

National Horticulture Mission
HRD Special Project

TRAINING PROGRAMMES
FOR FARMERS IN MAHARASHTRA

KONKAN

2007-08

Prepared by ;

Dr. P.O. Ingle

V. S. Kolekar

Dr. P.S. Joshi

Special Task Group, Farmers Training Programme

Submitted to ;

Managing Director

Maharashtra State Horticulture & Medicinal Plant
Board, Pune

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✚ Prepared by Special Task Group
Dr. P. O. Ingle, Consultant NHM, Amaravati-Chairman
Shri. Vijay Kolekar, I/C Insecticide Residue Testing Laboratory, Pune
Shri. P. S. Joshi, Technical Officer, DSAO Jalana

For Maharashtra State Horticulture and Medicinal Plants Board,
Government Of Maharashtra,
Sakhar Sankul, Shivajinagar, Pune-411005

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General Operational Guidelines for Execution of the Training Programme

1. A separate calendar of work for one, two and three days as shown in a sample copy appended herewith at Appendix I be prepared
2. 70 % time be allotted to practicals, field visits, demonstration and hand on exercises, and 30 % time for theory and other work. While preparing calendar of work this should be strictly followed.
3. Reading material & calendar of work should be distributed to the trainees at the time of their registration for training.
4. Flexibility should be only towards unforeseen situations and exigencies
5. Pre and post evaluation of trainees about knowledge, skill & attitude should be done without fail. The schedules for the same are appended herewith at App. II
6. Suggestive list of some resource persons is attached herewith however before each training confirmation about availability of resource person be done.
7. Arrangement of training resources be made in advance. e.g. Demonstration material, Practical kits, inputs etc.
8. All concerned DSAOs are to prepare estimates of trainings and to select the trainees from the beneficiaries of NHM.
9. Independent officer nominated by the MSH & MP Board for each district shall do monitoring of ongoing trainings. Also provision of third party monitoring has to be made by the Board.
10. Each Batch of trainees should be of 30 NHM beneficiaries related to a particular technology.

➤ *Full form of Course Code : e.g. RGDMT-04*

- First group of 3 letters- Abbreviation for District e.g. RGD for Raigad
- Second group of 1 or 2 letters- Abbreviation for Crop/ technology e.g. M for Mango, GH for Green House
- Last letter is T - for Training
- Number shows sequential course number for a crop or technology e.g. 04- Forth course of Mango

Acknowledgment

National Horticulture Mission Programme has unique importance for horticulture development in Konkan. Low and fragmented land holding, poor irrigation facilities, poor dissemination of post harvest management technology and inadequate marketing infrastructure are few of the causes for low productivity of horticulture crops in Konkan. However NHM has helped in boosting the adoption of improved cultivation and management practices for major fruit crops like Mango, Cashew, Sapota and Spices , vegetables and flower crops in recent years with a huge financial provision of Rs. 1574 Lakh. Still there is a long way to go in educating the potential farmers about improved & high-tech Horticulture so that it becomes truly remunerative. The proportion of small and marginal farmers and dependent on rainfed farming is very large. To motivate the farmers for adoption of proven horticulture technologies is major task before the extension functionary. Hence for empowering farmers through change in knowledge, skill and attitude towards NHM programmes is considered necessary. This document is an outcome of this need to facilitate the farmers in Konkan region for sustainable horticultural development.

We are happy to submit the need based crop wise training plans & designs for 4 districts of Konkan viz. Sindhudurg, Ratnagiri, Raigad and Thane with the document of Farmer's Field School on Mango for Konkan farmers. We feel grateful to Shri Nanasaheb Patil, Principal Secretary (Agriculture) MS for giving this opportunity to us. His inspiration and ideas helped us tremendously in preparing these need based training programmes. We express our heartfull thanks to Shri B.V.Gopal Reddy, MD, MSH & MP Board Pune for his regular guidance, persuasion, constructive criticism and financial assistance for this assignment. We are thankful for important suggestions & comments given by Dr. Krishna Lavekar, Commissioner of Agriculture M.S. which were very useful in preparing these training plans. The help rendered in assessment of training needs & subsequent planning by all JDAs, DSAOs, SDAOs, TAOs, progressive farmers, NGOs and SAU & NRC Citrus scientists is hereby acknowledged. Hope their wholehearted co-operation and involvement in execution of proposed training programmes will be showing a new way to Konkan farmers to adopt horticulture as a remunerative enterprise, with the support of NHM.

Dr. P.O. Ingle
V. S. Kolekar
Dr.P.S. Joshi
Special Task Group

Preamble

A comprehensive programme of human Resource Development was needed for the motivation of farmers for accelerating adoption of various technologies being promoted by the National Horticulture Mission. In order to bring proficiency in beneficiary farmers and to insure in them, desirable change in knowledge skill and Attitude for growing Horticulture Crops, training programme have been planned & designed by the Task Group specially constituted for this purpose.

The districtwise and cropwise training programme have been planned for 29 NHM districts in Maharashtra. The fruit crops covered are Orange, Mango, Kagzi lime, Sweet Orange, Cashew, Pomogranate, Sapota, Grapes, Guava, Aonla, Custard Apple, Banana and Strawberry. Flowers and vegetable seed production has also been covered. These training programmes also cover the special activities of NHM namely Pack house, Protected Cultivation in green and Polyhouses and community tanks.

Districtwise situation Specific Training Need Assessment (TNA) was done for each crop. For this purpose SRFP reports of all districts were reviewed initially. However, for confirmation of training needs discussion meetings with officers of Dept. of Agriculture Progressive farmers, farmers' representatives, and scientist were held.

On the basis of training needs specific objectives of each training programmes have been decided. The priority of each training was decided on the basis of its importance & urgency. Course curriculum and plan of work was then prepared. Care has been taken to include agenda practicals, demonstrations, hands on exercises to ensure change in undertaking and skill of the trainees. To ensure effectiveness of training programmes duration ranging from 1 to 3 days depending upon the course content of respective programme has been fixed.

For execution of these training programme it is expected that Master Trainers from the department of Agriculture will be useful however a comprehensive list of SMS & Scientists resource persons from SAUs has been appended.

In addition to these training programmes looking to the importance & hectarage of major fruit crop Farmer's Field Schools have been designed separately. The fruit crops selected for this purpose are Orange, Pomogranate, Mango and Sweet Orange. FFS is a season long (one year) on field participatory training programme. This comprehensive multistage & yearlong training programme will therefore be useful to attain the NHM objectives in future.

Considering the needs about development of Horticultural crops in Konkan region and empowerment of farmers districtwise and crop wise training plans have been prepared. In all, 106 courses for Thane, Raigad, Ratnagiri and Sindhudurg districts are proposed. The crops covered are Mango, Sapota, Cashew, Flowers, Vegetables, Spices and the special activities namely Community tanks, Green house and Packhouse. Priorities for different training courses have been given. A sample copy of the calendar of work is appended at Appendix I, which may be used as a guideline.

The individual farmers, Farmers Interest Groups, SHGs , NGOs & other beneficiaries should come forward to take advantage of this programme.

