

Growth Profile of **LIBRARY AND INFORMATION SERVICES** at CPCRI



CENTRAL PLANTATION CROPS RESEARCH INSTITUTE
(Indian Council of Agricultural Research)
Kasaragod - 671 124, Kerala, India





Dr. R.S. Paroda, Former Director General, ICAR visiting the library



Dr. G. Kalloo, Deputy Director General (Hort.), ICAR visiting the library

GROWTH PROFILE OF LIBRARY AND INFORMATION SERVICES AT CPCRI



CENTRAL PLANTATION CROPS RESEARCH INSTITUTE

(Indian Council of Agricultural Research)

Kasaragod 671 124, Kerala, India



Published by:

Dr. V. Rajagopal

Director

Central Plantation Crops Research Institute

Kasaragod - 671 124, Kerala

Tel. No. : 04994 - 232 974, 232 893, 232 894, 232 895, 232 896

Grams : 'RESEARCH' Kasaragod

Fax : 04994 - 232322

E mail : library@bioinfpcpri.org, cpcrilib@yahoo.com, cpcpri@hub.nic.in

Website : www.cpcri.nic.in, <http://bioinfpcpri.org>

Compiled and edited by:

M.P. Ramesh Kumar

K. Shobha

George V. Thomas

Word Processing, design and layout:

K.U. Mujib Rahiman

Photo credits:

K. Shyama Prasad

Correct citation:

**CPCRI, 2003 Growth Profile of library and information services
at CPCRI, Central Plantation Crops Research Institute, Kasaragod, India**

October 2003

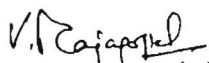
Printed at: Niseema Printers and Publishers, Kochi - 18. Ph : 2403760

PREFACE

Information is a vital resource and an essential input for research and development. Over the years there has been an exponential growth in information. Besides, the developments in the field of information and communication technology have resulted in information sources based on computers and digital media. A well equipped information centre is an essential part of any R&D organisation.

The library and information services at Central Plantation Crops Research Institute is in its thirty-third year of existence. During the span of more than three decades, the library has grown in size to earn the reputation of having the largest collection of plantation crops literature in the country in crops like Coconut, Arecanut, Cocoa, Cashew, Oil palm, Spices etc. NATP funding and sanctioning of Bioinformatics Centre by DBT further added new dimensions to the development of facilities in the library. It has just been shifted to an elegant and spacious newly constructed building with ample facilities. At this juncture, we feel it appropriate to bring out a brochure highlighting the achievements of the library and the services rendered by it.

A sincere attempt has been made to present the library in its historical perspective and trace its growth over the years in terms of the collection of literature and infrastructure development in the backdrop of technological advances in this field. I hope this brochure will serve as a useful guide for accessing information services provided by this centre.



Dr. V. V. Rajagopal
Director

Kasaragod
30.09.2003

CONTENTS

	Page No.
Historical perspective	1
Library and information services	2
Organisation of library resources	6
Services offered	9
Library user survey	13
Bioinformatics centre	14
Annexures	
I - Class numbers of frequently referred subjects	17
II - Digital library collection	18
III - Ph.D theses	19
IV - Library rules and regulations	21
V - Publications	22
VI - Library user study	23
VII - Library advisory committee	24
VIII - Plan wise funds and expenditure for library	24
IX - List of library staff	25

CPCRI: A HISTORICAL PERSPECTIVE

Coconut research in the country was initiated at Kasaragod in the erstwhile Central Coconut Research Station (CCRS) by the then combined Madras Presidency. A significant step towards strengthening research in coconut, arecanut, cocoa, oil palm, cashew and spices was taken by the Indian Council of Agricultural Research (ICAR) in 1970 by establishing the Central Plantation Crops Research Institute (CPCRI) by merging the two CCRS at Kasaragod (estd. in 1916) and Kayangulam (estd. in 1947) and the Central Arecanut Research Station (CARS) at Vittal (estd. in 1957) along with its five regional centres at Palode, Kannara, Hirehalli, Kahikuchi and Mohitnagar. CPCRI has made significant contribution in the areas of research and extension activities on the mandate crops. With the delinking of research on spices and cashew from CPCRI in 1986 and oil palm in 1999, the Institute is concentrating on coconut, arecanut and cocoa. A large number of externally funded projects, both national and international are currently in progress at this Institute.

LIBRARY AND INFORMATION SERVICES

Information is a vital resource for Research and Development. Information on the work being done or work already done elsewhere helps the R&D community to avoid duplication/redundancy in their work. It also helps in collaborating work with others in the field. The success of any R&D programme is based on the right information made available at the right time in the right manner. CPCRI Library recognised the value of information right from its inception and still continues to strive for excellence in its services through current use of information technology.

CPCRI has inherited one of the oldest research bases in coconut and a rich collection of literature pertaining to the plantation crops. The books and periodicals available at Quilon during the scheme for the investigation of different diseases of coconut were transferred to Kayangulam and a librarian was

posted in charge of the library in 1958.

The libraries at the HQ and Regional Stations have obtained books from the erstwhile CCRS and qualified librarians were posted into service in the sixties. After 1960, the library had attained remarkable growth. The library, which was accommodated in a small room of the old building of CPCRI, has grown in its size to a separate building with 400 m² area. Table 1 depicts the present status of the collection of various publications in the library at the HQ and Regional Stations.

The number of library professionals also increased with this growth from three to seven. The library used to cater to the demands of researchers/clientele working on spices, cashew (until 1986) and oil palm (until 1999). It has a fairly good collection on these crops also.

Libraries at the Research Centres are managed by non-professionals.

