



**CENTRE OF ADVANCED FACULTY TRAINING
IN
HORTICULTURE (FRUITS)
DEPARTMENT OF HORTICULTURE,
MAHATMA PHULE KRISHI VIDYAPEETH,
RAHURI, AHMEDNAGAR**

Introduction :

The departmental activities started at the Main Central Campus, in 1972-73. The significant contribution made by Department of Horticulture in respect of education, research and extension is summarized in the abridged form hereunder.

I) EDUCATION

Horticulture Department imparts the post-graduate teaching to M.Sc. and Ph.D. students under semester system. This department have two well equipped laboratories, one Post Harvest Technology lab, one Seminar Hall, two Lecture Hall and one Tissue Culture Laboratory. At present 26 M.Sc. and 10 Ph.D. students are on roll. Till date 488 M. Sc and 65 Ph.D. students have completed their degree's. College of Horticulture, Pune with intake capacity of 32/year and Hitech Floriculture and Vegetable Project, Pune where Department is imparting Experiential Learning Programme at College of Agriculture, Pune, Dhule, Kolhapur. Various courses are taught by this Department. In this department 150 ha total area is under fruit crops i.e. mango, sapota, fig, custard apple, aonla, pomegranate, guava, kagzi lime, sweet orange, grapes germplasm of each and every fruit crop. This department is conducting research trials on meadow orchard and high density planting in guava. Nursery of this department propagate 8-10 lakh planting and provided more than 1 crore planting material to the farmers and other institutes. Mali Training Programme regularly conducted by Department of Horticulture to strengthen the manpower. One NAIP project is also in progress on tomato. Various AICRP schemes on different fruit crops are being implemented under this department where the major research work on production technology, post harvest management and processing is in progress. As well as various product testing trials on plant growth regulators, weedicides, fungicides and pesticides are also conducted in this department.

II. RESEARCH

The research activities are carried out in four major disciplines viz., Fruit Science, Vegetable Science, Floriculture at various research schemes.

There are seven ICAR funded schemes, six state funded schemes and 12 ad-hoc schemes have been completed and two schemes are ongoing.

Details of schemes are listed below:

ICAR

- AICRP on Citrus, Rahuri
- AICRP on Vegetables, Rahuri
- AICRP on Arid Zone Fruits, Rahuri
- AICRP on Grapes, Rahuri
- Breeders Seed Production (Vegetables), Rahuri

State

- Tomato Improvement Project, Rahuri
- Scheme for Research on Onion Storage, Rahuri

The facilities of above schemes as well as expertise from other departments like Genetics and Plant Breeding, Biochemistry, Agriculture Engineering are utilized for training in Centre of Advanced Faculty Training.

Objective of CAFT:

1. To strengthen the PG teaching and research activities by providing infrastructure facilities and scientific equipments.
2. To become national leader to elevate the standard of horticultural education in fruit crops.
3. To provide leadership at the national level in development of course curriculum design and development of the instructional material.
4. To develop human resources by imparting training to the teachers and scientists of various SAU's and ICAR institutes at national level on scientific advancement in fruit crops including hi-tech horticulture.
5. To organize national level training programmes for improving the competence of the faculty.
6. To bring out scientific (research)/technical publications from the CAFT funded project.
7. To strengthen the departmental library by purchasing new quality books.

Expert Faculty from CAFT Faculty : Name and designation (as on 30.09.2011):

The faculties from Department of Horticulture, MPKV, Rahuri working in Post Graduate Institute and various Under Graduate colleges as well as in different research Projects were utilized for CAFT.