Proposed Farmers Training Programmes Under NHM For Konkan

Region

Division: Thane

1. Sindhudurg

A. Mango

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	SINMT-01	Integrated Nutrient Management in Mango	One	I
2	SINMT-02	Integrated Pest management in Mango	One	II
3	SINMT-03	Canopy Management in Mango	One	III
4	SINMT-04	Inflorescence Management in Mango	One	IV
5	SINMT-05	Export Management in Mango	One	V
6	SINMT-06	Management of Spongy Tissue in Mango	One	VI
7	SINMT-07	Rejuvenation of old mango trees		VII
8	SINMT-08	Pre and Post harvest Management of fruit	One	VIII
9	SINMT-09	Organic Mango Production	One	-
10	SINMT-10	High density plantation in Mango	One	-
11	SINMT-11	Use of <i>Jalkund</i> technology & water management in mango	One	-
12	SINMT-12	Value addition in Mango	One	-
13	SINMT-13	EUREPGAP certification in Mango	One	-

B. Cashew

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
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1	SINCT-01	Contour plantation of Cashew	One	I
2	SINCT-02	Rejuvenation of senile Cashew trees	One	II
3	SINCT-03	Integrated Pest Management in Cashew	One	II
4	SINCT-04	Jalkunda Technology for Cashew	One	III
5	SINCT-05	Cashewnut processing technology	One	IV
6	SINCT-08	Organic Cashew Production	One	-
7	SINCT-09	Cashew apple processing technology	One	-

C. Spices

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	SINCTT-01	Package of Practices for Black Pepper	One	I
2	SINGHT-02	Processing of Spices	Two	II

D. Banana

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	SINBT-01	Cultivation Practices for Banana	One	I
2	SINBT-02	Pre & post harvesting management of Banana	One	II

E. Floriculture in Greenhouse

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	SINFGT-02	Flower cultivation in greenhouse	One	I
2	SINFGT-01	Post harvest management of flowers	One	I

E. Special Activities

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	SINCTT-01	Establishment of Community Tanks	One	I
2	SINGHT-01	Construction & Management of Green House	Two	I
3	SINPHT-01	Establishment of Pack House	One	I

2. Ratnagiri

A. Mango

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RTNMT-01	Integrated Nutrient Management in Mango	One	I
2	RTNMT-02	Integrated Pest management in Mango	One	II
3	RTNMT-03	Canopy Management in Mango	One	III
4	RTNMT-04	Inflorescence Management in Mango	One	IV
5	RTNMT-05	Export Management in Mango	One	V
6	RTNMT-06	Management of Spongy Tissue in Mango	One	VI
7	RTNMT-07	Rejuvenation of old mango trees		VII
8	RTNMT-08	Pre and Post harvest Management of fruit	One	VIII
9	RTNMT-09	Organic Mango Production	One	-
10	RTNMT-10	Use of <i>Jalkund</i> technology & water management in mango	One	IX
11	RTNMT-11	High density plantation in Mango	One	-
12	RTNMT-12	Value addition in Mango	One	-
13	RTNMT-13	EUREPGAP certification in Mango	One	-

B. Cashew

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RTNCT-01	Contour plantation of Cashew	One	I
2	RTNCT-02	Rejuvenation of Cashew trees	One	II
3	RTNCT-03	Integrated Pest Management in Cashew	One	II
4	RTNCT-04	Jalkunda Technology for Cashew	One	III
5	RTNCT-05	Cashewnut processing technology	One	IV
6	RTNCT-08	Cashew apple processing technology	One	-

C. Spices

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RTNGHT-02	Package of Practices for Black Pepper	Two	I
2	RTNPHT-03	Processing of Spices	One	I

D. Banana

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
3	RTNBT-01	Cultivation Practices for Banana	One	I
4	RTNBT-02	Pre & post harvesting management of Banana	One	II

E. Floriculture in Greenhouse

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
3	RTNFGT-02	Flower cultivation in greenhouse	One	I
4	RTNFGT-01	Post harvest management of flowers	One	I

E. Special Activities

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RTNCTT-01	Establishment of Community Tanks	One	I
2	RTNGHT-01	Construction & Management of Green House	Two	I
3	RTNPHT-01	Establishment of Pack House	One	I

3. Raigad

A. Mango

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RGDMT-01	Integrated Nutrient Management in Mango	One	I
2	RGDMT-02	Integrated Pest management in Mango	One	II
3	RGDMT-03	Canopy Management in Mango	One	III
4	RGDMT-04	Inflorescence Management in Mango	One	IV
5	RGDMT-05	Management of Spongy Tissue in Mango	One	V
6	RGDMT-06	Pre and Post harvest Management of fruit	One	VI
7	RGDMT-07	Value addition in Mango	One	VII

B. Cashew

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RGDCT-01	Contour plantation of Cashew	One	I
2	RGDCT-02	Rejuvenation of Cashew trees	One	II
3	RGDCT-03	Integrated Pest Management in Cashew	One	II
4	RGDCT-04	Jalkunda Technology for Cashew	One	III

5	RGDCT-05	Cashewnut processing technology	One	IV
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C. Spices

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RGDCTT-01	Package of Practices for Nutmeg	One	I
2	RGDGHT-02	Package of Practices for Black Pepper	Two	I
3	RGDPHT-03	Processing of Spices	One	I

D. Vegetables

SR. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RGDVT-01	Package of Practices for production of Okra, Wal & Tomato	One	I
2	RGDVT-02	Post harvest management of vegetables	One	II

E. Jasmine

SR. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RGDFT-01	Package of Practices for production of Jasmine	One	I

F. Special Activities

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	RGDCTT-01	Establishment of Community Tanks	One	I
2	RGDGHT-01	Construction & Management of Green House	Two	I
3	RGDPHT-01	Establishment of Pack House	One	I

4. Thane

A. Mango

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	THAMT-01	Integrated Nutrient Management in Mango	One	I
2	THAMT-02	Integrated Pest management in Mango	One	II
3	THAMT-03	Canopy Management in Mango	One	III
4	THAMT-04	Inflorescence Management in Mango	One	IV
5	THAMT-05	Management of Spongy Tissue in Mango	One	V
6	THAMT-06	Pre and Post harvest Management of fruit	One	VI
7	THAMT-07	Value addition in Mango	One	VII

B. Sapota

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	THAMT-01	Integrated Nutrient Management in Sapota	One	I
2	THAMT-02	Integrated Pest management in Sapota	One	II
3	THAMT-03	Canopy Management in Sapota	One	III
4	THAMT-04	Pre and Post harvest Management in Sapota	One	IV
5	THAMT-05	Value addition in Sapota	One	V

C. Cashew

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	THACT-01	Contour plantation of Cashew	One	I
2	THACT-02	Rejuvenation of Cashew trees	One	II
3	THACT-03	Integrated Pest Management in Cashew	One	II
4	THACT-04	Cashewnut processing technology	One	IV

D. Vegetables

SR. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	THAVT-01	Protected cultivation of vegetables	One	I
2	THAVT-02	Export Management in vegetables	One	II

E. Jasmine

SR. No.	Course Code	Title of Training Course	Duration (Days)	Priority
3	THAFT-01	Package of Practices for production of Mongara	One	I

F. Special Activities

Sr. No.	Course Code	Title of Training Course	Duration (Days)	Priority
1	THACTT-01	Establishment of Community Tanks	One	I
2	THAGHT-01	Construction & Management of Green House	Two	I
3	THAPHT-01	Establishment of Pack House	One	I

Design of Training Courses Planned

1. Sindhudurg

A. Mango

1. Course Code: SINMT-01

Title: Integrated Nutrient Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June - July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand uptake & requirement of nutrients for mango tree
- To select fertilizer & micronutrient grades as per nutrient requirement
- To prepare organic products like vermicompost & BD compost locally
- To apply the nutrients at proper place & time