Table 1. Present status of collection of various publications at CPCRI Library

Station	Books	Back Volumes	Other Publications				
			Reprints	Pamphlets	Technical Reports	Maps & Atlases	Ann.Rep. & Res. Highlights
Kasaragod	7816	10437	1200	1100	500	200	4650
Kayangulam	2458	5839	600	500	250	100	2372
Vittal	4530	4449	649	549	301	149	2421
Total	14804	20725	2449	2149	1051	449	9443

Table 2. Year wise addition of documents in library

Year	HQ, KSD					RS, KGM					RS, Vittal				
	BK	BV	IJ	FJ	OP	BK	BV	IJ	FJ	OP	BK	BV	IJ	FJ	OP
1970	180	1560	50	80	1100	80	0	41	99	0	615	0	0	0	0
1971	108	0	62	85	88	94	0	50	50	0	198	0	0	0	0
1972	905	300	62	85	122	78	1600	50	82	0	169	639	0	0	0
1973	156	0	70	119	100	103	0	60	81	0	664	0	0	0	0
1974	67	160	121	74	225	103	0	49	76	0	306	0	0	0	0
1975	243	0	76	109	100	159	200	52	77	0	486	447	0	0	100
1976	353	0	82	102	150	258	200	55	87	0	455	625	0	0	150
1977	258	215	96	111	120	92	500	53	84	0	350	0	0	0	300
1978	327	551	93	114	25	150	0	47	97	0	113	0	0	0	0
1979	465	0	93	106	50	171	0	67	97	0	132	0	0	0	0
1980	363	1006	124	182	320	185	105	67	132	1566	164	114	0	0	50
1981	442	0	126	185	460	166	113	67	132	124	196	241	0	0	73
1982	356	127	142	239	113	108	374	87	129	110	100	188	0	0	807
1983	367	511	142	239	746	152	529	88	110	93	143	0	0	0	32
1984	472	1958	129	237	358	101	3	85	114	1135	20	345	0	0	150
1985	529	248	110	222	182	53	602	79	124	185	45	441	0	0	0
1986	272	0	114	204	58	27	2	109	124	173	29	150	0	0	1
1987	266	0	301	256	103	53	196	66	87	0	54	0	0	0	0
1988	466	0	120	112	80	23	0	62	59	19	35	0	0	0	17
1989	183	0	109	115	200	31	2	57	40	0	27	0	0	0	34
1990	270	1234	99	101	300	39	678	51	39	75	28	489	0	0	45
1991	169	0	99	101	300	25	0	46	40	0	8	0	0	0	3
1992	123	674	101	103	500	36	275	46	39	96	29	420	0	0	100
1993	98	0	107	109	150	35	0	27	36	19	29	5	0	0	1972
1994	81	488	112	94	22	25	100	28	35	8	13	0	34	18	81
1995	56	0	98	87	145	15	0	25	33	19	23	0	32	16	0
1996	29	532	99	61	146	14	0	25	18	0	18	0	31	17	0
1997	7	390	92	45	1127	10	200	25	17	0	18	345	33	11	154
1998	90	2	97	49	40	7	0	32	17	200	24	0	28	9	0
1999	74	481	70	53	100	18	0	31	16	0	9	0	25	8	0
2000	41		64	52	120	47	160	27	16	0	30	0	25	9	0
Total	7816	10437			7650	2458	5839			3822	4530	4449			4069

BK - books, BV-back volumes of journals, IJ-Indian journals, FJ-Foreign journals, OP-Other Publications

Table 3. Number of books available in major subjects and crops

Crops/Discipline	Kasaragod	Kayangulam	Vittal	Total
Plantation Crops - General	424	30	150	604
Coconut	177	18	61	256
Arecanut	26	1	29	56
Cocoa	35	1	54	90
Oil Palm	36	3	20	59
Spices	34	17	10	61
Genetics and Breeding	106	126	216	448
Biotechnology	129	0	20	149
Agronomy	170	268	225	663
Soils and Plant Nutrition	671	324	318	1313
Microbiology	119	112	59	290
Physiology and Biochemistry	736	492	364	1592
Entomology	62	578	249	889
Nematology	55	143	11	209
Pre & Post Harvest Technology	98	6	86	190
Pathology	498	684	252	1434
Agricultural Economics	504	52	91	647
Statistics	282	70	91	443
Extension	30	5	8	43
Total	4192	2930	2314	9436

Table 4. Journals available in major subjects and crops

Crops/Subject	Kasaragod	Kayangulam	Vittal	Total
Agricultural Economics	29	1	1	31
Agricultural Statistics	14	4	9	27
Agronomy	33	6	17	56
Arecanut	6	2	4	12
Biotechnology	8	0	0	8
Cocoa	4	1	6	11
Coconut	21	8	6	35
Oil Palm	2	0	0	2
Genetics and Plant Breeding	34	2	28	64
Harvest and Post Harvest technology	18	2	1	21
Microbiology	11	15	10	36
Nematology	7	10	0	17
Pests and Diseases	51	48	27	126
Physiology and Biochemistry	39	21	14	74
Soils and Nutrition	26	9	16	51
Total	303	129	139	571

FUNCTIONS

1. To develop and maintain a modern scientific and technical library devoted to plantation crops specifically on coconut, cocoa, arecanut and its related disciplines.
2. To acquire and build up a wide range of publications including books, monographs, treatises, reference books, journals, conference papers, proceedings, scientific and technical reports, CD-ROM and other digital media.
3. To organize the information resources in a systematic manner by adopting standard and effective methods for information storage and retrieval.
4. To provide information services for the user community by adopting information technology techniques.
5. To maintain liaison with other local, national and international information centres for exchange of information.
6. To supply copies of available documents in the information centre.
7. To serve as a national clearing house for information on mandatory crops and its allied branches.

INFRASTRUCTURE DEVELOPMENT

In the last quarter of the year 1999, the library secured NATP funds to the tune of Rs. 15 lakhs for modernization of the library. Utilizing this allocation given by ICAR, the library has established all facilities for online and offline information

retrieval. For networking and automation - computers and other accessories were installed. A CD Server with 14 bays was acquired, which made it possible to simultaneously search multiple databases over the Local Area Network.

An inverter was installed to avoid interruption in the lighting for the reading hall. The library was air-conditioned to avoid damage of books by fungal infection. New furniture was also acquired.

During 2001, the institute took up the construction of a separate building to accommodate library. A well furnished building of 400 m² area was completed by 2003. The new library has been provided with facilities for adopting latest information retrieval techniques. OFC network connection has been established with connectivity to all sections of the library. The CD-ROM databases are made accessible to all the sections over the Local Area Network. Content pages of latest journal issues are scanned and put in the server to provide immediate access to the users from different sections.

