molecular characterization		1		1
Genetics		3	1	4
Molecular markers		4		4
TOTAL	17	12	1	30

TABLE 41
GENETIC RESOURCES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA	TOTAL
	Genetic characterization	
LATIN AMERICA AND CARIBBEAN		
Costa Rica	1	1
TOTAL	1	1

TABLE 42
GENETIC RESOURCES RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING	TOTAL
	INDIVIDUALIZED	
	Specialization	
LATIN AMERICA AND CARIBBEAN		
Genetic Characterization	1	1
TOTAL	1	1

TABLE 43
LAND MANAGEMENT RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis PhD	
DEVELOPED COUNTRIES			
England	3		3
France	1		1
Germany	2	1	3
Spain	1		1
TOTAL	7	1	8

TABLE 44
LAND MANAGEMENT RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION AREA
AN COUNTRY OF ORIGIN

Country of origin	Specialization Area	TOTAL
	GIS	
DEVELOPED COUNTRIES		
England	3	3
France	1	1
Germany	3	3
Spain	1	1
TOTAL	8	8

TABLE 45
LAND MANAGEMENT RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis PhD	
DEVELOPED COUNTRIES			
GIS	7	1	8
TOTAL	7	1	8

TABLE 46
SUSTAINABLE LAND USE
RESEARCH TRAINING 1995
PROFESSIONALS TRAINED BY CATIE AND CIAT ACCORDING TO TYPE OF
TRAINING AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING	TOTAL
	GROUP	
	Specialized Course	
LATIN AMERICA AND CARIBBEAN		
Belize	1	1
Bolivia	1	1
Brazil	2	2
Chile	1	1
Colombia	2	2
Costa Rica	2	2
Dominican Republic	1	1
Ecuador	1	1
El Salvador	2	2
Guatemala	1	1
Mexico	2	2
Nicaragua	2	2
Panama	2	2
Paraguay	1	1
Peru	2	2
Venezuela	2	2
TOTAL	25	25

TABLE 47
OTHER RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND COUNTRY OF ORIGIN

Country of origin	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis MS	
LATIN AMERICA AND CARIBBEAN			
Colombia	3	1	4
Paraguay	1		1
SUBTOTAL	4	1	5
DEVELOPED COUNTRIES			
France	1		1
SUBTOTAL	1		1
TOTAL	5	1	6

TABLE 48
OTHER RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO SPECIALIZATION
AREA AND COUNTRY OF ORIGIN

Country of origin	SPECIALIZATION AREA				TOTAL
	Breeding Maize	Green house management	Virology	Lab management	
LATIN AMERICA AND CARIBBEAN					
Colombia	1	2	1		4
Paraguay				1	1
SUBTOTAL	1	2	1	1	5
DEVELOPED COUNTRIES					
France			1		1
SUBTOTAL			1		1
TOTAL	1	2	2	1	6

TABLE 49
OTHER RESEARCH TRAINING 1995
PROFESSIONALS TRAINED AT CIAT ACCORDING TO TYPE OF TRAINING
AND SPECIALIZATION AREA

Specialization area	TYPE OF TRAINING		TOTAL
	INDIVIDUALIZED		
	Specialization	Thesis MS	
LATIN AMERICA AND CARIBBEAN			
Lab management	1		1
Greenhouse management	2		2
Virology	1		1
Maize/breeding		1	1
SUBTOTAL	4	1	5
DEVELOPED COUNTRIES			
Virology	1		1
SUBTOTAL	1		1
TOTAL	5	1	6

TABLE 50

UNDERGRADUATE THESIS RESEARCH 1995

THESES BY SPECIALIZATION AREA AND RESEARCH PROGRAM/UNIT

Specialization area	PROGRAM/UNIT									TOTAL
	Beans	Biotechnology	Cassava	Genetic Resources	Field Operations	Hillside	Lowland Tropics	Rice	Tropical Forages	
Agonomy							1			1
Breeding				2						2
Entomology	1		2							3
Genetic Diversity				1						1
Irrigation Systems					1					1
Molecular Biology		1								1
Physiology				1				1	1	3
Post-Harvest			2							2
Socioeconomics						1				1
TOTAL	1	1	4	4	1	1	1	1	1	15