Course Content

- Uptake & requirement of nutrients
- Working out quantity of fertilizers based on nutrient requirement
- Role of micronutrients in mango production
- Preparation of vermicompost in mango orchard
- Preparation of BD compost

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

2. Course Code: SINMT-02**Title: Integrated Pest management in Mango**

- Target group: Mango Growers
- Duration: One day
- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To identify pests & diseases affecting Mango plants
- To know measure to manage the pests & diseases on Mango
- To acquaint with Mango Inflorescence Protection schedule

Course Content

- Identification of Pests diseases affecting Mango
- Control measures for pest & diseases
- Cultural practices for sanitation of Mango plantation
- Management of Hopper on inflorescences
- Plant protection schedule
- Preparation of spray solution of pesticides
- Preparation of Bordeaux paste
- Use of biological pesticides

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

3. Course Code: SINMT-03**Title: Canopy Management in Mango**

- Target group: Mango Growers

- Duration: One day
- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand need for training and pruning in mango
- To perform different pruning practices in mango
- To prepare & apply Bordeaux paste to the pruned branches

Course Content

- Concept of canopy management
- Pruning technology & its benefits
- Methods of pruning
- Pesticide application & after care

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

4. Course Code: SINMT-04

Title: Inflorescence Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June- July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know management practices for good inflorescence development
- To know pests & diseases affecting mango inflorescence
- To acquaint with inflorescence protection schedule

Course Content

- Concept of inflorescence management

- Use of hormones for development of inflorescence
- Surveillance of Pests & diseases affecting inflorescences
- Management of pests & diseases on inflorescences

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

5. Course Code: SINMT-05

Title: Export Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: October- November
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station

Objectives

- To sensitize the mango growers about the export process
- To make the growers aware about export standards required by the importing countries
- To enable the growers to manage pesticide residue in exportable fruits

Course Content

- Scope for export of mango
- Procedure for export of fruits
- Documents required
- Quality standards
- Residue Monitoring plan

Resource Persons

Master Trainers from DoA and Mango experts from SAU

6. Course Code: SINMT-06

Title: Management of Spongy Tissue in Mango

- Target group: Mango Growers

- Duration: One day
- Month: June-July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know causes for development of spongy tissue in mango
- To understand the role of micronutrients in quality fruit development
- To execute the practices for management of spongy tissue in mango

Course Content

- Causes for development of spongy tissue in mango
- Detection of spongy tissue in mango fruits
- Nutrition management
- Role of micronutrients in nourishment of mango fruits
- Role of Canopy management in spongy tissue management
- Package of practices for spongy tissue management

Resource Persons

Master Trainers from DoA and Mango experts from SAU

7. Course Code: SINMT-07

Title: Rejuvenation of old mango trees

- Target group: Mango Growers
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know causes of low productivity in old mango orchards
- To acquaint with the principles & practices of rejuvenation in mango
- To improve nutritional management of senile mango orchards

Course Content

- Causes of low productivity in old mango orchards
- Nutritional requirements of old mango trees
- Use of micronutrients old mango orchards
- Organic manuring in old mango orchards
- Canopy management of old mango trees
- Techniques for removal of parasites (*Bandguls*)
- Pest & disease management old mango orchards
- Water management old mango orchards

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

8. Course Code: SINMT-08**Title: Pre and Post harvest Management of fruit**

- Target group: Mango Growers
- Duration: One day
- Month: February- March
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To acquaint with pre & post harvest management practices
- To know techniques for uniform ripening of mango fruits
- To know grading & packaging techniques for mango

Course Content

- Maturity signs
- Harvesting techniques
- Post harvest care of mango fruits
- Fungicide treatment to mango fruits

- Ripening technology
- Keeping quality of mango
- Grading of mango fruits
- Packaging material for mango

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

9. Course Code: SINMT-09

Title: Organic Mango Production

- Target group: Mango Growers
- Duration: One day
- Month: November- December
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know the principles of organic farming in mango
- To acquaint with practices for organic mango production
- To prepare the organic matter on the demonstration farm
- To develop internal control system for organic mango production
- To prepare the necessary documents at the farm

Course Content

- Scope for organic mango in domestic & international markets
- Principles of organic production
- Practices for organic mango production
- Preparation of BD compost, S- culture
- Internal Control System
- Record keeping
- Certification procedure

Resource Persons

Master Trainers from DoA, Experts from organic certification agencies and Mango experts from SAU

10. Course Code: SINMT-10**Title: High density plantation in Mango**

- Target group: Mango Growers
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To sensitize about the concept of high density plantation in mango
- To impart skills for high density plantation in mango

Course Content

- Concept of high density plantation
- Benefits of high density plantation
- Layout for high density plantation
- Package of practices for high density plantation
- Care of established mango orchard

Resource Persons

Master Trainers from DoA, and Mango experts from SAU

11. Course Code: SINMT-11**Title: Use of *Jalkund* technology & water management in mango**

- Target group: Mango Growers
- Duration: One day
- Month: October to december
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To sensitize about the concept of *Jalkunda* Technology in mango
- To impart skills for preparation of *Jalkunda* in mango orchard

Course Content

- Water requirement of mango plants
- Concept of *Jalkunda* technology
- Benefits of *Jalkunda* technology
- Site selection and layout for preparation *Jalkunda*
- Preparation of cost estimate for *Jalkunda*
- Maintenance of *Jalkunda*

Resource Persons

Master Trainers from DoA, and Mango experts from SAU

12. Course Code: SINMT-12

Title: Value addition in Mango

- Target group: Mango Growers
- Duration: One day
- Month: May -June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To impart knowledge about principles of preservation of mango fruits
- To know processing technology for mango fruits
- To facilitate trainees about preparation of project proposal for small mango processing unit

Course Content

- Principles of preservation
- Processing of raw mango fruits
- Processing of ripe fruits
- Recipes of byproducts from mango

- Packaging of byproducts
- Establishment of small mango processing unit
- Project preparation

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Owners of Processing units

13. Course Code: SINMT-13

Title: EUREPGAP certification in Mango

- Target group: Mango Growers
- Duration: One day
- Month: November- December
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know the principles of Good Agriculture Practices in mango
- To acquaint with procedure for EUREPGAP certification
- To facilitate trainees to prepare the necessary documents at the farm

Course Content

- Need for quality mango in domestic & international markets
- Principles of Good Agriculture Practices
- Procedure for EUREPGAP certification
- Record keeping at Farm

Resource Persons

Master Trainers from DoA, Experts from organic certification agencies and Mango experts from SAU

B. Cashew

1. Course Code: SINCT -01

Title: Contour plantation of Cashew

- Target group: Farmers who have registered for Cashew plantation

- Duration: One day
- Month: May & June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery

Objectives

- To select and prepare proper land for cashew cultivation
- To impart skill to mark contours.
- To enable the trainees to prepare pits along the contours
- Course Content
 - Selection of site for cashew orchard
 - Contour marking with A- frame or Tube level
 - Preparation of contour trenches
 - Preparation & Filling of pits
 - Selection of good Cashew grafts
 - Planting techniques for Cashew grafts
 - Erection of fencing
- Resource Persons
Master trainers, Horticulture officers and Cashew Scientists from SAU & KVK, Progressive Cashew growers

2. Course Code: SINCT -02

Title: Rejuvenation of Senile Cashew Trees

- Target group: cashew growers
- Duration: One day
- Month: June to August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery /
Progressive Farmers' cashew orchard
- **Objectives**
 - To know causes of low productivity in old cashew trees

