

**UNIVERSITY OF HORTICULTURAL SCIENCES,
BAGALKOT, KARNATAKA**



**SELF STUDY REPORT FOR THE
M. Sc. HORTICULTURE IN ENTOMOLOGY
KRCCH, ARABHAVI, 2014-15 to 2018-19**

SUBMITTED TO
Indian Council of Agricultural Research,
Krishi Bhavan, New Delhi.

SUBMITTED BY
University of Horticultural Sciences,
Udyanagiri, Bagalkot – 587 104
Karnataka

PREFACE

India faced the challenge of providing food security to millions of its people soon after independence. The Research and Development initiatives taken by the Government of India resulted in the 'Green revolution' in the late 60s and early 70s. As a result of 'Green revolution', India has made significant achievement through production of 228 million tonnes of food grains and gained self-sufficiency. But considering the nutritional security, economic sustainability and high generation of employment, Horticulture sector plays an important role. Hence, it was only in mid-80s that the Government of India recognized the importance of Horticulture sector and thus greater emphasis was given on this. It is a means of diversification for making agriculture more profitable through efficient land use, optimum utilization of natural resources and creating skilled employment for rural masses. Horticulture has invariably improved the economic status of our farmers. It has also played a significant role in improving floriculture, plantation, spices, medicinal, aromatic industry, fruit and vegetable production and processing, production of quality seed and planting materials, encouraging hi-tech horticulture, contract farming, cooperative farming, participatory approach of production and marketing, etc. Thus, there is a growing awareness about the advantages of the horticultural crop production and this is bound to go up with the increase in socio-economic status of the people.

The R & D programmes in horticulture have received an impressive support from the Eighth Five Year Plan onwards. As a result, the research infrastructure has increased manifold with the setting up of a number of new institutes, national research centres in several crops, important both from domestic as well as export point of view. The establishment of educational institutions in the field of horticulture plays a pivotal role in developing human resource, which would cater to the needs of horticulture industry.

To cater the horticulture needs of the farmers of northern Karnataka and to develop the quality human resource in the field of horticulture, the **Kittur Rani Channamma College of Horticulture, Arabhavi** was established at Arabhavi on **31.08.1994** under the University of Agricultural Sciences, Dharwad, and is presently functioning under the University of Horticultural Sciences, Bagalkot. The college offers undergraduate, postgraduate and Ph.D. courses and has the admission capacity of 50 students for undergraduate, 30 students for Masters and 8 students for Ph.D.

degree programme annually excluding ICAR quota students. Students of this college have excelled not only in curriculum but also in extracurricular activities and national level competitive examinations and the college is making continuous efforts to improve the quality of education offered here. The ICAR has introduced the procedure of accreditation, which help in assessing facilities available to impart the quality education offered by the college. The college was accredited by ICAR Peer Review committee for a period of **five years**. After accreditation, the financial support of ICAR and State Government has greatly facilitated the growth and developmental activities of the college to a greater extent, as a result the quality of education has improved. Since the college is due for further accreditation, the present report provides all the necessary information about the college activities performed during **last eight years**.

The University Level Task Force and Steering Committee has been gratefully acknowledged for their help, guidance and suggestions given in preparing the report.

The college level Steering Committee and Task Force have done a great job in compiling information and bringing out this report to be submitted to Accreditation Board of ICAR. My heartfelt thanks to all those who are involved in preparation of this report.

K.R.C. College of Horticulture, Arabhavi
September-2018


(Nagesh H. Naik)

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6.4 SELF STUDY REPORT FOR M.Sc. HORTICULTURE IN ENTOMOLOGY AT KRCCH, ARABHAVI

6.4.1. Brief history of the degree programme

Evolution of the P.G. programme

Belgaum is a potential district to grow Horticultural crops. The pest's spectrum of above mentioned crops has been changed due to intensive management practices. As a result several insects and mite pests are attaining major pest's status. The yield loss caused due to insect pests is enormous and need to develop effective, economical and ecologically sound pest management practice. With this background, the Department of Entomology started M.Sc. (Hort.) in Horticulture Entomology degree programme during the year 2016-17.