TABLE 51

CIAT CONFERENCES - 1995

Title	No. of Participants	Venue	Program	Objectives	Dates
Carbon Sequestration by Tropical Grasslands	11	CIAT	Tropical Lowlands Program	Determine the geographical extent of the sequestration of carbon in soils of the savannas. Determine to the extent possible the upper limits of sequestration. What constrains the rate of sequestration, and what determines its upper limits.	13-02-95 17-02-95
International Expert Meeting on the GEO Process	17	CIAT	Land Management	Develop the operational modalities of translating the basic conceptual structure into a report. Identify the set of scenarios and major determinants (equity, poverty, population, emissions, resource use etc.) that need to be considered in the integrated analyses. Further develop the proposals for the historical analysis (key question addressed: what can be learnt with regard to the applicability and limitations of the proposed integrated assessment approach when applied to the analysis of current and past conditions and trends). Develop guidelines for the authors of the report.	27-02-95 02-03-95
Workshop " A 2020 Vision for Food, Agriculture, and the Environment in Latin America. IFPRI-CIAT-IICA	28	CIAT	Impact Assessment Unit	Focus on the challenges facing Latin America in these areas between now and the year 2020.	20-03-95 22-03-95

Cont.

Cont.

Title	No. of Participants	Venue	Program	Objectives	Dates
An Ecoregional Approach to Enhancing Agricultural Research Effectiveness in Tropical America	31	CIAT	Impact Assessment Unit	Enhance the effectiveness of agricultural and natural resources management research in Tropical America by improving the capacity to define and understand productivity problems in agriculture; to develop and adapt suitable solutions to these problems; and to extrapolate results among agroecosystems through the development of georeferenced information systems and analysis.	03-04-95 04-04-95
International Symposium of Statistics in Agriculture and Environmental Research	163	CIAT	Biometry Unit	Discuss - statistical methods in environmental research - statistical methods in biotechnology and molecular biology - statistical methods in agricultural epidemiology	07-06-95 09-06-95
Internally Commissioned External Review on Resource Management Research	19	CIAT	Impact Assessment Unit	Review the strategies and activities of research programs in the area of natural resource management and SRGs	12-06-95 29-06-95
Consultation on Systemwide Livestock Project	23	CIAT	Tropical Forages Program	- Better define problems in the area of research that is proposed and their solution - Reach agreement on who has comparative advantages to undertake different aspects of the research, and - Expand and complete a rough draft of a full project profile	06-07-95 08-07-95
Rice Breeders Workshop, FLAR/INGER/CIAT	120	CIAT	Rice Program	Stimulate exchange of experiences between researchers of the region Select rice germplasm for each participant country Analyze and discuss main problems of genetic breeding in the region	31-07-95 04-08-95
Fourth Agropastoral Workshop for Acid Savanna Soils Methodological Workshop on Agropastoral Research	53	Santa Cruz, Bolivia	Tropical Lowlands Program	Discuss - targets on agropastoral research - the state of the art of agropastoral research - experience of participating countries - sustainable indicators - validation of technologies: statistical methods and data basis	25-09-95 30-09-95
Workshop on Regional Experiences with <i>Arachis pinto</i> and Future Plans for Research and Promotion in Mexico, Central America and the Caribbean. RIEPT-MCAC	27	San José, Costa Rica	Tropical Forages Program	Become acquainted of advances obtained and limitations of this legume in the region that will allow us to plan future research and develop strategies for its diffusion	09-10-95 13-10-95

Cont.

Cont.