- To acquaint with the principles & practices of rejuvenation of cashew trees
 - To improve nutritional management of senile cashew trees
 - **Course Content**
 - Causes of low productivity in old cashew trees
 - Nutritional management
 - Use of organic matter for old cashew trees
 - Conversion of local cashew trees into improved variety
 - Pest & disease management
 - Contour trenches & *Jalkunda* technology
 - Resource Persons, Master trainers, Horticulture officers and cashew Scientists from SAU & KVK, Progressive cashew growers
-

3. Course Code: SINCT -03

Title: Integrated Pest Management in Cashew

- Target group: Cashew growers
- Duration: One day
- Month: May-June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery / Progressive Farmers' cashew plantation

Objectives

- To identify pests & diseases affecting cashew plants
- To know measure to manage the pests & diseases on cashew
- To acquaint with cashew plant protection schedule

Course Content

- Identification of Pests on cashew
- Identification of diseases affecting cashew
- Control measures for pest & diseases
- Use of neem oil
- Cultural practices for sanitation of cashew plantation

- Management of Tea mosquito on inflorescences
- Plant protection schedule
- Preparation of spray solution of pesticides
- Preparation of Bordeaux paste

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK, Progressive cashew growers

4. Course Code: SINCT -04

Title: Use of *Jalkund* technology & water management in Cashew

- Target group: Cashew Growers
- Duration: One day
- Month: October to december
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To sensitize about the concept of *Jalkunda* Technology in Cashew
- To impart skills for preparation of *Jalkunda* in Cashew orchard

Course Content

- Water requirement of Cashew plants
- Concept of *Jalkunda* technology
- Benefits of *Jalkunda* technology
- Site selection and layout for preparation *Jalkunda*
- Preparation of cost estimate for *Jalkunda*
- Maintenance of *Jalkunda*

Resource Persons

Master Trainers from DoA, and Cashew experts from SAU

5. Course Code: *SINCT -05*

Title: Cashewnut processing technology

- Target group: Cashew growers and willing entrepreneurs
- Duration: One day
- Month: December to March
- Venue : District Training Center/ Agropolyclinic / Cashew Processing Training center/
Cashew apple processing unit

Objectives

- To acquaint with the technology of processing of cashewnut
- To perform the operations involved in processing of cashewnut
- Prepare a project proposal for establishment of cashewnut processing unit

Course Content

- Scope for cashew processing industry
- Components of cashew processing industry
- Cashewnut processing technology
- Selection of cashew seeds for processing
- Boiling of cashew seeds
- Cutting of cashewnuts
- Drying of cashew kernels
- Grading of cashew kernels
- Packaging of cashew kernels
- Economics of small cashewnut processing unit
- Preparation of project proposal

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK,
Successful cashew apple processors

6. Course Code: *SINCT -06*

Title: Cashew apple processing technology

- Target group: Cashew growers and willing entrepreneurs
- Duration: One day
- Month: December to March
- Venue : District Training Center/ Agropolyclinic / Cashew Processing Training center/
Cashew apple processing unit

Objectives

- To acquaint with the technology of processing of cashew apple
- To perform the operations involved in processing of cashew apple
- To prepare the byproducts of cashew apple as per the recommended recipe
- To prepare a project proposal for establishment of cashew apple processing unit

Course Content

- Scope for cashew processing industry
- Components of cashew processing industry
- Cashew apple processing technology
- Development of recipe for Cashew Syrup
- Preparation of cashew RTS drink, concentrate, chutney etc.
- Packaging of cashew syrup
- Economics of small cashew apple processing unit
- Preparation of project proposal

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK,
Successful cashew apple processors

7. Course Code: SINCT-07

Title: Organic Cashew Production

- Target group: Cashew Growers
- Duration: One day

- Month: November- December
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive Cashew grower

Objectives

- To know the principles of organic farming in Cashew
- To acquaint with practices for organic Cashew production
- To prepare the organic matter on the demonstration farm
- To develop internal control system for organic Cashew production
- To prepare the necessary documents at the farm

Course Content

- Scope for organic Cashew in domestic & international markets
- Principles of organic production
- Practices for organic Cashew production
- Preparation of BD compost, S- culture
- Internal Control System
- Record keeping
- Certification procedure

Resource Persons

Master Trainers from DoA, Experts from organic certification agencies and Cashew experts from SAU

Spices

1. Course Code: SINST-01

Title: Package of Practices of Black Pepper

- Target group: Farmers registered for Black Pepper cultivation
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive spice grower

Objectives

- To acquaint with package of practices for black pepper cultivation
- To impart knowledge and skill for nutrition management in black pepper

Course Content

- Practices for black pepper cultivation
- Layout for black pepper cultivation
- Planting of supports
- Good quality planting material
- Nutrition management
- Harvesting techniques

Resource Persons

Master Trainers from DoA, Experts from SAU

2. Course Code: SINST-02

Title: Processing of Spices

- Target group: Spice growers
- Duration: One day
- Month: January-February
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive spice grower

Objectives

- To impart knowledge and skill for post harvest management & processing of black pepper, cinnamon, nutmeg and clove

Course Content

- Harvesting techniques
- Post harvest care & Storage
- Processing technology for black pepper
- Processing technology for Cinnamon
- Processing technology for nutmeg

- Processing technology for clove

Resource Persons

Master Trainers from DoA, Experts from SAU

Banana

1. Course Code: SINBT-01

Title: Cultivation Practices for Banana

- Target group: Farmers registered for Banana cultivation
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Agropolyclinic / ARS/ KVK

Objectives

- To acquaint the trainees to package of practices of banana cultivation
- To impart knowledge about pest & nutrition management of Banana

Course content

- Good quality planting material
- Layout for banana cultivation
- Uptake & requirement of nutrients
- Role of micronutrients in banana production
- Methods of application of biofertilizers, organic matter & micronutrients
- Pest management in Banana

Resource Persons

Master Trainers in DoA, Crop Scientists from SAU/ KVK, Progressive farmers

2. Course Code: SINBT -02

Title: Post Harvest Management of Banana

- Target group: Banana Growers
- Duration: One day
- Month: May- June

- Venue: District Training Center/ Agropolyclinic / KVK/ Progressive farmers' plantation

Objectives

- To enable trainees in carrying out proper harvesting of Banana
- To impart knowledge & skill about storage, ripening & transportation techniques for Banana

Course Content

- Harvesting stage of Banana
- Storage Losses & remedies
- Ripening Technology
- Grading of Banana bunches

Resource Persons

Master Trainers in DoA, Crop Scientists from SAU/ KVK, Progressive farmers

Floriculture in Greenhouse

1. Course Code: SINFGT-01

Title: Flower cultivation in greenhouse

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To create awareness about Green House Technology
- To facilitate the trainees in selection of flower crops to be grown under Green House conditions
- To impart skill for execution of various practices in floriculture under Green House conditions

Course Contents

- Principles of Green House construction
- Selection of crop & varieties for cultivation in Green House
- Preparation of beds

- Fertigation management
- Plant protection in Green House

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

2. Course Code: SINFGT-02**Title: Post harvest management of flowers**

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To enable the trainees to handle the harvested flowers carefully
- To impart sorting & grading skill to the trainees

Course Content

- Harvesting stage of different flowers
- Harvesting techniques
- Defoliating of roses
- Grading of flowers
- Packing of flowers

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

E. Special Activities**1. Course Code: SINFGT -01****Title: Establishment of Community Tanks**

- Target group: Beneficiaries under NHM

- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about selection of site for community tanks
- To enable the trainees to prepare estimates of construction of community tank
- To facilitate the trainees in planning for construction of community tank