Objectives

- Timely prediction and forecasting of important pests of Horticultural crops.
- Promotion of eco-friendly and sustainable pest management technologies.
- Validation and promotion of low cost, ITK (Indigenous technology knowledge), bio-rationales and botanical insecticides.
- Evaluation of newer molecules of insecticides.
- Consultancy services to farmers in person, phone and field visits.
- Development of Human resources to find out solutions to the major thrust areas.

6.4.2 FACULTY STRENGTH

Sl.No.	Cadre	S	F	V	Faculty recom. by ICAR	Deviations from ICAR recom.
1.	Assoc. Professor	1	1	-	1	-
3.	Asst. Professor	2	2*	-	2	-

* Working arrangement of one Asst. Professor is at COH Bagalkot

6.4.3 TECHNICAL AND SUPPORTING STAFF

SL NO	POST	2018					Remarks
		S	F	V	Recommended by UHS	Diversion from recommendation (Sanctioned)	
1.	Field Assistant	0	-	0	0	0	
2.	Lab Assistant	1	1	0	1	0	Field assistant is look after the lab work
3.	Messenger	1	1*	0	1	0	Messenger look after attainer work
4.	Farm Labour	1	-	1	1	1	-
	Total	3	2	1	3	2	-

*Contract Basis. S-Sanctioned, F-Filled, V-Vacant

6.4.4 CLASS ROOMS AND LABORATORIES

Class rooms

Sl.No.	Class room No.	Area	Seating capacity	Other facilities (LCD projector, Computer etc.)
1.				

Laboratories

Sl.No.	Name of the laboratory	Area	Seating capacity (No.)	Other facilities
1.	Biocontrol Laboratory	257.25 sq m	30	LCD projector,
2.	Entomology Laboratory	104.04 sq m	10	---

Major equipment

Sl.No.	Name of the equipment	Quantity
1.	Vertex orbital shaker	1
2.	Magnetic stirrer	1
3.	Water Bath	1
4.	Digital dry Bath	1
5.	Hot Air Oven	1
6.	Vacuum pump	1
7.	Upright Deep freezer	1
9.	Photomicrography system, with camera with coupler suitable	1
10.	Centrifuge 50-60HZ	1
11.	Laboratory working tables	1

Farm facilities

Sl.No.	Farm Area(Acre)	Irrigated/Non-Irrigated	Crops grown
1.	2	Both	Horticulture crops

Average Number of Students in Theory and Practical Classes

Postgraduate students as they are less in number are grouped into one theory batch and one practical batch. (Course works carried out at COH, Bagalkot)

Sl. No.	Name of the department	Theory Batch	Practical Batch
1.	Entomology	Full strength	Full strength

6.4.5 CONDUCT OF PRACTICAL AND HANDS ON TRAINING

Sl.No.	Course	Skills / Method of Hands on training
Nil	Nil	Nil

6.4.6 SUPERVISION OF STUDENTS IN PG PROGRAMME

Every student shall have Advisory Committee with a Major Advisor and at least four members among whom two members shall be from outside the major field of specialization. Programme of Research proposed by the Advisory Committee and approved by the Dean (Post Graduate Studies) will be carried out by the student under the supervision of Advisory Committee. Totally 4 M.Sc. students have passed out from the Department of Entomology, K.R.C College of Horticulture, Arabhavi from 2015 to 2018. Research work was carried out by students on Identification of local isolates of Entomopathogens and on IPM OF vegetable crops crops viz., Chilli and Cabbage

Sl. No.	No. of PG recognized teachers	Academic year	Intake of Students	Students Teachers
			M.Sc.	
1.	2	2013-14		
2.	2	2014-15	2*	1;1
3.	2	2015-16	-	
4.	2	2016-17	1**+2*	1;1
5.	1	2017-18	1**	1:1

*Admission of the students and course work at COH Bagalkot, research at KRCCH Arabhavi.

** Admission of the students and research work at KRCCH Arabhavi, however course work at COH Bagalkot.

6.4.7. FEEDBACK OF STAKEHOLDERS

(STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Feedback by the students

Sl. No.	Name	Year of completion	Important remarks/feed back
M.Sc. Passed out students			
1.	Ms. Saumya	2017	Good Lab facility to carry out research work.
2.	Ms.Rashmi	2017	Facility is good to carryout research under laboratory.
4.	Mr.Chethan G. B.	2017	Good Lab facility to carry out research work.
5.	Ms.Manasa C.	2018	Facility is good but needs to be strengthed.