Title	No. of Participants	Venue	Program	Objectives	Dates
Workshop on Management of Cassava Genetic Resources (<i>Manihot esculenta</i> Crantz)	17	Cruz das Almas, Brazil	Cassava Program	Strengthen the capacity for collection of the cassava germplasm banks; handling, conservation and documentation of accessions. Promote a permanent exchange of accessions and information between curators of the participating germplasm banks.	23-10-95 28-10-95
Workshop on Regional Priority Setting IICA/BID/IFPRI/CIAT	26	CIAT	Impact Assessment Unit	Up date and inform professionals of agricultural research institutions from Latin America and the Caribbean (LAC) on priorities in agricultural research. Develop outlines on courses-workshops and subregional applications of research priorities within the framework of the Cooperative Research Programs (Programas Cooperativos de Investigación, PROCIS)	06-11-95 09-11-95
Workshop and Consultancy on <i>Manihot</i> Taxonomy and Conservation	35	CIAT	Cassava Program	Information exchange toward conservation, evaluation and use of germplasm from the primary gene pool of cassava Revision of CIAT herbarium operations (<i>Manihot</i>) including general recommendations cross - species	07-11-95 11-11-95
International Workshop on Angular Leaf Spot of Common Beans	30 (Estimated)	CIAT	Bean Program	Standardize and define methodologies for race characterization of the ALS pathogen with differential varieties and molecular tools. Discuss and standardize methodologies for identification of new sources of resistance, for the generation of appropriate plant populations leading to the molecular tagging of ALS resistance genes and for the discussion of the different breeding strategies, especially gene pyramiding, that would result in bean varieties with durable ALS resistance.	19-11-95 24-11-95
MAS - Managing Acid Soils (A research consortium that will strengthen agriculture's contribution to sustainable development in Latin America by focusing on integrated management of acid soils)	11 (Estimated)	CIAT	Savannas Hillsides Forest Margins	Produce a document detailing our proposals for an initiation phase in 1996 and a full project from 1997 onwards. This document should list the activities planned relevant to the Feldafing project and should emphasize environmental impacts such as runoff, water pollution, gaseous fluxes, etc. Particular attention also needs to be given to the concept of matching funding from the collaborators.	12-12-95 14-12-95

TABLE 52

**USE OF CONFERENCE ROOMS 1995
NUMBER OF EVENTS AND HOURS OF USE BY TYPE OF USERS**

User		No. of Events	Hours
CIAT	Research	151	798
	Training	37	1392
	Visitors	39	79
	Administration	139	463
	CRECIAT-PROCIAT	58	100
	Subtotal	424	2832
Associate Institutions	IPGRI	18	106
	CIMMYT	3	28
	Subtotal	21	134
External	Complimentary	3	297
	Non-Complimentary	50	1772
	Subtotal	53	2069
Total		498	5035

TABLE 53
USE OF CONFERENCE ROOMS 1995
NUMBER OF EVENTS BY TYPE OF USER AND CONFERENCE ROOM

User		Rooms (Capacity)							Total
		Auditorium (180)	Nariño (80)	Muisca (40)	Calima (40)	Tairona (30)	Tumaco (20)	Quimbaya (12)	
CIAT	Research	3	15	15	42	23	35	18	151
	Training	-	8	5	4	6	11	3	37
	Visitors	-	5	5	10	11	8	-	39
	Administration	11	15	23	18	26	32	14	139
	CRECIAT-SALUD OCUPACIONAL	1	13	5	14	20	3	2	58
Associate Institutions	IPGRI	-	-	3	4	6	4	1	18
	CIMMYT	-	-	-	3	-	-	-	3
External	Complimentary	-	-	1	-	-	1	1	3
	Non-Complimentary	5	10	9	9	11	4	2	50
TOTAL		20	66	66	104	103	98	41	498
Percentage		4	13	13	21	21	20	8	