Course Contents

- Selection of site
- Design of community tank
- Estimation of earthwork
- Preparation of estimate
- Planning for construction of community tank

Resource Persons

Master trainers from DoA

2. Course Code: AURGHT-01

Title: Construction & Management of Green House

- Target group: Beneficiaries under NHM
- Duration: Two days
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Green House Technology
- To know various components of Green House construction
- To facilitate the trainees in selection of crops to be grown under Green House conditions
- To impart skill for execution of various practices in Green House

Course Contents

- Principles of Green House construction
- Selection of site for Green House

- Components of Green House
- Selection of crop & varieties for cultivation in Green House
- Preparation of beds
- Fertigation management
- Plant protection in Green House

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

3. Course Code: SINPHT-01

Title: Construction & Management of Pack House

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Pack House Technology
- To know various components of Pack House construction
- To impart skill for preparation of project for Pack House

Course Contents

- Scope for Pack House construction
- Selection of site for Pack House
- Components of Pack House
- Scheduling of crop & varieties for storage in Pack House
- Preparation of project proposal of Pack house

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

2. Ratnagiri

A. Mango

1. Course Code: RTNMT -01

Title: Integrated Nutrient Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June - July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand uptake & requirement of nutrients for mango tree
- To select fertilizer & micronutrient grades as per nutrient requirement
- To prepare organic products like vermicompost & BD compost locally
- To apply the nutrients at proper place & time

Course Content

- Uptake & requirement of nutrients
- Working out quantity of fertilizers based on nutrient requirement
- Role of micronutrients in mango production
- Preparation of vermicompost in mango orchard
- Preparation of BD compost

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

2. Course Code: RTNMT -02

Title: Integrated Pest management in Mango

- Target group: Mango Growers
- Duration: One day

- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To identify pests & diseases affecting Mango plants
- To know measure to manage the pests & diseases on Mango
- To acquaint with Mango Inflorescence Protection schedule

Course Content

- Identification of Pests diseases affecting Mango
- Control measures for pest & diseases
- Cultural practices for sanitation of Mango plantation
- Management of Hopper on inflorescences
- Plant protection schedule
- Preparation of spray solution of pesticides
- Preparation of Bordeaux paste
- Use of biological pesticides

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

3. Course Code: RTNMT -03

Title: Canopy Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand need for training and pruning in mango
- To perform different pruning practices in mango

- To prepare & apply Bordeaux paste to the pruned branches

Course Content

- Concept of canopy management
- Pruning technology & its benefits
- Methods of pruning
- Pesticide application & after care

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

4. Course Code: RTNMT -04

Title: Inflorescence Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June- July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know management practices for good inflorescence development
- To know pests & diseases affecting mango inflorescence
- To acquaint with inflorescence protection schedule

Course Content

- Concept of inflorescence management
- Use of hormones for development of inflorescence
- Surveillance of Pests & diseases affecting inflorescences
- Management of pests & diseases on inflorescences

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

5. Course Code: RTNMT -05

Title: Export Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: October- November
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station

Objectives

- To sensitize the mango growers about the export process
- To make the growers aware about export standards required by the importing countries
- To enable the growers to manage pesticide residue in exportable fruits

Course Content

- Scope for export of mango
- Procedure for export of fruits
- Documents required
- Quality standards
- Residue Monitoring plan

Resource Persons

Master Trainers from DoA and Mango experts from SAU

6. Course Code: RTNMT -06

Title: Management of Spongy Tissue in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June-July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know causes for development of spongy tissue in mango
- To understand the role of micronutrients in quality fruit development
- To execute the practices for management of spongy tissue in mango

Course Content

- Causes for development of spongy tissue in mango
- Detection of spongy tissue in mango fruits
- Nutrition management
- Role of micronutrients in nourishment of mango fruits
- Role of Canopy management in spongy tissue management
- Package of practices for spongy tissue management

Resource Persons

Master Trainers from DoA and Mango experts from SAU

7. Course Code: RTNMT-07

Title: Rejuvenation of old mango trees

- Target group: Mango Growers
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know causes of low productivity in old mango orchards
- To acquaint with the principles & practices of rejuvenation in mango
- To improve nutritional management of senile mango orchards

Course Content

- Causes of low productivity in old mango orchards
- Nutritional requirements of old mango trees
- Use of micronutrients old mango orchards
- Organic manuring in old mango orchards
- Canopy management of old mango trees
- Techniques for removal of parasites (*Bandguls*)
- Pest & disease management old mango orchards
- Water management old mango orchards

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

8. Course Code: RTNMT -08**Title: Pre and Post harvest Management of fruit**

- Target group: Mango Growers
- Duration: One day
- Month: February- March
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To acquaint with pre & post harvest management practices
- To know techniques for uniform ripening of mango fruits
- To know grading & packaging techniques for mango

Course Content

- Maturity signs
- Harvesting techniques
- Post harvest care of mango fruits
- Fungicide treatment to mango fruits
- Ripening technology
- Keeping quality of mango
- Grading of mango fruits
- Packaging material for mango

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

9. Course Code: RTNMT -09**Title: Organic Mango Production**

- Target group: Mango Growers
- Duration: One day

- Month: November- December
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know the principles of organic farming in mango
- To acquaint with practices for organic mango production
- To prepare the organic matter on the demonstration farm
- To develop internal control system for organic mango production
- To prepare the necessary documents at the farm

Course Content

- Scope for organic mango in domestic & international markets
- Principles of organic production
- Practices for organic mango production
- Preparation of BD compost, S- culture
- Internal Control System
- Record keeping
- Certification procedure

Resource Persons

Master Trainers from DoA, Experts from organic certification agencies and Mango experts from SAU

10. Course Code: RTNMT -10

Title: Use of *Jalkund* technology & water management in mango

- Target group: Mango Growers
- Duration: One day
- Month: October to december
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To sensitize about the concept of *Jalkunda* Technology in mango
- To impart skills for preparation of *Jalkunda* in mango orchard

Course Content

- Water requirement of mango plants
- Concept of *Jalkunda* technology
- Benefits of *Jalkunda* technology
- Site selection and layout for preparation *Jalkunda*
- Preparation of cost estimate for *Jalkunda*
- Maintenance of *Jalkunda*

Resource Persons

Master Trainers from DoA, and Mango experts from SAU

11. Course Code: RTNMT -11

Title: High density plantation in Mango

- Target group: Mango Growers
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To sensitize about the concept of high density plantation in mango
- To impart skills for high density plantation in mango

Course Content

- Concept of high density plantation
- Benefits of high density plantation
- Layout for high density plantation
- Package of practices for high density plantation
- Care of established mango orchard

Resource Persons

Master Trainers from DoA, and Mango experts from SAU

12. Course Code: RTNMT -12

Title: Value addition in Mango

- Target group: Mango Growers
- Duration: One day
- Month: May -June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To impart knowledge about principles of preservation of mango fruits
- To know processing technology for mango fruits
- To facilitate trainees about preparation of project proposal for small mango processing unit

Course Content

- Principles of preservation
- Processing of raw mango fruits
- Processing of ripe fruits
- Recipes of byproducts from mango
- Packaging of byproducts
- Establishment of small mango processing unit
- Project preparation

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Owners of Processing units

13. Course Code: RTNMT -13

Title: EUREPGAP certification in Mango

- Target group: Mango Growers

- Duration: One day
- Month: November- December
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know the principles of Good Agriculture Practices in mango
- To acquaint with procedure for EUREPGAP certification
- To facilitate trainees to prepare the necessary documents at the farm