Senior Faculties in Horticulture at Central Campus MPKV, Rahuri

Sr. No.	Senior Faculties	Designation	Specialization
1.	Dr. T. A. More	Hon. Vice Chancellor, MPKV., Rahuri	Vegetable/Fruit Science
2.	Dr. R. S. Patil	Associate Dean, PGI, MPKV., Rahuri	Vegetable/Fruit Science

Faculty Strength/Expertise in Horticulture at Central Campus MPKV, Rahuri

Sr. No.	Name	Designation	Specialization
1.	Dr. S.A. Ranpise	Head, Department of Horticulture	Fruit Science
2.	Dr. V. S. Supe	Horticulturist, AICRP on AZF	Fruit Science
3.	Dr. B. V. Garad	Horticulturist, AICRP on STF	Fruit Science

4.	Prof. D. D. Jagtap	Horticulturist, AICRP on Citrus	Fruit Science
5.	Dr. P. V. Patil	Associate Professor of Horticulture	Fruit Science
6.	Prof. B.V. Gondhali	Associate Professor of Horticulture	Fruit Science
7.	Dr. V. R. Joshi	Assistant Professor of Horticulture	Fruit Science
8.	Dr. S. S. Kulkarni	Assistant Professor of Horticulture	Fruit Science
9.	Prof. P. S. Pawar	Assistant Professor of Horticulture	Fruit Science
10.	Prof. Mrs. S.S. Dighe	Assistant Professor of Horticulture	Fruit Science
11.	Prof. R. V Patil	Assistant Professor of Horticulture	Fruit Science
12.	Prof. N. R. Dalal	Assistant Professor of Horticulture	Fruit Science
13.	Prof. H.K. Shirsath	Assistant Professor of Horticulture	Fruit Science
14.	Dr. A. M. Musmade	Professor of Horticulture	Vegetable Science
15.	Dr. M. N. Bhalekar	Sr. Vegetable Breeder, AICVIP on Vegetables	Vegetable Science
16.	Prof. R.M. Birade	Onion Breeder	Vegetable Science
17.	Dr. K. G. Kadam	Associate Professor of Horticulture	Vegetable Science
18.	Prof. B. T. Patil	Assistant Professor of Horticulture	Vegetable Science
19.	Dr. K. G. Shinde	Assistant Professor of Horticulture	Vegetable Science
20.	Prof. D. B. Kshirsagar	Assistant Professor of Horticulture	Vegetable Science

Faculty Strength/Expertise with their specialization in Horticulture at different Agril. Colleges and Research stations, MPKV, Rahuri

A) Professor of Horticulture

Sr. No.	Name of Scientist	Place	Specialization
1.	Dr. A.R. Karale	College of Horticulture, Pune	Fruit Science
2.	Dr. S.B. Gurav	National Agriculture Research Project, Ganeshkhind, Pune-5	Vegetable Science
3.	Dr. S.D. Masalkar	College of Horticulture, Pune	Post Harvest Technology

B) Associate Professor of Horticulture

Sr. No.	Name of Scientist	Place	Specialization
1.	Dr. S.N. Ambad	College of Agriculture, Pune	Floriculture
2.	Dr. P.B. Pachankar	College of Agriculture, Pune	Fruit science
3.	Dr. S.M. Katwate.	National Agriculture Research Project, Ganeshkhind, Pune-5	Floriculture
4.	Dr. B. Singh	National Agriculture Research Project, Ganeshkhind, Pune-5	Floriculture
5.	Dr. K.K. Mangave	College of Agriculture, Kolhapur	Fruit Science
6.	Dr. V.S. Patil	National Agriculture Research Project, Igatpuri	Fruit Science
7.	Dr. V.P. Pawar	Agriculture School, Digraj	Vegetable Science
8.	Dr. A.B. Kamble	Agriculture Research Station, Pimpalgaon	Fruit Science
9.	Dr. B.B. Dhakare	College of Agriculture, Dhule	Vegetable Science
10.	Dr. N.B. Shaikh	Banana Research Station, Jalgaon	Vegetable Science
11.	Dr. S.V. Sawant	National Agriculture Research Project, Digraj	Vegetable Science
12.	Dr. K.B. Jagtap	College of Horticulture, Pune	Post Harvest Technology
13.	Dr. M.T. Ingawale	National Agriculture Research Project, Kolhapur	Fruit Science
14.	Dr. C.V. Pujari	College of Agriculture, Dhule	Fruit Science
15.	Dr. S.G. Bhalekar	National Agriculture Research Project, Ganeshkhind, Pune-5	Vegetable Science
16.	Dr. M.B. Naikwadi	National Agriculture Research Project, Ganeshkhind, Pune-5	Vegetable Science
17.	Dr. D.R. Padgaonkar	National Agriculture Research Project, Igatpuri	Vegetable Science
18.	Dr. M.B. Shete	Agriculture School, Solapur	Fruit Science
19.	Dr. V.K. Garande	Agriculture School, Kolhapur	Post Harvest Technology