TABLE 54. GROUP VISITORS OCTOBER 1994-SEPTEMBER 1995

	COLOMBIA		OTHER COUNTRIES	TOTAL
	Local Community	Other Communities		
Donors and Constituency		3 groups (17)	Europe 7 group (22) USA + Canada 1 group (2) Asia 3 groups (9)	Colombia 3 groups (17) Other countries 11 groups (33)
Partners and Constituency	2 groups (35)	9 groups (59)	L.A. + Caribbean 11 groups (72) Europe 3 groups (6) USA + Canada 2 groups (10) Australia + Oceany 2 groups (4) Africa 1 group (5) Asia 1 group (6)	Colombia 11 groups (94) Other Countries 20 groups (103)
Facilitators	10 groups (56)	4 groups (36)	L.A. + Caribbean 1 group (3)	Colombia 14 groups (92) Other Countries 1 group (3)
University Students	32 groups (489)	58 groups (1139)	USA + Canada 1 group (2) Europe 1 group (2)	Colombia 90 groups (1628) Other Countries 2 groups (4)
High School Students	14 groups (272)	8 groups (180)		Colombia 22 groups (452)
Primary School Students	1 group (70)			Colombia 1 group (70)
General Community Urban	19 groups (169)	12 groups (55)	L.A. + Caribbean 13 groups (179) Europe 3 groups (7) 2 groups (8) USA + Canada 1 group (3) Australia + Oceany 1 group (4)	Colombia 31 groups (224) Other countries 20 groups (201)
General Community Rural	1 groups (18)	1 groups (9)		Colombia 2 groups (27)
Community Leaders	1 group (17)	2 groups (33)	L.A. + Caribbean groups ()	Colombia 3 groups (50)
TOTAL	80 groups (1126)	97 groups (1528)	54 groups (344)	231 groups (2998)

Data until 30 September 1995

TABLE 55. INDIVIDUAL VISITORS

October/94 - September/95

	COLOMBIA		OTHER COUNTRIES	TOTAL
	Local Community	Other Communities		
Donors and Constituency		1	Europe 9 Asia 3 USA + Canada 4 Australia + Oceany 1	Colombia 1 Other countries 17
Partners and Constituency		9	Europe 10 L.A. + Caribbean 16 Africa 7 USA + Canada 3 Asia 7 Australia + Oceany 3	Colombia 9 Other Countries 46
Facilitators	1	1		Colombia 2
University Students	3	3	Asia 2 USA + Canada 1 Europe 6	Colombia 6 other Countries 9
High School Students				
General Community Urban	11	13	Europe 4 USA + Canada 4 LA + Caribbean 5 Australia + Oceany 2	Colombia 24 Other Countries 15
Community Leaders		1		Colombia 1
Human Resources Support	51 (I) 1 (S)	1 (I) 2 (S)	USA + Canada 6(S) Europe 4 (I), 1 (S) Africa 1 (S) LA + Caribbean 1 (S), 1 (I) Asia 1 (I)	Colombia 55 Other countries 15
Total	67	31	102	200

Data until 30 September 1995.

ANNEX 4.

DEVELOPMENT OF NATIONAL AND SUBREGIONAL TRAINING CAPACITIES AND OF TRAINING MATERIALS.

PROVISION OF SERVICES, PRODUCT DEVELOPMENT AND MARKETING FOR EXTERNAL CLIENTS

Activities	Client	Results
1. Development of a participatory monitoring model for training in production technologies, to be incorporated to all PROFRIJOL regular training courses. Model was developed and field-tested in Costa Rica and Nicaragua, using the PROFRIJOL courses carried out in these two countries.	PROFRIJOL	1.1 A model with all necessary instruments which can be easily incorporated to training activities in the network countries. Model could be assimilated by other national commodity program or other networks. Instruments include guides to elaborate the characterization of micro agrosystems where bean is produced, formats to develop action plans to validate technology transfer activities with farmers, and follow up instruments to check progress made in implementing the action plans. Examples on the two cases are presented. 1.2 A guide to use the training monitoring methodology will be published and presented in March 1996.