6.4.8 STUDENT INTAKE AND ATTRITION

Academic year	Sanctioned seats	Actual intake	Attrition (No)	Attrition Percentage
		M.Sc.		
2013-14	-	-	-	-
2014-15	-	-		
2015-16	-	-		
2016-17	-	1*		
2017-18	-	1*		

* Admission of the students and research work at KRCCH Arabhavi, however course work at COH Bagalkot.

6.4.9 ICT APPLICATION IN CURRICULA DELIVERY

ICT enabled teaching-learning encompasses a variety of techniques, tools, content and resources aimed at improving the quality and efficiency of the teaching-learning process. At KRCCH Arabhavi for effective teaching and learning, teachers participate in selection and critical evaluation of digital content and resources. For this each individual staff allotted with high configured computer system and connected with high speed Internet facilities for sharing digital contents.

Below mentioned ICT facilities established in the college are being utilized for PG programme at Department of Biotechnology and crop improvement

S.No.	Name of Lab	Equipment	Usage
1.	ICT Enabled Class Room	1 PG Class room with Computer System and LCD Projector	For educational video, PPT, conferencing, teaching and learning
2.	PG -Computer Lab	16 HP Computers Systems	Statistical software programmes for research data analysis
3.	ICT Enabled Smart Boards	One Smart Board installed in PG class room	Teaching, Learning
4.	ICT Enabled Conference Hall	High Definition CISCO Camera System with High Speed Internet of 4 Mbps lease Line connectivity	For online interaction with University key officials by students and staff, online interaction with different subject experts in different streams

Library:- Digitalized college library:

KOHA, CeRA, e- books, e-Journals, Krishikosh

The KoHA (library management)

Open wear software is implemented to automate the library activities. The charging and discharging of documents is automated and e-mail reminder facility has been introduced.

CeRA and other online e-resources

CeRA is the ICAR Consortium of e-resources in Agriculture. This covers more than 3500 scholarly journals pertaining to the Agriculture and allied sciences which are available in full text.

e -books& e - journals

Library is having access to Springer e-books for the copy right years 2014-16, which covers nearly 1900 books in virtual format with full text availability and at a time 25 users can open an e-book. In addition library has access to 200 Indian e-books and also library having excess to e-journals for Hortsci and Journal of American society for Horticulture Science.

Krishikosh

Krishikosh is database of thesis submitted to the Agriculture universities and ICAR institutions. The UHS Library is a member for Krishikosh and all the thesis submitted to the UHS are being uploaded regularly.

Internet

The library is provided with separate internet link line with speed of 100mbps. There is a separate digital library section made in the library which is equipped with 05 computers with facility of internet connected to all computers. Web OPAC of Kittur Rani Channamma College of Horticulture, Arabhavi library is available in the net. EZ-proxy remote access server is installed in main campus library through which we are accessing the e-resources, CeRA, and Agristat.

Wi-fi facility

Wi-fi is available in the library premises. One can have net facility in the campus through IP based network. Through which students and faculty members can browse CeRA and e-resources of the library and college premises.

Different ICT Software's used by PG students at KRCCH Arabhavi


S. No	ICT Application	Usage
1.	Academic Management System Software	Online PG Student Admission, POW , POR, Thesis Submission, Qualifying Examination etc. Complete activities of Student, Staff, Academic section activities, automated in this software
2.	Horti App	Provide information about the horticulture trends, technologies and methods being used. HortiApp is a useful app in cultivation of all kinds of crops, where it gives detailed information of each crop.
3.	SYSTAT	Statistical Software for analysis of Statistical Data
4.	Window STAT	Statistical Software for analysis of Statistical Data
5.	HERBIQ	Windows Form Application that stores data in encrypted XML files to track the progress of plants, nutrient levels, environment, smoke effects, strain characteristics for breeding, etc. Output to single file with embedded images like a pdf file or some open format to show others
6.	English Digital Laboratory	16 HP P-IV Computer Systems for English Learning

6.4.12.

CERTIFICATE

I the Dean, Kitturu Rani Channamma College of Horticulture, Arabavi hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college and degree awarding university.

Date: March, 2019


Dean
K.R.C. College of Horticulture
Arabhavi-591218. Tq:Gokak