LibSys software was installed and complete library collection data is fed in to it. The details of library collection are accessible through library OPAC (Online Public Access Catalogue). Basawa Barcode Labeler is used for barcoding of library documents and circulation is automated with the use of barcode scanners. Barcode technology is utilized for stock verification too.

LIBRARY WORKING HOURS

Library is kept open on all working days from 9:30 AM to 5:00 PM with a break of one hour from 1:00 PM to 2:00 PM. On Sundays and other public holidays, the library is kept closed.

ORGANISATION OF LIBRARY RESOURCES

The Central Library at the Head quarters as well as the libraries of other centres has a sizeable collection. This includes reference books, current and back volumes of research journals, reports, conference proceedings, annual reports of national and international organizations, theses and dissertations, standards and specifications, reprints, CD-ROM databases and other electronic documents.

BOOKS

Documents are classified according to Universal Decimal Classification, catalogued according to Anglo American Cataloguing Rules

II, and indexed with Library of Congress Subject Headings with local modifications. Library provides the catalogue data through OPAC (Online Public Access Catalogue). The card catalogue is also maintained.

While classifying a book according to the subject content, each book gets a Class Number and a Book Number. Books are arranged in the shelves based on these call numbers and books of the same subject are kept together with those of related ones coming next or just before them. The class number and book number are written on a book tag, which is pasted on the spine of the book. Class numbers of certain frequently referred subjects are included in Annexure I. Books for reference are kept in separate shelves with a prefix alphabet R in the class number.

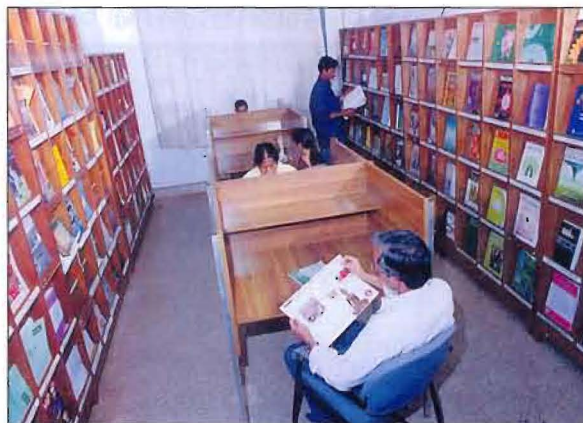
PERIODICALS

Current issues of periodicals are arranged alphabetically on periodical display-cum-storage racks. Previous issues of the year are kept in the



Books and Journal Back
Volumes Storage Hall

Current Periodicals Section



cubicles of periodical display racks. Newsletters are arranged alphabetically in a separate sequence in vertical cabinets along with back issues.

BOUND VOLUMES OF JOURNALS

The bound volumes of journals for the previous years are arranged in the stack room. The arrangement is alphabetical by title of the journal. Volumes of the same journal for different years are arranged in the ascending sequence. All journals except those of popular nature are bound as per the recommendation of Library Advisory Committee. The popular journal issues and news letters of general nature are disposed off as per the guidelines of Library committee with the approval of the competent authority.

ANNUAL REPORTS

Library has a good collection of annual reports obtained from agricultural and other research institutions in India and abroad. These are arranged alphabetically by the name of the institution. Three

separate sequences are followed for annual reports viz. Reports of ICAR institutes, Reports from Indian organizations other than ICAR and Reports of other International organizations.

TECHNICAL REPORTS

A good collection of technical reports received from both Indian and foreign organizations are arranged as per the call number in a separate sequence. The call numbers of technical reports are prefixed with the alphabet TR for easy identification.

PATENTS AND STANDARDS

Patents and standards are arranged as per the call number in vertical cabinets.

THESES & DISSERTATIONS

Library has a limited number of MSc/Ph.D dissertations/theses. Most of these titles are the works submitted by researchers of CPCRI. Theses and dissertations are arranged alphabetically by the name of the scholar.

Table 5. Some of the important journal back volumes available in the library

Journal	Period
Agronomy journal	1907+
Annals of Botany	1955-98
Analyst	1960-86
Analytical Chemistry	1960-87
Annals of Applied Biology	1962-96
Methods in Enzymology	1955-94
Biochemical Journal	1962-82
Botanical Abstracts	1953-84
Botanical Gazette	1955-88
Canadian Journal of Botany	1964-67
Chromosoma	1970-84
Communication in Soil Science & Plant Analysis	1973-90
Crop Science	1963+
Euphytica	1952-93
Economic Botany	1960-94
Experimental Agriculture	1967-97
Journal of AOCS	1960-93
Journal of Experimental Botany	1960-96
Jl. of the Royal Stat. Society Series C	1984+
New Phytologist	1960-94
Nature	1953+
New Scientist	1971+
Oleagineaux	1946-96
Physiologia Plantarum	1969+
Phytopathology	1953-96
Plant Cell Reports	1982-2002
Plant Cell Tissue and Organ Culture	1982-2002
Plant Disease	1981-2002
Plant Physiology	1968-98
Plant Science	1985+
Plant and Soil	1949-97
Planta	1970-90
Planter	1972+
Soil Biology and Biochemistry	1980+
Soil Science	1946+
Soil Science and Plant Nutrition	1972+
Soil Science Society of America Journal	1976+
Theoretical and Applied Genetics	1968-87
Scientific American	1969+

(+ indicates continued subscription)

DEPUTATION REPORTS

Deputation Reports are arranged in a separate sequence alphabetically by name of author.

REPRINTS

Reprints are arranged by accession number in vertical cabinets. These are also made available online in electronic format.

MICROFILMS

The microfilms are classified and arranged separately by their accession number. Microfilm readers are provided to use these microfilms. The microfilms are kept in locked shelves.

ELECTRONIC COLLECTION

The library has databases developed in-house and subscribes to different databases in various subjects each year. Major CD-ROM databases of agricultural importance are subscribed and back issues of these databases are available from 1970. The library also has a variety

of directories, encyclopaedias, maps and other publications in electronic format. The electronic collection is arranged alphabetically by title. A list of electronic collection in the library is provided in Annexure II.