Activities	Client	Results
2. Production of seven training manual for trainees who attend courses led by PROFRIJOL.	PROFRIJOL	2.1 Based on the seven instructional units in use for two years, seven training manual were developed. These contain all technical information that appears in the instructional units. The price for each manual is US\$5, which is very low compared to the price of this units (US\$80). A request has been made by national bean programs to PROFRIJOL to finance copies of these manual to all trainees in the bean technology courses. Copies for 8 courses were produced and are being now distributed.
3. Revision of Instructional Units and manuals to up date information.	PROFRIJOL	3.1 During the Actualization and Induction of New Trainers (October/95), authors of instructional units revised and updated both the units and the manuals. Revisions are abundant and a new edition of these materials is needed.
4. Production of seven illustrated booklets (Cartillas) for bean producers with the most important messages on bean production practices directly linked to information provides in manuals and units.	PROFRIJOL	4.1 Booklets were produced and are now in the final revision and publication stage. A participatory methodology was use to validate the material (content validity and user reliability). Four different groups of interested parties participated in the revision, four groups of farmers, four groups of extensionists, the trainers team and the executive committee of PROFRIJOL. Validation activities included "acting out" the content by farmers in Costa Rica and Nicaragua.

Activities	Client	Results
5. Assist PROFRIJOL in the development of a self-evaluation process, in preparation of the new ZOPP exercise to be carried out in November 1995.	PROFRIJOL	5.1 In May 1995, assistance was provided to PROFRIJOL in the development of a self evaluation model. The scheme was followed by the network members. In October/95 qualitative and quantitative results were presented during a meeting held by the executive committee. A new evaluative report came out of the analysis.
6. Following an initiative of CIAT's bean program assistance was provided to PROFRIJOL in planning and carrying out a workshop on new perspectives for bean research in Central America and the Caribbean.	PROFRIJOL	6.1 The workshop was held in Costa Rica in October/95. A new focus on research came out of deliberation of the executive committee. CIAT's bean program had an opportunity to present a new —more holistic— scheme for the next four years of PROFRIJOL, which was adopted by its members. With activities 5 and 6 PROFRIJOL is prepared to carry out a very productive ZOPP exercise in November
7. Workshop to update PROFRIJOL trainers team, carry out the induction of new trainers and design three new instructional sequences to the training units.	PROFRIJOL	7.1 The workshop was carried out in October/95. Thirteen new trainers from nine countries including Cuba and Dominican Republic were prepared to use the instructional units, the modules, the booklets and the training monitoring methodology. They also prepared the first drafts of three new instructional sequences (chapters) while fly management practices, use of hydrological resources and small seed enterprises for on-farm seed production.

Activities	Client	Results
8. Assistance to ISNAR for the publication of research administration modules and manuals.	ISNAR	8.1 Planning, Monitoring and Evaluation of Agricultural Research Manuals and Modules in English and Spanish were produced and are now being distributed trough out the world. CTA has taken responsibility to distribute those products to its clients in Europe and the U.S.. The new coordinating office of the second phase of the ISNAR project now located in Quito will distribute these materials in Latin America and the Caribbean.
9. Preparation of a new collaborative project between ISNAR and CIAT for 1996-98	ISNAR	9.1 In a three day meeting in Quito a new proposal for collaboration with ISNAR was prepared and presented to the ISNAR project coordinator. Expectations are to receive US\$24,000 per month, per nine months.
10. Participation in the World Conference on Evaluation (Vancouver, Canada, November/95)	ISNAR	10.1 To present the participatory methodology to validate ISNAR training materials, the section head will present a paper on "The Use of Formative Evaluation Strategies in the Development of Instructional Modules"
11. Participation in a meeting with CARDI representatives to plan the training strategy in research administration for the Caribbean	ISNAR	11.1 Meeting will be held in November/95.