C) Assistant Professor of Horticulture

Sr. No.	Name of Scientist	Place	Specialization
1.	Dr. S.S. Dhumal	College of Agriculture, Kolhapur	Fruit Science
2.	Dr. U.S. Shinde	College of Agriculture, Kolhapur	Fruit Science
3.	Dr. J.H. Kadam	National Agriculture Research Project, Digraj	Fruit Science
4.	Dr. B.G. Pawar	National Agriculture Research	Fruit Science

		Project, Ganeshkhind, Pune	
5.	Dr. S.B. Jadhav	National Agriculture Research Project, Ganeshkhind, Pune	Fruit Science
6.	Dr. S.K Chavan	College of Horticulture, Pune	Floriculture
7.	Dr. B.B .Patil	College of Horticulture, Pune	Fruit Science
8.	Dr. M.R. Deshmukh	College of Agriculture, Pune	Floriculture
9.	Dr. M.S. Patil	College of Agriculture, Pune	Floriculture
10.	Mrs. Kadam M.	National Agriculture Research Project, Ganeshkhind, Pune	Fruit Science
11.	Dr. C.D. Badgujar	Banana Research Station, Jalgaon	Vegetable science
12.	Prof. B.B. Meher	National Agriculture Research Project, Ganeshkhind, Pune	Vegetable science
13.	Dr. J.K. Dhemere	Krishi Vigyan Kendra, Dhule	Fruit Science
14.	Prof .S.P. Gaikwad	National Agriculture Research Project, Ganeshkhind, Pune	Vegetable science
15.	Prof V.S. Bharmal	National Agriculture Research Project, Mahabaleshwar	Vegetable science

16.	Prof. D.B. Ahire	Agriculture Research Station, Pandharpur	Post Harvest Technology
17.	Prof. A..B. Bhosale	National Agriculture Research Project, Solapur	Vegetable science
18.	Dr. S.D. Patil	College of Agriculture, Dhule	Vegetable science
19.	Prof S.B. Desale	College of Agriculture, Dhule	Vegetable science
20.	Prof .S.K. Marbal	Agriculture Research Station, Lakhamapur	Vegetable science

Faculty members from the other supporting Department like Plant Pathology, Entomology, Botany, Economics etc from Central Campus, Mahatma Phule Krishi Vidyapeeth, Rahuri as per course, syllabus are invited for delivering lectures during training period.

Human Resource Development:

Particulars of Short Courses/Training programme for HRD conducted during XI plan period

Sr. No.	Name of the Program	Period	No. of Participants		
			Internal	External	Total
1.	Advances in Arid Zone Fruit Culture	21.12.2006 to 10.1.2007	02	13	15
2.	i) Advances in Fruit Breeding	27.11.2007 to 17.12.2007	02	10	12
3.	ii) Organic Farming in Hort. Crops	28.2.2008 to 19.3.2008	02	17	19

4.	Hi-tech Horticulture in relation to Fruit Production	16.9.2008 to 6.10.2008	01	22	23
5.	Advances in Post-harvest Management and Value Addition of Horticultural Crops	2.3.2010 to 22.3.2010	05	09	14
6.	Challenges in Fruit Crops	5.1.2011 to 25.1.2011	02	19	21
7.	Biotic and Abiotic Stress Management in Fruit Crops	21.9.2011 to 11.10.2011	02	14	16
	Total		16	104	120

Infrastructure development (equipments etc.):

Following equipments purchased during Xth plan from Rs. 100 crores Institute of Excellence Award