SERVICES WE OFFER

INTERNET

Internet services are provided on all nodes of the electronic library via VSAT (64 Kbps) connection of NIC. Readers are allowed to use the internet from machines identified for this purpose with proper records in the log sheets. Readers are allowed to utilise all services available over internet.

LIBRARY WEBPAGE

Library web page is accessible at the site <http://bioinfpcpri.org> where necessary links are available to access various services offered by the library. Databases, Content pages of journals, different proforma, study circle papers etc. are accessible at this site for authorised users.



Electronic Library
Section

ONLINE PUBLIC ACCESS CATALOGUE (OPAC)

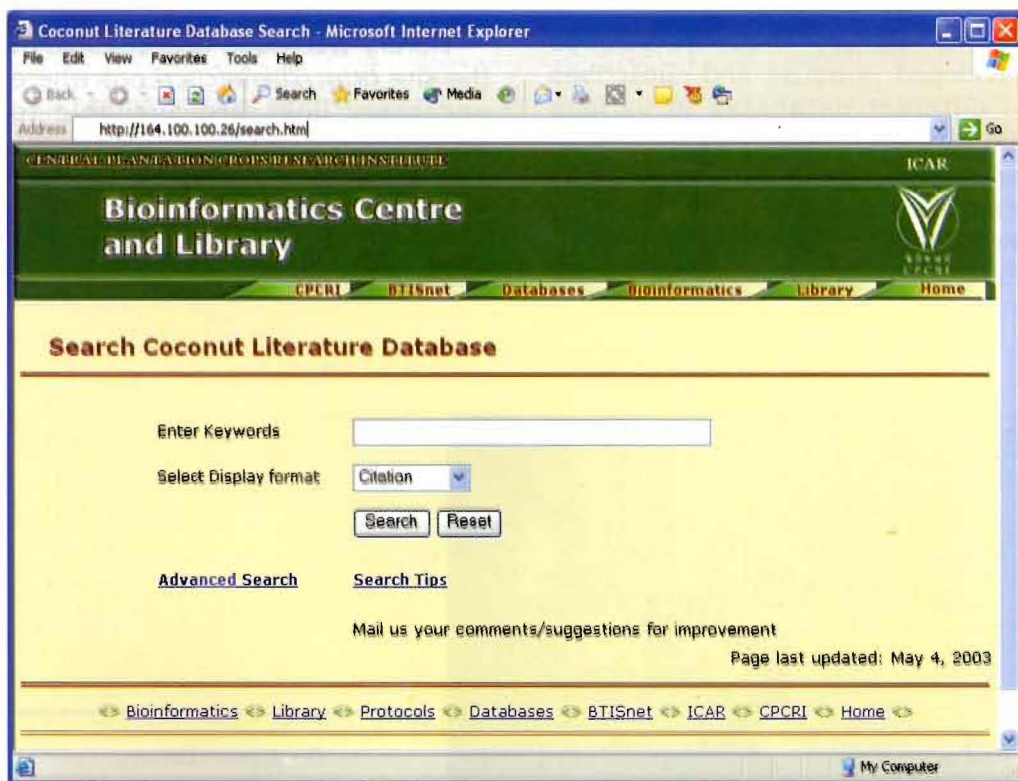
The library is automated with fully integrated multiuser library software working under Windows NT. The software package provides the modules for acquisition, serials control, circulation, cataloguing, OPAC etc. OPAC facility is made available through the LibSys software. The users can identify the class number and locate required documents. The subject or keyword search will help the reader to locate the publications on a particular subject. It also allows searching through author or title of a document. From the OPAC, the reader can

identify the status of documents (whether available in the library or issued out). It allows combination searches by the use of Boolean logic. OPAC is also accessible on the Internet.

ACCESS TO DATABASES

a. Subscribed databases

The Library has a 14 bay CD-Server that is connected to LAN, which provides access to all sections. The library has a good collection of CD-ROM databases related to Agriculture and these databases can be accessed over CPCRI LAN through the CD-Server during library working hours.



Database search through Library website

b. Databases developed in-house

Library provides access to bibliographic and full text databases developed by the Library and Bioinformatics Centre. These databases are made accessible through LAN through web browsers from the library web site. The same will be accessible on the Internet from the institute web site to authorised users. The database, which is in CDS/ISIS, is running on WWWISIS software. This has search options from various access points like author, title, keywords, year etc. It also allows combination search. In addition to online access we offer offline search facility by supplying these databases in CD-ROM.

ACCESS TO ONLINE JOURNALS

The library web site is hosted in the Internet and necessary links are made to various online agricultural journals, which provide free access. Online editions of various journals subscribed by the library also can be accessed at this site. Permission to

access these titles are restricted by IP number or by password.

UNION CATALOGUE OF PERIODICALS

Union catalogue of journal back volumes available at different libraries is essential to know the availability of various journals for easy access. The Union Catalogue of periodicals in the Headquarters, Regional Stations and Research Centres of CPCRI is available online.

PHOTOCOPYING SERVICES

Photocopying services are offered to provide information to our clientele. Services are extended free of cost to official requests forwarded with necessary approval of the Head of the Section/Division. Personal requests from within the institution and visitors are entertained at the rate of Re. 1/- per page.

INTER LIBRARY LOAN (ILL)

The library is sharing its resources with other libraries. Library

Reprography
Services



documents are issued on loan to other libraries against the request from the concerned library. The services are extended to many co-operating libraries.

RESOURCE SHARING

The institute library has established a resource sharing programme with the neighbouring ICAR institutes, IISR and NRC for Cashew to avoid wasteful expenditure and to ensure efficient utilization of funds. These institutes have decided to avoid duplicate subscriptions and to exchange journals required by each station. In this effort each library is making available the content pages of subscribed titles over the institute web page immediately on receipt and the users are given permission to access these pages and make their article request online to the concerned library. The required pages will be scanned and supplied to the user as Email attachment.

CIRCULATION

All documents in the library are bar-coded. This enables computerized issue and return, renewal and reservation. All members are given barcoded membership cards. The number of documents issued depends on the category of the user. Group A officers are issued a maximum of 6 documents, Group B staff members are issued 4 documents and for Group C and below, 2 documents. Rules and regulations for circulation of documents are provided in Annexure III.