Activities	Client	Results
12. Presentation of a proposal to the Colombian Ministry of Agriculture to continue CIAT's support to the strengthening of the National Technology Transfer System.	Ministry of Agriculture - Colombia	12.1 Following a successful collaboration with the Colombian Ministry of Agriculture a letter of intention for continued collaboration was issued to the new Vice-minister. Two follow up visits were made and various proposals presented. No response so far. The attitude of the Ministry as well as CORPOICA's is that CIAT has to cooperate with these two organisms "free of charge" due to the fact that the country is now a CG System donor. This attitude covertly expressed by ministry's officers, has been openly suggested by CORPOICA's managers.
13. Publication of SINTAP's training modules and manuals	Ministry of Agriculture - Colombia	13.1 Modules and manuals were timely produced and delivered to the Colombian Ministry of Agriculture. Evaluation reports that all manuals and modules were distributed through out the country by trainers and multipliers trained by our section.
14. Production of first drafts of training manuals for PROFRIZA network countries	PROFRIZA	14.1 Under the leadership of PROFRIZA coordinator two workshops were conducted with bean production experts from Bolivia, Peru and Ecuador, one in 1994 and another in 1995. First drafts on six different topics await resources from the Netherlands government to continue the training for trainers process (see project ahead).

Activities	Client	Results
15. Exploring the possibility to participate in the Technology Transfer Development Project funded by the World Bank for Venezuela.	Venezuelan Ministry of Agriculture	15.1 Letters of intent were sent to the Venezuelan Ministry of Agriculture; telephone calls and other interpersonal contacts were made with no successful results.
16. Design and presentation of a proposal to assist INTA - Nicaragua in the implementation of INTA's World Bank funded training project.	INTA - Nicaragua	16.1 Based on a general cooperation agreement between CIAT and INTA - Nicaragua and based on information and documents collected and prepared in three visits, a proposal was handed in to INTA to help nicaragua develop its training capacity. response suggested nicaragua has all technical resources needed to carry out its training program.
17. Preparation and presentation of a project to "Strengthen National Technology Transfer Mechanisms Through Training"	RIEPT - Central America and the Caribbean. PROFRIZA - Andean Zone	17.1 A two million dollar project was presented to the Netherlands government. The project has been verbally accepted and is now being studied in the Netherlands. Support from all participatory countries has been obtained and letters of support sent to the Netherlands Embassy in Bogota. This project is considered to be a key factor for sustainability of our section.
18. Preparation and presentation of a project to train trainers for training in bean production technologies for Haiti.	IICA - Haiti	18.1 A project was presented to the IICA representative in Haiti. A response known through a PROFRIJOL trainer (Emmanuel Prophete) suggested that the project was not big enough to be worth investing the time of the IICA representative in Haiti.

Activities	Client	Results
19. Participation in the IPGRI workshop on collaborative efforts for the conservation and use of genetic resources.	IPGRI	19.1 A proposal was written and presented to IPGRI (Rome and Cali) to train trainers and produce training materials. No tangible response from IPGRI has been issued so far.
20. Participation in the agroforestry workshop held in Yucatan - Mexico. Organized by ICRAF.	ICRAF	20.1 A proposal was written and presented to ICRAF (Africa) to train trainers and to produce training materials for a basic curriculum in agroforestry. No tangible response from ICRAF, so far.

PROVISION OF SERVICES AND PRODUCT DEVELOPMENT FOR CIAT's PROGRAMS AND RESEARCH UNITS

Activities	Client	Results
21. Participation in the Caribbean Rice Research Meeting. (Georgetown) February/95.	Rice Program	21.1 A presentation was made to CARDI representatives on the training for trainers strategy. Even though the strategy was well received and incorporated to the general framework of the rice research network no response has been issued by CARDI, so far.
22. Collaboration with the rice program in the II Workshop on Anther Cultivation for Rice Breeding	Rice Program	22.1 The section deployed its associate to help the Rice Program in the planning, implementation and evaluation of this successful activity. A report on this activity was issued.
23. Production of a video and a manual on "Rice anther cultivation for germplasm development".	Rice Program	23.1 Both, the video and the manual are at the final production stage.