Sr. No.	Particulars	Amount (Actual)
Year 2008-09		
1.	Automatic leaf area metre	5,70,559.00
2.	Plant Canopy analyzer	3,96,302.00
3.	Laboratory Spray Drier (PHT)	6,15,600.00
4.	Vacuum Packing Machine (PHT)	1,30,000.00
5.	Citizen Digital Electronic Balance	33,075.00
6.	Digital Flame Photometer Elico Model CL-22D	34,110.00
7.	Spectrophotometer Model 722	49,690.00
8.	Sarotrius Moisture Analyzer	1,60,000.00
9.	Farmyard Fungicides/Insecticide (Vegetable)	34,975.00
10.	Inter Write Pad	58,000.00
11	Elmol In Digital Visualiser, Carring Case for Visualiser, Mitsubishi Multimedia DLP Projector XD 22IU	1,17,095.00
		21,99,406.00
Year 2009-2010		
12.	Liquid Pouch Filling Machine, Sevena Liquid Packaging Machine (PHT)	41,300.00
13.	Grinding Mill (PHT)	26,840.00
14.	Dryer Electrical (PHT)	48,089.00
15.	M.S. Pipe (781 Kg)	44,673.00
16.	Labout Charges 5x8 Angle Frame (6 Nos.)	39,000.00
17.	Water Bath	29,250.00
18.	Refractometer Digital Handle	45,720.00

19.	pH meter's an pH Electrodes	27,440.00
20.	Nitrogen (Proteins) Determination (Kjeldahl method)	4,03,287.00
21.	UPS AP make 1 KVA Quick Heal Antivirus Software (3 years)	19,100.00
22.	Computer	71,458.00
23.	Automatic Weather Station (Grape)	3,90,500.00
24.	Global Positioning System (Grape)	14,800.00
25.	Rotavator (Vegetable)	75,000.00
26.	Tractor New Holand (Vegetable)	5,06,984.00
27.	Tractor Drawn Plough (Vegetable)	28,000.00
28.	Cultivator (Vegetable)	19,000.00
29.	Ridger (Vegetable)	26,650.00
30.	PVC pipe (Vegetable)	1,99,665.00
31.	New Holand Tractor (AFS)	5,06,984.00
32.	Ridger (AFS)	26,650.00
33.	Cultivator (AFS)	19,000.00
34.	Nangar (AFS)	33,000.00
35.	Water Tanker (AFS)	1,15,000.00
36.	Rotavator (AFS)	75,000.00
		28,32,390.00
		50,31,796.00

Renovation of Lecture Room/Laboratories:

During XI plan one M.Sc. (Hort) laboratory renovated costing Rs. 2,97,130/- and Seminar Hall Renovation costing Rs. 5,89,084/-, Classrooms renovated through departmental funds.

Library upgraded:

Books purchased : More than **three hundred books** comprising text books, reference books from horticulture as well as from supporting departments and fifteen different journals amounting to Rs. 3,03,244 (Rs. Three lakhs three thousand two hundred and forty four only) were purchased from funds received from CAFT in Horticulture (Fruits) and kept in department library for PG students as well as Faculty.

Awards/Recognitions: Nil

Publication*

- **International Journal**

1. **Musmade A.M.**, Jagtap D.D. and Pujari C.V. Effect of different spacing on growth, yield, quality and relation to citrus canker of acid lime *Assian J. Hort* Vol. 1(2)2007 pp. 87-89.
2. **Musmade A.M.**, Jagtap D.D. and Pujari C.V. "Marmalade Organic" A promising root stocks for Mosambi *Assian J. Hort* Vol. 1(2)2007 pp. 50-53.
3. Torkadi S.S., **Musmade A.M.** and Mangave K.K. Genetic variability studies in Muskmelin (*Cucumis melo* L.) *J. Soils and Crops* Vol. 17(2) 2007, pp. 308-31
4. Mulani T.G., **Musmade A.M.**, Kadu, P.P. and Mangave K.K. Effect of organic manures and biofertilizres on growth, yield and quality of bitter gourd (*Memordica charantia* L) cv. Phule Green Gold. *Soils and Crops* Vol. 17(2) 2007, pp. 258-261.