ANNUAL CURRENT PERIODICALS/NEWSLETTERS LIST

List of journals/CD-ROM databases subscribed/received on gratis basis each year at the HQ and the Regional Stations and Research Centres and those libraries co-operating in resource sharing programme is compiled and



Circulation
Counter

distributed. It is also made available over the website. This helps the readers to locate their required titles easily.

NEWSPAPER CLIPPINGS SERVICE

A newspaper clippings service "The Glimpse" covering the news items related to agriculture/plantation crops is brought out daily.

NEW ADDITION LIST

Annual list of new additions of books in the library is brought out for the information of readers in print and over the website.

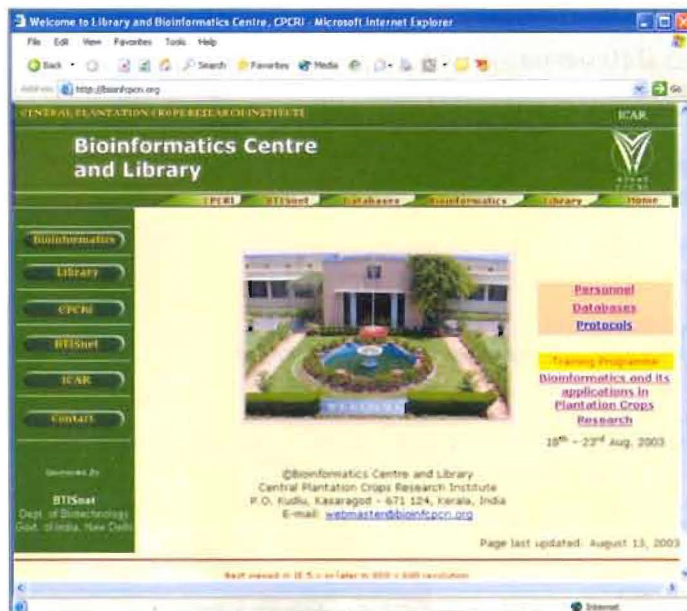
LIBRARY ADVISORY COMMITTEE

The Director constitutes the institute Library Advisory Committee (LAC) with the Head of Library as Vice Chairman and members representing various disciplines. The Librarian-cum-Documentation Officer will be

the Convener. LAC gives recommendations regarding various activities of the institute library including library purchases. It also has power to constitute different sub committees for weeding out, physical verification, purchase of equipments, furniture etc. with the approval of the Director.

LIBRARY USER SURVEY

The progress of research depends upon the availability of the right information in the right form at the right time. Therefore, it is necessary to understand the information needs as well as information seeking pattern of users. Hence, the library conducted a study to ascertain the information seeking behaviour of the CPCRI research workers and to identify the problems of readers and to suggest necessary improvement of the available facilities. The report of the study is given as Annexure V.



Library home page

CENTRAL PLANTATION CROPS RESEARCH INSTITUTE

ICAR

Bioinformatics Centre and Library

CPCRI
BTISnet
Databases
Bioinformatics
Library
Home

CPCRI Intranet

Resource Sharing

Access the **Table of Contents** and **Online Document Delivery Services** from CPCRI and participating libraries.

New Indian MEDLARS Centre is providing a variety of services to the scientists/researchers.... [More](#)

Coconut Literature Database Search

The coconut literature database holds more than 6000 references on various aspects of coconut. Can be searched through various access points like author, title, year, keywords etc.

New Imaging in Cell Biology a new supplement by Nature. Accessible **free** till March 2004 ...[More](#)

Online Journals

Links to various free journals in the field of agriculture and biology available online.

Search Union Catalogue of Back Volumes

Search Interface for catalogue of back volumes at CPCRI Libraries. Will be updated with back volumes available at libraries participating in resource sharing programme.

Online Public Access Catalogue

Search the Library Catalogue at CPCRI.

Search Fulltext Databases

Search fulltext databases of CPCRI publications, Root (wilt) and Biotechnology literature. Currently this facility is accessible only at the HQ.

Download Forms

Various administrative forms are made available here in PDF for easy access

News and Information

Visit this page to see news and other information that may be of interest.

Selected Web Resources

Links to selected web resources on Agriculture, Biology, Bioinformatics etc.

Page last updated: September 29, 200

[Bioinformatics](#) <> [Library](#) <> [Protocols](#) <> [Databases](#) <> [Contact](#) <> [Personnel](#) <> [Opportunities](#) <> [BTISnet](#) <> [ICAR](#) <>
[CPCRI](#) <> [Training](#) <> [Home](#) <>

Services offered on Intranet

BIOINFORMATICS CENTRE

The Distributed Information Sub Centre (Sub-DIC) under the Biotechnology Information System Network (BTISnet) programme sponsored by Department of Biotechnology, Government of India, New Delhi, was established in December 2000 to provide updated and pinpointed information in the area of Biotechnology, especially related to plantation crops. The Bioinformatics centre at CPCRI was inaugurated by Honourable Union Minister for Textiles on 10th December 2000. This centre has taken up the creation of databases on biotechnological aspects of coconut, arecanut and cocoa and provides information retrieval services in Biotechnology topics.

OBJECTIVES

1. Provide upto date information in the field of biotechnology to researchers on plantation crops.
2. Make available latest softwares and databases in the field of biotechnology.
3. To conduct training to introduce available facilities of the centre to the users.
4. Establish linkages with other organisations working on similar topics and make arrangements for sharing of information and resources.
5. Develop bibliographical databases, gene databanks and molecular data banks related to plantation crops.

FACILITIES

Hardwares

- * IBM Web Server
- * Pentium IV Computers
- * Scanners, LaserJet and InkJet Printers
- * Internet connection via VSAT with OFC
- * Databases and softwares for biotechnology related works

Softwares

- * Windows NT/XP/2000, Linux 8.0
- * MS Office XP
- * Trend PC-Cillin 2000
- * Norton Antivirus 2002



Bioinformatics
Centre

- * Reference Manager 9.5
- * Adobe Acrobat 5.0
- * ABBYY Fine Reader Professional
- * WINISIS
- * WWWISIS
- * Arlequin
- * Phylip
- * NTSYS
- * RAPDistance etc.