Course Content

- Need for quality mango in domestic & international markets
- Principles of Good Agriculture Practices
- Procedure for EUREPGAP certification
- Record keeping at Farm

Resource Persons

Master Trainers from DoA, Experts from organic certification agencies and Mango experts from SAU

B.Cashew

1. Course Code: RTNCT -01

Title: Contour plantation of Cashew

- Target group: Farmers who have registered for Cashew plantation
- Duration: One day
- Month: May & June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery

Objectives

- To select and prepare proper land for cashew cultivation
- To impart skill to mark contours.
- To enable the trainees to prepare pits along the contours

- **Course Content**
 - Selection of site for cashew orchard
 - Contour marking with A- frame or Tube level
 - Preparation of contour trenches
 - Preparation & Filling of pits
 - Selection of good Cashew grafts
 - Planting techniques for Cashew grafts
 - Erection of fencing
 - **Resource Persons**
Master trainers, Horticulture officers and Cashew Scientists from SAU & KVK, Progressive Cashew growers
-

2. Course Code: RTNCT -02

Title: Rejuvenation of Senile Cashew Trees

- Target group: cashew growers
- Duration: One day
- Month: June to August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery / Progressive Farmers' cashew orchard
- **Objectives**
 - To know causes of low productivity in old cashew trees
 - To acquaint with the principles & practices of rejuvenation of cashew trees
 - To improve nutritional management of senile cashew trees
- **Course Content**
 - Causes of low productivity in old cashew trees
 - Nutritional management
 - Use of organic matter for old cashew trees
 - Conversion of local cashew trees into improved variety
 - Pest & disease management

- Contour trenches & *Jalkunda* technology
 - Resource Persons, Master trainers, Horticulture officers and cashew Scientists from SAU & KVK, Progressive cashew growers
-

3. **Course Code: RTNCT -03**

Title: Integrated Pest Management in Cashew

- Target group: Cashew growers
- Duration: One day
- Month: May-June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery / Progressive Farmers' cashew plantation
- Objectives
 - To identify pests & diseases affecting cashew plants
 - To know measure to manage the pests & diseases on cashew
 - To acquaint with cashew plant protection schedule
- Course Content
 - Identification of Pests on cashew
 - Identification of diseases affecting cashew
 - Control measures for pest & diseases
 - Use of neem oil
 - Cultural practices for sanitation of cashew plantation
 - Management of Tea mosquito on inflorescences
 - Plant protection schedule
 - Preparation of spray solution of pesticides
 - Preparation of Bordeaux paste
- Resource Persons
Master trainers, Horticulture officers and cashew Scientists from SAU & KVK, Progressive cashew growers

4. Course Code: RTNCT -04

Title: Use of *Jalkund* technology & water management in Cashew

- Target group: Cashew Growers
- Duration: One day
- Month: October to december
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To sensitize about the concept of *Jalkunda* Technology in Cashew
- To impart skills for preparation of *Jalkunda* in Cashew orchard

Course Content

- Water requirement of Cashew plants
- Concept of *Jalkunda* technology
- Benefits of *Jalkunda* technology
- Site selection and layout for preparation *Jalkunda*
- Preparation of cost estimate for *Jalkunda*
- Maintenance of *Jalkunda*

Resource Persons

Master Trainers from DoA, and Cashew experts from SAU

5. Course Code: RTNCT -05

Title: Cashewnut processing technology

- Target group: Cashew growers and willing entrepreneurs
- Duration: One day
- Month: December to March
- Venue : District Training Center/ Agropolyclinic / Cashew Processing Training center/ Cashew apple processing unit

Objectives

- To acquaint with the technology of processing of cashewnut
- To perform the operations involved in processing of cashewnut
- Prepare a project proposal for establishment of cashewnut processing unit

Course Content

- Scope for cashew processing industry
- Components of cashew processing industry
- Cashewnut processing technology
- Selection of cashew seeds for processing
- Boiling of cashew seeds
- Cutting of cashewnuts
- Drying of cashew kernels
- Grading of cashew kernels
- Packaging of cashew kernels
- Economics of small cashewnut processing unit
- Preparation of project proposal

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK,
Successful cashew apple processors

6. Course Code: *RTNCT -06*

Title: Cashew apple processing technology

- Target group: Cashew growers and willing entrepreneurs
- Duration: One day
- Month: December to March
- Venue : District Training Center/ Agropolyclinic / Cashew Processing Training center/
Cashew apple processing unit

Objectives

- To acquaint with the technology of processing of cashew apple

- To perform the operations involved in processing of cashew apple
- To prepare the byproducts of cashew apple as per the recommended recipe
- To prepare a project proposal for establishment of cashew apple processing unit

Course Content

- Scope for cashew processing industry
- Components of cashew processing industry
- Cashew apple processing technology
- Development of recipe for Cashew Syrup
- Preparation of cashew RTS drink, concentrate, chutney etc.
- Packaging of cashew syrup
- Economics of small cashew apple processing unit
- Preparation of project proposal

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK,
Successful cashew apple processors

C. Spices

1. Course Code: RTNST-01

Title: Package of Practices of Black Pepper

- Target group: Farmers registered for Black Pepper cultivation
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive spice grower

Objectives

- To acquaint with package of practices for black pepper cultivation
- To impart knowledge and skill for nutrition management in black pepper

Course Content

- Practices for black pepper cultivation

- Layout for black pepper cultivation
- Planting of supports
- Good quality planting material
- Nutrition management
- Harvesting techniques

Resource Persons

Master Trainers from DoA, Experts from SAU

2. Course Code: RTNST -02

Title: Processing of Spices

- Target group: Spice growers
- Duration: One day
- Month: January-February
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive Spice grower

Objectives

- To impart knowledge and skill for post harvest management & processing of black pepper, cinnamon, nutmeg and clove

Course Content

- Harvesting techniques
- Post harvest care & Storage
- Processing technology for black pepper
- Processing technology for Cinnamon
- Processing technology for nutmeg
- Processing technology for clove

Resource Persons

Master Trainers from DoA, Experts from SAU

D. Banana

1. Course Code: RTNBT-01

Title: Cultivation Practices for Banana

- Target group: Farmers registered for Banana cultivation
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Agropolyclinic / ARS/ KVK

Objectives

- To acquaint the trainees to package of practices of banana cultivation
- To impart knowledge about pest & nutrition management of Banana

Course content

- Good quality planting material
- Layout for banana cultivation
- Uptake & requirement of nutrients
- Role of micronutrients in banana production
- Methods of application of biofertilizers, organic matter & micronutrients
- Pest management in Banana

Resource Persons

Master Trainers in DoA, Crop Scientists from SAU/ KVK, Progressive farmers

2. Course Code: RTNBT -02

Title: Post Harvest Management of Banana

- Target group: Banana Growers
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Agropolyclinic / KVK/ Progressive farmers' plantation

Objectives

- To enable trainees in carrying out proper harvesting of Banana
- To impart knowledge & skill about storage, ripening & transportation techniques for Banana

Course Content

- Harvesting stage of Banana
- Storage Losses & remedies
- Ripening Technology
- Grading of Banana bunches

Resource Persons

Master Trainers in DoA, Crop Scientists from SAU/ KVK, Progressive farmers

E. Floriculture in Greenhouse

1. Course Code: RTNFGT-01

Title: Flower cultivation in greenhouse

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To create awareness about Green House Technology
- To facilitate the trainees in selection of flower crops to be grown under Green House conditions
- To impart skill for execution of various practices in floriculture under Green House conditions