5. Marbhal S.K., **Musmade, A.M.**, Supe, V.S. and Patil S.D. Effect of organic manures and biofertilizers on growth, yield and quality of bitter gourd (*Momordica charantia* L) cv. Phule Green Gold. *Internat J. agric.sci.* Vol.4(2) 2008 pp. 565-568.
6. Suman Bala, **P. V. Patil** and J. H. Kadam. 2010. Effect of Plant densities and Levels of Nitrogen on Yield of Larkspur. *J. Maharashtra agric. Univ.* **35**(2): 198-202.
7. R.D. Pawar, **P.V. Patil** and S.D. Magar. 2011. Influence of plant growth retardant on flower quality and yield in marigold (*Tagetes terecta* L.) *Eco.Env. & Cons.* 17(1):107-110.
8. R.D. Pawar, **P.V. Patil**, S.D. Magar and S. K. Chavan. 2011. Effect of Maleic Hydrazide, Cycocel and SADH (Alar) on Growth and Flower Quality in Marigold (*Tagetes erecta*). *J. Agric. Res. Technol.*, 36(1):170-172.
9. Gohil S. N., **R. V. Patil**, V. B. Jadhav, S. V. Bulbule and D.D. Jagtap (2007). Performance study of selections in sweet orange for ready to serve beverage. *J. of Eco. Env. & Cons.* 13 (3): 525-527.
10. Gohil S. N., **R. V. Patil**, V. B. Jadhav, S. V. Bulbule, C.S.Thakre and B.T. Gaikwad (2007). Study of varietal performance in sweet orange for ready to serve beverage. *J. of Eco. Env. & Cons.* 13 (3): 543-545.
11. Gohil S. N., **R. V. Patil**, V. B. Jadhav, S. V. Bulbule, D. D.Jagtap and B.T. Gaikwad (2007). Performance study of Exotic cultivars in sweet orange for ready to serve beverage. *J. of Eco. Env. & Cons.* 13 (3): 571-573.
12. Gohil S. N., **R. V. Patil**, V. B. Jadhav, and B.T. Gaikwad (2007). Survey study of Acid lime orchards for leaf nutrient status. *J. of Eco. Env. & Cons.* 13 (3): 585-587.
13. Gohil S. N., **R. V. Patil**, V. B. Jadhav, and B.T. Gaikwad (2007). Survey of Sweet orange orchards for leaf nutrient status. *J. of Eco. Env. & Cons.* 13 (3): 601-603.
14. Bulbule S. V., S. N. Gohil, C.S.Thakre, **R. V. Patil**, V. B. Jadhav, and D.D. Jagtap (2007). Studies on integrated management of canker in acid lime. *J. of Eco. Env. & Cons.* 13 (3): 637-640.
15. Gohil S. N., C.S.Thakre, N.R.Dalal and **R. V. Patil** (2007). Seasonal budding performance of Sweet orange (*Citrus sinensis* Osbeck) on Rangpur lime (*Citrus limonia*). *J. of Eco. Env. & Cons.* 13 (3): 673-675.
16. **Patil R.V.**, S. V. Kolase and K. G. Kadam (2007). Effect of micronutrients on seed production in okra. *J. of Eco. Env. & Cons.* 13 (4) : 829-830.
17. **Patil R.V.**, K. G. Kadam and S. V. Kolase (2007). Effect of plant growth regulators on seed yield and quality of Okra(*Abelmoschus esculantus*). *J. of Eco. Env. & Cons.* 13 (4) : 841-842.
18. Ingale K.D., C. K. Dixit, **R. V. Patil** and N. Y. Wakchaure (2008). Effect of Plant Growth Regulators on Fruit set and Yield of Sapota cv. Kallipatti. *Journal of Maharashtra Agricultural Universities* 33 (1): 007-009.
19. Gohil S.N., B.T.Gaikwad, S.V.Bulbule, V.B.Jadhav, **R.V.Patil** and D.D.Jagtap (2008). Study of growth, yield and quality parameters in Sweet orange cultivars. *J. of Eco. Env. & Cons.* 14 (2-3): 489-493.
20. **Patil R.V.** and S. A. Hirey (2008). Effect of Plant growth regulators on keeping quality and longevity of Golden rod (*Solidago Candensis* L.) panicles. *Bioinfolet* 5 (4) : 428-429, 2008.