Communication Facilities

Internet connectivity through VSAT and Optical Fibre Cabling.

Services

- * Survey and collection of literature in the field of biotechnology of plantation crops
- * Collect information related to biotechnology of plantation crops and make them available offline and online
- * Acquire databases and softwares relevant to the subject field for the use of research workers
- * Conduct training on topics related to computer application in biotechnology and information retrieval
- * Develop various databases of interest to research workers of biotechnology

ACHIEVEMENTS

Databases

The development of coconut germplasm database has been taken up and the work is in progress. Coconut germplasm collected at CPCRI is being characterized using molecular markers (RAPD, AFLP) and the data generated is being incorporated into the database.

The centre continued to survey and collect literature in the field of Biotechnology of Plantation Crops

and updated the Coconut Biotechnology Database. The Centre has developed a database of published literature on coconut and the development of database on arecanut literature is in progress.

Tissue Culture Protocols

Different protocols for molecular biology and tissue culture studies of coconut, arecanut, cocoa and oil palm were digitised for easy access.

Website

A website has been designed and all the databases developed by the centre are hosted on the internet. The website also provides access to various molecular biology and tissue culture protocols of coconut, arecanut and cocoa.

Training

The centre conducts training programmes on bioinformatics to provide awareness and to impart necessary skills in the application of bioinformatics tools and techniques in research. The details of the training programmes are announced in advance in the website and different organizations are informed about the training programmes. The training programmes include a blend of lectures, demonstrations, hands on practice and discussions.

A Training programme on "Bioinformatics in Biological Research" was organized during 1st to 14th of August 2002 with the objective of imparting latest knowledge on application of molecular techniques, biocomputing, biostatistics and information retrieval in biological research. Ten participants from various institutes attended the training.

Annexure I

Class numbers of frequently referred subjects

Subject	Class No.
Agriculture	631
Agricultural Engineering	620
Agricultural Extension	374:63
Arecanut	634.613
Biochemistry	577
Biotechnology/Tissue culture	578.085.23
Chemistry	546
Coconut	634.616
Computers	681.14
Economics	330
Entomology	595.7
Library Science	25
Food Processing	664
Genetics/Molecular Biology	575
Horticulture	635
Microbiology	576.8
Oil Palm	634.614
Physiology	581.1
Plant Pathology	632
Soil Science	631.4
Irrigation	631.6
Soils & Nutrition	631.8
Statistics	310.17

Annexure II

Digital Library Collection

Sl. No.	Database/Publications
1	AgEconCD 1973 – 2002
2	Agricola 1970 – 2002
3	Agris 1975 – 2002
4	Agronomy Journal 1907 – 1943
5	Akhila Vijnana Kosham
6	Arecanut Expert
7	CAB HortCD 1973 – 2002
8	CAB PestCD 1973 – 2002
9	CGIR Handbook of Agricultural Engineering
10	Cocoa Expert
11	Coconut Descriptor
12	CPCRI Publications
13	Current Science 2003
14	Database on Coconut Biotechnology
15	Database on Indian Coconut Literature
16	Database on Root (wilt) Disease
17	Electronic Brochure
18	E-manual of Coconut Cultivation
19	Encyclopaedia of Indian Horticulture
20	Encyclopaedia of Indian Literature
21	Encyclopaedia Britannica
22	Indian Science Abstracts 1990 -1999
23	Integrated Pest Management
24	Manorama Knowledge Adventure
25	Maps of India
26	Naalikeram
27	NISC Discover 1948 – 2000
28	Oleagineaux 1972 – 1974
29	Patents Made Easy
30	Plant GeneCD 1973-2003
31	Plantation Research & Development 1994 – 1999
32	Soil CD 1973 – 2002
33	Tropag & Rural CD 1975 - 2002
34	VB Script Master's Handbook

Annexure III

Ph.D Theses at CPCRI

Centre	Author	Title	Year
Kasaragod	Abraham, K. J.	Effect of palm density and levels of NPK fertilizers on yield and quality of coconut	1978
	Nambiar, M.C.	Morphological and cytological investigations in the genus <i>Curcuma</i>	1979
	Singh, Ram Keshwar	Economics of arecanut cultivation in Jalpaiguri District, West Bengal	1982
	Singh, Vijay	Physiological and biochemical basis of resistance in cashewnut kernels against stored product insects	1983
	Sundararaju, P	Studies on the burrowing nematode of arecanut	1984
	Bopaiah, B. M.	Microbiological studies in relation to high density multispecies cropping system in coconut	1988
	Ravindran Nayar, P. N.	Studies on black pepper (<i>P. nigrum</i>) and some of its wild relatives	1990
	Sanal Kumar, R.	<i>In vitro</i> interaction of <i>Thielaviopsis paradoxa</i> , with mycoflora of coconut root zone	1990
	Gopalasundaram, P	Studies on sorghum based intercropping systems as influenced by irrigation regimes, plant population and nitrogen levels	1992
	Kochu Babu, M	Investigations on spear rot complex of oil palm (<i>Elaeis guineensis</i> Jacq.)	1993
	Kasturi Bal, K. V.	Evaluation of coconut germplasm for drought tolerance	1993
	Nirmal Babu, K	<i>In vitro</i> studies in <i>Zingiber officinale</i> Rosc.	1997
	Maheshwarappa, H. P.	Agronomic investigations on kacholam and arrow root grown as intercrop in coconut garden	1997
	Moosa, H	Biocontrol of <i>Phytophthora palmivora</i> (Butl.), the causal organism of bud rot disease of coconut palm	2002
	Sushama Devi, C.K.	A quantitative analysis of Indian research output on spices since 1970	2002
Vittal	Raghavan, V.	On certain aspects of the biology of Arecanut (<i>Areca catechu</i> Linn) and the utilization of the by-products in industry	1957
	Veena Gariyali	Studies on the physiology and neuroendocrine control of reproduction in the short-tailed bandicoot rat, <i>Nesokia indica</i>	1975
	Radhakrishnan Nair, C. P.	Investigations on insect pest of cacao in Kerala with special reference to the mealy bug	1981