Course Contents

- Principles of Green House construction
- Selection of crop & varieties for cultivation in Green House
- Preparation of beds
- Fertigation management
- Plant protection in Green House

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

2. Course Code: RTNFGT-02

Title: Post harvest management of flowers

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To enable the trainees to handle the harvested flowers carefully
- To impart sorting & grading skill to the trainees

Course Content

- Harvesting stage of different flowers
- Harvesting techniques
- Defoliating of roses
- Grading of flowers
- Packing of flowers

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

F. Special Activities

1. Course Code: RTNFGT -01

Title: Establishment of Community Tanks

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about selection of site for community tanks
- To enable the trainees to prepare estimates of construction of community tank

- To facilitate the trainees in planning for construction of community tank

Course Contents

- Selection of site
- Design of community tank
- Estimation of earthwork
- Preparation of estimate
- Planning for construction of community tank

Resource Persons

Master trainers from DoA

2. Course Code: RTNGHT-01

Title: Construction & Management of Green House

- Target group: Beneficiaries under NHM
- Duration: Two days
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Green House Technology
- To know various components of Green House construction
- To facilitate the trainees in selection of crops to be grown under Green House conditions
- To impart skill for execution of various practices in Green House

Course Contents

- Principles of Green House construction
- Selection of site for Green House
- Components of Green House
- Selection of crop & varieties for cultivation in Green House
- Preparation of beds
- Fertigation management
- Plant protection in Green House

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

3. Course Code: RTNPHT-01**Title: Construction & Management of Pack House**

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Pack House Technology
- To know various components of Pack House construction
- To impart skill for preparation of project for Pack House

Course Contents

- Scope for Pack House construction
- Selection of site for Pack House
- Components of Pack House
- Scheduling of crop & varieties for storage in Pack House
- Preparation of project proposal of Pack house

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

3. Raigad**A. Mango**

1. Course Code: RGDMT -01

Title: Integrated Nutrient Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June - July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand uptake & requirement of nutrients for mango tree
- To select fertilizer & micronutrient grades as per nutrient requirement
- To prepare organic products like vermicompost & BD compost locally
- To apply the nutrients at proper place & time

Course Content

- Uptake & requirement of nutrients
- Working out quantity of fertilizers based on nutrient requirement
- Role of micronutrients in mango production
- Preparation of vermicompost in mango orchard
- Preparation of BD compost

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

2. Course Code: RGDMT -02

Title: Integrated Pest management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To identify pests & diseases affecting Mango plants

- To know measure to manage the pests & diseases on Mango
- To acquaint with Mango Inflorescence Protection schedule

Course Content

- Identification of Pests diseases affecting Mango
- Control measures for pest & diseases
- Cultural practices for sanitation of Mango plantation
- Management of Hopper on inflorescences
- Plant protection schedule
- Preparation of spray solution of pesticides
- Preparation of Bordeaux paste
- Use of biological pesticides

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

3. Course Code: RGDMT -03

Title: Canopy Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand need for training and pruning in mango
- To perform different pruning practices in mango
- To prepare & apply Bordeaux paste to the pruned branches

Course Content

- Concept of canopy management
- Pruning technology & its benefits
- Methods of pruning

- Pesticide application & after care

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

4. Course Code: RGDMT -04**Title: Inflorescence Management in Mango**

- Target group: Mango Growers
- Duration: One day
- Month: June- July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know management practices for good inflorescence development
- To know pests & diseases affecting mango inflorescence
- To acquaint with inflorescence protection schedule

Course Content

- Concept of inflorescence management
- Use of hormones for development of inflorescence
- Surveillance of Pests & diseases affecting inflorescences
- Management of pests & diseases on inflorescences

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

5. Course Code: RGDMT -05**Title: Management of Spongy Tissue in Mango**

- Target group: Mango Growers
- Duration: One day
- Month: June-July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know causes for development of spongy tissue in mango
- To understand the role of micronutrients in quality fruit development
- To execute the practices for management of spongy tissue in mango

Course Content

- Causes for development of spongy tissue in mango
- Detection of spongy tissue in mango fruits
- Nutrition management
- Role of micronutrients in nourishment of mango fruits
- Role of Canopy management in spongy tissue management
- Package of practices for spongy tissue management

Resource Persons

Master Trainers from DoA and Mango experts from SAU

6. Course Code: RGDMT -06

Title: Pre and Post harvest Management of fruit

- Target group: Mango Growers
- Duration: One day
- Month: February- March
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To acquaint with pre & post harvest management practices
- To know techniques for uniform ripening of mango fruits
- To know grading & packaging techniques for mango

Course Content

- Maturity signs
- Harvesting techniques
- Post harvest care of mango fruits

- Fungicide treatment to mango fruits
- Ripening technology
- Keeping quality of mango
- Grading of mango fruits
- Packaging material for mango

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

7. Course Code: RGDMT -07

Title: Value addition in Mango

- Target group: Mango Growers
- Duration: One day
- Month: May -June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To impart knowledge about principles of preservation of mango fruits
- To know processing technology for mango fruits
- To facilitate trainees about preparation of project proposal for small mango processing unit

Course Content

- Principles of preservation
- Processing of raw mango fruits
- Processing of ripe fruits
- Recipes of byproducts from mango
- Packaging of byproducts
- Establishment of small mango processing unit
- Project preparation

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Owners of Processing units

B.Cashew

1. Course Code: RTNCT -01

Title: Contour plantation of Cashew

- Target group: Farmers who have registered for Cashew plantation
- Duration: One day
- Month: May & June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery

Objectives

- To select and prepare proper land for cashew cultivation
- To impart skill to mark contours.
- To enable the trainees to prepare pits along the contours

Course Content

- Selection of site for cashew orchard
- Contour marking with A- frame or Tube level
- Preparation of contour trenches
- Preparation & Filling of pits
- Selection of good Cashew grafts
- Planting techniques for Cashew grafts
- Erection of fencing

Resource Persons

Master trainers, Horticulture officers and Cashew Scientists from SAU & KVK, Progressive Cashew growers

2. Course Code: RTNCT -02

Title: Rejuvenation of Senile Cashew Trees

- Target group: cashew growers
- Duration: One day

- Month: June to August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery / Progressive Farmers' cashew orchard

Objectives

- To know causes of low productivity in old cashew trees
- To acquaint with the principles & practices of rejuvenation of cashew trees
- To improve nutritional management of senile cashew trees

Course Content

- Causes of low productivity in old cashew trees
- Nutritional management
- Use of organic matter for old cashew trees
- Conversion of local cashew trees into improved variety
- Pest & disease management
- Contour trenches & *Jalkunda* technology

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK, Progressive cashew growers

3. Course Code: RTNCT -03

Title: Integrated Pest Management in Cashew

- Target group: Cashew growers
- Duration: One day
- Month: May-June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery / Progressive Farmers' cashew plantation

Objectives

- To identify pests & diseases affecting cashew plants
- To know measure to manage the pests & diseases on cashew
- To acquaint with cashew plant protection schedule

Course Content

- Identification of Pests on cashew
- Identification of diseases affecting cashew
- Control measures for pest & diseases
- Use of neem oil
- Cultural practices for sanitation of cashew plantation
- Management of Tea mosquito on inflorescences
- Plant protection schedule
- Preparation of spray solution of pesticides
- Preparation of Bordeaux paste