21. **Patil R.V.**, A. B. Bhosale and R. L. Takte (2010). Effect of drip irrigation and fertigation levels on growth and yield of Gerbera under greenhouse conditions. *J. of Eco. Env. & Cons.* 16 (2): 235-237.
22. Wakchaure N. Y., B.K.Dhaduk **R. V. Patil**, and K.D Ingale. (2008). Effect of Growth Regulators on Yield and Quality of Golden rod (*Solidago Canadensis*). *Journal of Maharashtra Agricultural Universities* 33 (1): 110-111.
23. Wakchaure N. Y., B.K.Dhaduk **R. V. Patil**, and K.D Ingale.(2008). Effect of Growth Regulators on Growth and Sucker Production of Golden rod (*Solidago Canadensis*). *Journal of Maharashtra Agricultural Universities* 33 (1): 113-114.
24. **Patil R.V.**, S. V. Kolase and K. G. Kadam (2007). Effect of micronutrients on seed production in Brinjal (*Solanum melongena*). *J. of Eco. Env. & Cons.* 13 (4) : 835-836.
25. Gohil, S.N., R.V.Patil, **D.D.Jagtap**, V.B. Jadhav, and S.V. Bulbule. 2007. Performance study on physico-chemical parameters in exotic cultivars of sweet orange (*Citrus sinensis* L. Osbeck) under sub-arid zone of Maharashtra. *Eco. Env. & Cons.*13 (1) : 27-30.
26. Bulbule S.V., Gohil, S.N., V.B. Jadhav, **D.D.Jagtap**, and R.V.Patil. 2007. influence of fungicides and wax treatments on post-harvest storage in sweet orange. *Eco. Env. & Cons.*13 (1) : 37-40.
27. Gohil, S.N., R.V.Patil, **D.D.Jagtap**, V.B. Jadhav, and S.V. Bulbule. 2007. Performance study of improved kagzi lime cultivars (*Citrus aurantifolia* Swingle) under sub-arid zone of Maharashtra. *Eco. Env. & Cons.*13 (1) : 51-52.
28. Gohil, S.N., **D.D.Jagtap**, R.V.Patil, V.B. Jadhav, and S.V. Bulbule. 2007. Study on physico-chemical parameters of sweet orange cultivars (*Citrus sinensis* L. Osbeck) under sub-arid zone of Maharashtra. *Eco. Env. & Cons.*13 (1) : 63-66.
29. Gohil, S.N., R.V.Patil, U.S. Tiwari, **D.D.Jagtap**, V.B. Jadhav, and S.V. Bulbule. 2007. Use of bio-fertilizers to improve yield and quality in sweet orange (*Citrus sinensis* L. Osbeck) under sub-arid zone of Maharashtra. *Eco. Env. & Cons.*13 (1) : 93-95.
30. Gohil, S.N., R.V.Patil, V.B. Jadhav , S.V. Bulbule. and B.T. Gaikwad. 2007. Performance study of selections in Sweet orange for ready to serve beverage. *J. of Eco. Env. & Cons.*13(3) : 15-16.
31. **Gohil, S.N.**, R.V.Patil, V.B. Jadhav , S.V. Bulbule. and C.S. Thakare. 2007. Study of varietal performance in sweet orange for RTS. *J. of Eco. Env. & Cons.*13(3) : 19-21.
32. Gohil, S.N., R.V.Patil, V.B. Jadhav , S.V. Bulbule and **D.D. Jagtap**. 2007. Performance study of exotic cvs. in sweet orange for RTS. *J. of Eco. Env. & Cons.*13(3) : 26-28.
33. **Gohil, S.N.**, R.V.Patil, V.B. Jadhav , S.V. Bulbule and B.T. Gaikwad. 2007. Survey study of Acid lime orchards for leaf nutrient status. *J. of Eco. Env. & Cons.*13(3) : 29-31.
34. **Gohil, S.N.**, R.V.Patil, V.B. Jadhav , S.V. Bulbule and B.T. Gaikwad. 2007. Survey study of Sweet Orange orchards for leaf nutrient status. *J. of Eco. Env. & Cons.*13(3) : 32-34.
35. **Bulbule S.V.** Gohil, S.N., C.S.Thakare, R.V.Patil, V.B. Jadhav and B.T. Gaikwad. 2007. Studies on integrated management of canker in acid lime. *J. of Eco. Env. & Cons.*13(3) : 40-41.