Centre	Author	Title	Year
Vittal	Abdul Khader, K. B.	Effect of depth of irrigation based on cumulative pan evaporation, mulching and drip irrigation with fertilizer levels on growth and yield of arecanut (<i>Areca catechu</i> Linn.)	1983
	Khandige Shama Bhat	Plant interactions in a mixed crop community of arecanut (<i>Areca catechu</i> L.) and cocoa (<i>Theobroma cacao</i> L.)	1983
	Chandramohan, R.	<i>Colletotrichum</i> species on cocoa in South India	1983
	Kumaran, P. M.	Genetical studies in cashew (<i>Anacardium occidentale</i> L.)	1985
	Mariamanna Daniel	Investigations on root and stem borers of cashew (<i>Anacardium occidentale</i> Linnaeus)	1991
	Saraswathy, N.	Studies on <i>Phytophthora</i> spp. of arecanut and arecanut based cropping systems	1993
	Chowdappa, P.	<i>Phytophthora</i> causing black pod disease of cocoa (<i>Theobroma cacao</i> L.) in South India.	1995
	Jose, C. T.	Non-parametric inference on structural changes in regression	1999
	Yadhukumar, N.	Efficacy of drip irrigation and graded nitrogen, phosphorus and potassium on the productivity of cashew (<i>Anacardium occidentale</i> L.)	2001
Kayangu-lam	Robert Cecil, S.	Mineral nutrition of the coconut palm in health and disease with special emphasis on calcium and magnesium	1981
	Abraham, V. A.	Biology, bionomics and control of coconut cockchafer, <i>Leucopholis coneophora</i>	1981
	Mathew George	Investigation on the association of bacteria in the root (wilt) disease of coconut	1983
	Ravikumar, K.	Studies on the physiological changes in coconut plants infected with <i>Radopholus similis</i>	1984
	Sosamma Varghese, K.	Studies on the burrowing nematode of coconut	1984
	Sundararaju, P.	Studies on the burrowing nematode of arecanut	1984
	Surbamanian, S.	Bioconversion of aquatic weeds for utilization in aquaculture	1987
	Geetha S. Menon	Studies on the biology, pathogenicity and biocontrol of different populations of <i>Radopholus similis</i>	1991
	Jasy Thomas	Host specificity, pathogenicity and morphological variations in the populations of burrowing nematode infesting plantation crops	1991
	Jacob, P. M.	Studies on the reaction of coconut genotypes to root (wilt) disease	1995

Annexure IV

LIBRARY RULES AND REGULATIONS

A) General

1. The library is primarily intended for the use of Scientific and Technical Staff of the Institute. However, outsiders will be allowed to avail the use of the library for reference purpose only, at the discretion of the Director/Head/Librarian-cum-Documentation Officer.
2. Personal effects (like umbrella, briefcases, books etc.) are not allowed into the library and shall be left at the property counter.
3. All readers should sign the Library register for proper records.
4. Silence shall be observed strictly.
5. Smoking is strictly prohibited in the Library.

B) Circulation of documents

1. Books/Bound volumes will be issued only against Library ID cards for a period of one month for books and two weeks for bound volumes.
2. Loose issues of journals are also issued against the library ID cards for overnight use after 04:30 PM.
3. Reference books and rare books shall not be issued out of the Library.
4. Staff members shall not lend books on their own to others.
5. Any publication on loan can be recalled at any time by the

Librarian-cum-Documentation Officer.

6. Any publication lost by a reader during the period he had it on loan, shall be replaced or its value paid by the reader. In the case of rare books, loose issues and bound volumes of periodicals, which are difficult to replace, the value shall be fixed by the Director as per the recommendation of the Librarian-cum-Documentation Officer.
7. Outstation loans shall be for a maximum period of one month.
8. Issue of duplicate cards in lieu of lost ones will be made against payment of a penalty of Rs. 20/- (Rupees Twenty only).
9. The Library ID Cards are not transferable.
10. Books can be reserved by furnishing the particulars of the book (title, author, call no etc.) in a requisition slip. No book can be renewed more than twice.

C) Guidelines for supply of xerox copies

1. The Photocopying Machine in the library will be mainly used for the work concerned with documentation/information services in the library.
2. Requests for Xerox copies must be forwarded through the Division/Section Heads.
3. Requests for copies of articles etc. from research and other agencies

outside CPCRI will be entertained at the rate of Re. 1/- per page.

4. Requests for xerox copies of articles from Regional Stations and Research Centres are to be forwarded through the Head/Scientist-in-charge respectively and the copies will be made available to the libraries of the concerned stations/centres.

D) Loan of current journals (Loose issues) for overnight use

1. All current journals will be issued to the staff members for overnight use, subject to the terms and conditions stipulated below. However, latest issues of the journals will be issued after displaying it in the library for a

period of one week.

2. Overnight issues will be made in the library (Periodical section) between 4.45 PM. and 5.00 PM on all working days on producing the Library ID card.
3. Journals issued for overnight use must be returned the next working day by 9.30 am.
4. It will be the responsibility of the reader to keep the journal clean and tidy and protect from dog-earing of the issue.
5. If the journal issued is misused or lost, the borrower has to replace the same or pay the entire cost of the journal volume, in case the particular journal issue could not be purchased separately.

Annexure V

Publications

1. Annotated bibliography of coconut in India (1936-76). Compiled by M. Divakaran Pillai, E.V.V. Bhaskara Rao and C.P. Mamoo Koya. (1976) CPCRI, Kasaragod. 270 p.
2. Annotated bibliography of coconut in India 1977-90. Compiled by D. Kamalavijayan and M.P Ramesh Kumar (1991). CPCRI, Kasaragod. 314 p.
3. Bibliography on cashew (*Anacardium occidentale* L.). Compiled by M. Divakaran Pillai and R.R. Haveri (1979). CPCRI, Kasaragod. 92 p.
4. CD-ROM Database on Coconut Literature
5. CD-ROM Database on Coconut Biotechnology
6. CD-ROM Database on Root (Wilt) Literature

Annexure VI

Library User Study

The study was planned with the following objectives and a structured questionnaire was distributed to the library users and data collected to study the library utilization behaviour.