Activities	Client	Results
24. Visit to the Southern Cone Cassava Network Countries to distribute training units and explore new training activities.	Cassava Program	24.1 In May/95 the visit was made. Almost all trainers from Brazil, Paraguay and Argentina showed up. Twenty seven copies of each of the six instructional units were handed in to cassava trainers and institutions. An extensive report on this visit was issued.
25. Preparation of a workshop on project design for the PNUD - Brazil based research project.	Cassava Program	25.1 A workshop was prepared with the cooperation of the Project Development Office (R. Ruggles) but the PNUD project coordinator in Brazil found low local motivation to carry out this activity, due to institutional problems.
26. Publication of the tropical forage units and manuals.	Tropical Forages Program	26.1 A total of four instructional units on tropical forages production technologies was published and is now available for distribution.
27. Production of the audiotutorial: "Bean pests in Africa"	Bean Program	27.1 The audiotutorial was produced and distributed to all NARs in Africa.
28. Production of the audiotutorial: "Nutritional Disorders in Beans"	Bean Program	28.1 Sixty copies of this audiotutorial unit were made and distributed to users in Africa.
29. Production of a video on "Biotechnology for Agrobiodiversity Conservation"	Biotechnology Unit	29.1 A video on this subject was produced under the direction of Dr. W. Roca. It is now ready for use and distribution.
30. Production of a video on Medicinal Plants	Hillsides Program	30.1 Following a recommendation of Dr. J. Ashby support was provided to a student from Finland to produce this video, at no charge for the user.
31. Preliminary edition of a video on FEBERSURCA	IPRA	31.1 Preliminary edition of this video was made at the TV studio.

Activities	Client	Results
32. Editing a video on security for CIAT	CIAT's Administration	32.1 A video on this topic was edited following a request from CIAT's administration.
33. Production of CIAT's institutional video	CIAT's Administration	33.1 CIAT's administration, decided to contract the institutional video with our section. The pre-production process is underway in spite of difficulties encountered in the preparation of the draft, due to lack of expertism in the journalist hired by the human resources unit for this purpose.
34. Production of a video—magazine	CIAT—wide	34.1 As a development of the communications schemes at CIAT, analyzed by the ARCOS committee and with the support of the Communications' Unit Head, and experimental version of an institutional video magazine is being produced and tested. A document on its goal, purposes, products and activities involved has been issued.
35. Development of a slide—bank	CIAT-wide	35.1 A report on thousands of slides spread throughout CIAT prompted the idea to create a center-wide slide bank service. An agronomist was hired for this purpose. By December/95 CIAT will count on a computerized slide bank to which any staff will be able to access, and use the original slides for copies, at no cost. A user's manual of the system is now being prepared.

TCDIM DEVELOPMENT ACTIVITIES

Activities	Client	Results
36. Redesign of physical facilities	SNTC	36.1 With an ample support from the DDG for finance and administration a redesign of the SNTC was planned and executed. The new spaces created lend themselves to more efficient and productive development of activities.
37. Design of a "Homepage" for the section	SNTC	37.1 The section is now designing an INTERNET homepage to advertize its services, particularly for the CG System and for NARDS.
38. Training for TCDIM personnel	SNTC	38.1 The section's personnel participated in at least two of the following courses, financed by the section itself or with the support of the Human Resources Unit: ● PowerPoint ● Video Editing Techniques ● High 8 - Video Editing ● Seminar on Multimedia ● Seminar on Digital Image Management ● Windows - Basic ● WordPerfect 6.0 ● Harvard Graphics ● Photography ● CorelDraw 5.0