36. **Gohil, S.N.**, C.S. Thakare, N.R. Dalal and R.V.Patil, 2007. Seasonal budding performance of sweet orange (*Citrus sinensis* Osbeck) on Rangpur lime (*Citrus limonia*) J. of Eco. Env. & Cons.13(3) : 44-46.
37. Gohil, S.N., B.T. Gaikwad, **D.D.Jagtap**, S.V. Bulbule, and V.B. Jadhav. 2008. Effect of organic farming on growth, yield and quality in sweet orange under Western Maharashtra conditions. Eco. Env. & Cons.14 (1) : 123-127.
38. Gohil, S.N., B.T. Gaikwad, **D.D.Jagtap**, S.V. Bulbule, V.B. Jadhav and R.V.Patil. 2008. Standardization of time for irrigation under drip method to conduct Ambia bahar in sweet orange for Western Maharashtra. Eco. Env. & Cons.14 (1) : 139-141.
39. Gohil, S.N., B.T. Gaikwad, **D.D.Jagtap**, R.V.Patil and S.V. Bulbule. 2008. Effect of biofertilizers on growth, yield and quality of acid lime in Western Maharashtra. Eco. Env. & Cons.14 (1) : 151-153.
40. Gohil, S.N., Gaikwad, B.T., **Jagtap, D.D.**, Bulbule, S.V. and V.B. Jadhav. 2008. Effect of organic farming on growth, yield and quality in sweet orange under Western Maharashtra conditions. Eco. Env. & Cons. 14(1): 123-127.
41. Gohil, S.N., Gaikwad, B.T., **Jagtap, D.D.**, Bulbule, S.V., Jadhav, V.B. and R.V. Patil. 2008. Standardization of time for irrigation under drip method to conduct Ambia bahar in sweet orange for Western Maharashtra conditions. Eco. Env. & Cons. 14(1): 139-141.
42. Gohil, S.N., Gaikwad, B.T., **Jagtap, D.D.**, Patil, R.V. and S.V. Bulbule. 2008. Effect of biofertilizers on growth, yield and quality of acid lime in Western Maharashtra. Eco. Env. & Cons. 14(1): 151-153.
43. **Bulbule. S.V.**, Gohil, S.N., Patil, R.V. and B.T.Gaikwad. 2008. Environmental factors on the incidence of twing blight in sweet orange. Eco. Env. & Cons. 14(1): 187-189.
44. **Jagtap, A..D.**, Jagtap, D.D., Kadam, A.S. and S.B. Patil. 2009. Effect of different sources of nitrogen on yield and quality of cabbage (*Brassica oleracea* var. Capitata). Eco. Env. & Cons. 15 (2): 223-227.
45. **Jagtap, A..D.**, Kadam, A.S. Jagtap, D.D., and S.B. Patil. 2009. Effect of organic manures and chemical fertilizers on growth, yield and economics of cabbage. J. Mah. Agri. Univ. 34 (3): 278-281.
46. Dalal, N.R., **Gohil, S.N.**, Shaikh, N.B and B.T Gaikwad.2009. Standardization of time for N and K fertilizer application in sweet orange. The Asian J.Horticulture .4(1):116-117.
47. **Dalal, N.R.** and S.N Gohil.,2009. Study of intercropping in sweet orange. The Asian J. Horticulture .4(1):219-220.
48. B.B. Ahire, **S.S. Kulkarni** and R.D. Satbhai 2010. Studies on extraction, packaging and storage of pomegranate (*Punica granatum L*) Juice 2010. Beverage and Food World, 31(1) PP 66-68.
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Training Manual