1. To document and analyze the selected characteristics of researchers
2. To find out the library utilization behaviour of the researchers
3. To find out the differences, if any, between male and female researchers with regard to their library utilization behaviour
4. To find out the relationship of selected characteristics of the researchers with their library utilization behaviour
5. To identify the constraints, if any, and to elucidate suggestions endorsed by the researchers for the betterment/improvement of the CPCRI library

In the light of the objectives, characteristics viz, age, education, professional experience, nature of projects, sources of ideas, membership in journals and publication behaviour as independent variables and library utilization behaviour as dependent variable

were selected. These variables are grouped into various categories and rating was assigned to each category.

The library utilization behaviour was conceptualized based on visiting habit, consultation habit, reading habit, borrowing habit, internet use and CD-ROM use. Accordingly, scores were assigned to each component of the library utilization behaviour. Based on the scores obtained, the respondents were grouped into categories as low, medium and high.

From the observations, it was inferred that the institute library users as a whole were dominated by the young age category between 23-34 years and had low to medium professional experience of less than 20 years. The study showed that irrespective of gender, all respondents depend on publications as one of the main sources of ideas. A distinctive variation exists between men and women in the library reading habit and library borrowing habit. The study showed the preference of the readers for print media over electronic media. Many readers made remarks about lack of space and proper lighting, which will be taken care by the construction of the new building.

Annexure VII

Library Advisory Committee

Chairmen

Chairman	Period
Dr. K.V. Ahmed Bavappa	01.05.1970 - 22.01.1977
Dr. M.C. Nambiar	23.01.1977 - 17.07.1977
Dr. N.M. Nayar	18.07.1977 - 08.02.1982
Dr. K.V. Ahmed Bavappa	09.02.1982 - 31.03.1987
Dr. M.K. Nair	01.04.1987 - 31.08.1997
Dr. K.U.K. Nampoothiri	01.09.1997 - 31.12.2000
Dr. V. Rajagopal	01.01.2001 - continuing

Vice-Chairmen

Vice-Chairman	Period
Dr. R.D. Iyer	1976-1987
Mr. Jacob Mathew	1988-1991
Dr. V. Rajagopal	1992-1993
Dr. K.K.N Nambiar	1993-1998
Dr. V.A. Parthasarathy	1998-2002
Dr. George V. Thomas	2002-continuing

Annexure VIII

Planwise Funds and Expenditure for Library

Period	Non-plan	Plan
1992-1993	813,022	282,592
1993-1994	15,921	1,841,475
1994-1995	8,842	1,648,395
1995-1996	2,560	1,841,748
1996-1997	592,682	641,571
1997-1998	291,848	946,281
1998-1999	2,314	1,390,840
1999-2000	225,693	999,768
2000-2001	1,275,258	899,309
2001-2002	2,417,518	282,238
2002-2003	415,636	2,267,097

Annexure IX

List of Library staff since 1970 in different centres

Centre	Name	Designation	Period of Service	
			From	To
Kasaragod	Raghavendra Rao	Librarian	1970	1972
	Haveri R.R	Librarian	1977	1980
	Mamookoya	Librarian	1975	1976
	Kamalavijayan D	Librarian	1981	1993
	Ramesh Kumar M.P	Librarian	1983	Continuing
	Varadaraj V	Sr. Lib. Asst.	1980	1987
	Azghar Sherif	Sr. Lib. Asst.	1979	1981
	Mrs. Shobha K	Asst. Librarian	1988	continuing
	Mrs. Sushama Devi C.K.	Sr. Lib. Asst.	1985	2002
	Humayoon Kabir	Sr. Lib. Asst.	1984	1984
	Raghuram M	Sr. Lib. Asst.	1982	1984
	Aloka Saikia	Tech. Asst.	1983	1984
	Paniker K.K.R.	Clerk	1979	1981
	Jayaram Naik	Clerk	1983	1984
	Surendran P.K	Clerk	1983	1988
	Kunji Palu K	Clerk	1988	1990
	Premavally A	Clerk	1989	1989
	Visalakshi K.S	Clerk	1991	1992
	Manoharan Pillai P.G	Clerk	1990	1991
	Ramadas K	Clerk	1994	1998
	Narayan Naik	Clerk	1998	1998
	Kunhiraman M.V	Clerk	1994	1994
	Ramoola Pereira	Jr. Steno	1990	1992
	Ravindran K	Jr. Steno	1992	1993
	Narayanani K	Jr. Steno	1992	1995
	Gangayya A	Jr. Clerk	1994	1994
	Narayana Naik P	Jr. Clerk	1998	1998
	Prema Pillai	Jr. Clerk	1994	1998
	Seena Naik	Jr. Clerk	1983	1983
	Ahmed C.H	Lib. Attender	1970	1986
	Koraga K	Lib. Attender	1985	1986
	Krishnankutty K	Lib. Attender	1986	1987
	Krishnan K.P	Lib. Attender	1984	1987
			2002	Continuing
	Ambu P	Lib. Attender	1992	1998
	Nambiar M.P.G	Lib. Attender	1989	1989
	Damodaran B	Lib. Attender	1989	1989
	Kumaran K	Lib. Attender	1995	2002
	Chithralekha K	Lib. Attender	1990	1992
	Moosa Manikfan K.A.	Lib. Attender	1988	1992
	Purandara Shetty U	Lib. Attender	1988	1993
	Raman K.S	Lib. Attender	1993	1993
	Ratnakaran P.K	Lib. Attender	1992	1993
	Govindan Nair P.T	Lib. Attender	2000	Continuing
Kayangulam	Divakaran Pillai	Librarian	1970	1991
	Tajuddin S.	Tech. Officer	1990	Continuing
Vittal	Sheriff P.A.	Sr. Lib Asst.	1972	1976
	Haveri R. R.	Sr. Lib Asst.	1976	1978
	Ramakrishnan S.S.	Sr. Lib Asst.	1992	1993
	Ramachandra Reddy N	Librarian	1979	1983
	Tajuddin S.	Librarian	1980	1991
	Meenakshi Patil	Librarian	1993	Continuing



Dr. T. Madhan Mohan, Director, Bioninformatics Division, DBT releasing the CD-ROM Database on Coconut Biotechnology



CPCRI, Kasaragod



CPCRI Regional Station, Kayangulam



CPCRI Regional Station, Vittal