Following five training manuals published from CAFT:

1	Advances in Arid Zone Fruit Culture	2007
2	Organic farming in Horticulture	2008
3	High Tech Horticulture in Relation to Fruit Production	2008
4	Advances in Post Harvest Management and Value Addition of Horticultural Crops	2010
5	Challenges in Fruits Crops	2011

Following books were purchased from CAFT grants during XI Plan:

Sr. No.	Author	Title	Copies
1.	Allard	Principles of Plant Breeding	01
2.	Bose	Vegetable Crops Volume I	01
3.	Bose	Vegetable Crops Volume II	01
4.	Bose	Vegetable Crops Volume III	01
5.	Chaddha	Advances in Horticulture Volume I	01
6.	Arya singh	Vegetable Crops: Breeding & Seed Production	01
7.	Kaloo	Vegetable Breeding Volume I	01
8.	Kaloo	Vegetable Breeding Volume II	01
9.	Palaniappa	Organic Farming Theory and Practice	01
10.	Raj	Heterosis Breeding in Vegetable Crops	01
11.	Rajan	Propagation of Horticultural Crops	01
12.	Singh	Modern Vegetable Varieties & Production Technology	01
13.	Singh	Seed Production of Commercial vegetables	01

14.	Srivastava	Fruit & Vegetable Preservation Princi. & Prctices.	01
15.	Tiwari	Green House Technology for Controlled Enviroment	01
16.	Tiwari	Green House Technology for Controlled Enviroment	01
17.	Verma	Post-Harvest Technology of Fruits & Vegetables Volume-I	01
18.	Verma	Post-Harvest Technology of Fruits & Vegetables Volume-II	01
19.	Bose	Fruits of India-Tropical & Subtropical Volume-I	01
20.	Bose	Fruits of India-Tropical & Subtropical Volume-II	01
21.	Maitra	Temperate Fruits	01
22.	Bose	Propagation of Tropical & Sub. Horticultural Crops Volume-I	01
23.	Bose	Tropical Horticulture Volume-I	01
24.	Hartmann	Plant Propagation with CD	01
25.	Sharma	Systematics of Fruit Crops	01

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Book Chapters

M. T. Patil and P. V. Patil (2007) Green House cultivation of Rose Hi-Tech Floriculture, pp : 56 - 65



Sr. No.	Head	Year									
		2006-07		2007-08		2008-09		2009-10		2010-11	
		Allocation (Rs.in lakhs)	Utilization (Rs.)	Allocation (Rs.in lakhs)	Utilization (Rs.)	Allocation (Rs.in lakhs)	Utilization (Rs.)	Allocation (Rs.in lakhs)	Utilization (Rs.)	Allocation (Rs.in lakhs)	Utilization (Rs.)
1.	Organizing one/two training courses	3.54	1,27,039	3.54	2,33,388	3.54	1,47,440	1.71	1,08,641	3.75	2,92,770
2.	Renovation of laboratory	-	-	-	-	-	-	-	-	-	-
3.	Recurring contingency	1.20	1,09,019	2.00	1,77,461	2.00	2,36,786	1.50	1,43,261	2.00	1,93,724
4.	TA/DA of staff	0.30	-	100	-	1.00	-	0.30	-	0.30	-
5.	Books/Journals	0.30	29,070	0.50	49,913	0.50	49,,639	0.30	2,99,77	0.30	29,853
6.	Non-recurring contingency	-	-	-	-	-	-	-	-	-	-
	Total	5.34	2,65,128	7.04	4,60,762	7.04	4,33,866	3.81	2,81,879	6.35	5,16,347