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK, Progressive cashew growers

4. Course Code: RTNCT -04

Title: Use of *Jalkund* technology & water management in Cashew

- Target group: Cashew Growers
- Duration: One day
- Month: October to december
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To sensitize about the concept of *Jalkunda* Technology in Cashew
- To impart skills for preparation of *Jalkunda* in Cashew orchard

Course Content

- Water requirement of Cashew plants
- Concept of *Jalkunda* technology
- Benefits of *Jalkunda* technology
- Site selection and layout for preparation *Jalkunda*

- Preparation of cost estimate for *Jalkunda*
- Maintenance of *Jalkunda*

Resource Persons

Master Trainers from DoA, and Cashew experts from SAU

5. Course Code: RTNCT -05

Title: Cashewnut processing technology

- Target group: Cashew growers and willing entrepreneurs
- Duration: One day
- Month: December to March
- Venue : District Training Center/ Agropolyclinic / Cashew Processing Training center/
Cashew apple processing unit

Objectives

- To acquaint with the technology of processing of cashewnut
- To perform the operations involved in processing of cashewnut
- Prepare a project proposal for establishment of cashewnut processing unit

Course Content

- Scope for cashew processing industry
- Components of cashew processing industry
- Cashewnut processing technology
- Selection of cashew seeds for processing
- Boiling of cashew seeds
- Cutting of cashewnuts
- Drying of cashew kernels
- Grading of cashew kernels
- Packaging of cashew kernels
- Economics of small cashewnut processing unit
- Preparation of project proposal

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK,
Successful cashew apple processors

C. Spices

1. Course Code: RGDST-01

Title: Package of Practices for Nutmeg

- Target group: Farmers registered for Nutmeg cultivation
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive Nutmeg grower

Objectives

- To acquaint with package of practices for nutmeg cultivation
- To impart knowledge and skill for nutrition management in nutmeg

Course Content

- Practices for nutmeg cultivation
- Layout for nutmeg cultivation
- Good quality planting material
- Nutrition management
- Harvesting techniques

Resource Persons

Master Trainers from DoA, Experts from SAU

1. Course Code: RGDST-01

Title: Package of Practices of Black Pepper

- Target group: Farmers registered for Black Pepper cultivation
- Duration: One day
- Month: September-October

- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive spice grower

Objectives

- To acquaint with package of practices for black pepper cultivation
- To impart knowledge and skill for nutrition management in black pepper

Course Content

- Practices for black pepper cultivation
- Layout for black pepper cultivation
- Planting of supports
- Good quality planting material
- Nutrition management
- Harvesting techniques

Resource Persons

Master Trainers from DoA, Experts from SAU

2. Course Code: RGDST -02

Title: Processing of Spices

- Target group: Spice growers
- Duration: One day
- Month: January-February
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive Cashew grower

Objectives

- To impart knowledge and skill for post harvest management & processing of black pepper, cinnamon, nutmeg and clove

Course Content

- Harvesting techniques
- Post harvest care & Storage
- Processing technology for black pepper
- Processing technology for Cinnamon
- Processing technology for nutmeg

- Processing technology for clove

Resource Persons

Master Trainers from DoA, Experts from SAU

D. Vegetables

1. Course Code: RGDVT-01

Title: Package of Practices for production of Okra, Wal & Tomato

- Target group: Vegetable growers
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Agropolyclinic / ARS/ KVK

Objectives

- To acquaint the trainees to package of practices of vegetable cultivation

Course content

- Good quality seed & seedlings
- Planting methods
- Preparation of beds
- Seedling treatment
- Uptake & requirement of nutrients
- Integrated Pest Management
- Harvesting stages

Resource Persons

Master Trainers in DoA, Crop Scientists from SAU/ KVK, Progressive farmers

2. Course Code: RGDVT -02

Title: Post harvest management of vegetables

- Target group: Vegetable Growers
- Duration: One day
- Month: January-February

- Venue: District Training Center/ Agropolyclinic / KVK/ Progressive farmers' plantation

Objectives

- To enable trainees in carrying out proper harvesting of vegetables
- To impart knowledge & skill for grading and packing of vegetables

Course Content

- Harvesting techniques in vegetables
- Grading of vegetables
- Packing techniques
- Storage Losses & remedies
- Transporting of vegetables

Resource Persons

Master Trainers in DoA, Crop Scientists from SAU/ KVK, Progressive farmers

E. Jasmine

1. Course Code: RGDJGT-01

Title: Package of Practices for production of Jasmine

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To create awareness about scientific production technology for Jasmine
- To orient the trainees about marketing management for Jasmine

Course Contents

- Selection of site for Jasmine cultivation
- Selection of varieties
- Layout for Jasmine cultivation
- Nutrition management
- Plant protection
- Harvesting techniques

- Packaging of Jasmine flowers

Resource Persons

Master trainers from DoA, Technologists from SAU/ Progressive growers

F. Special Activities***1. Course Code: RGDFGT -01*****Title: Establishment of Community Tanks**

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about selection of site for community tanks
- To enable the trainees to prepare estimates of construction of community tank
- To facilitate the trainees in planning for construction of community tank

Course Contents

- Selection of site
- Design of community tank
- Estimation of earthwork
- Preparation of estimate
- Planning for construction of community tank

Resource Persons

Master trainers from DoA

2. Course Code: RGDGHT-01**Title: Construction & Management of Green House**

- Target group: Beneficiaries under NHM
- Duration: Two days
- Month: October to December

- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Green House Technology
- To know various components of Green House construction
- To facilitate the trainees in selection of crops to be grown under Green House conditions
- To impart skill for execution of various practices in Green House

Course Contents

- Principles of Green House construction
- Selection of site for Green House
- Components of Green House
- Selection of crop & varieties for cultivation in Green House
- Preparation of beds
- Fertigation management
- Plant protection in Green House

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

3. Course Code: RGDPH-01

Title: Construction & Management of Pack House

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Pack House Technology
- To know various components of Pack House construction
- To impart skill for preparation of project for Pack House

Course Contents

- Scope for Pack House construction

- Selection of site for Pack House
- Components of Pack House
- Scheduling of crop & varieties for storage in Pack House
- Preparation of project proposal of Pack house

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

4. Thane

A. Mango

1. Course Code: THAMT -01

Title: Integrated Nutrient Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June - July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand uptake & requirement of nutrients for mango tree
- To select fertilizer & micronutrient grades as per nutrient requirement
- To prepare organic products like vermicompost & BD compost locally
- To apply the nutrients at proper place & time

Course Content

- Uptake & requirement of nutrients
- Working out quantity of fertilizers based on nutrient requirement
- Role of micronutrients in mango production

- Preparation of vermicompost in mango orchard
- Preparation of BD compost

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

2. Course Code: THAMT -02**Title: Integrated Pest management in Mango**

- Target group: Mango Growers
- Duration: One day
- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To identify pests & diseases affecting Mango plants
- To know measure to manage the pests & diseases on Mango
- To acquaint with Mango Inflorescence Protection schedule

Course Content

- Identification of Pests diseases affecting Mango
- Control measures for pest & diseases
- Cultural practices for sanitation of Mango plantation
- Management of Hopper on inflorescences
- Plant protection schedule
- Preparation of spray solution of pesticides
- Preparation of Bordeaux paste
- Use of biological pesticides

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

3. Course Code: THAMT -03

Title: Canopy Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: July-August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To understand need for training and pruning in mango
- To perform different pruning practices in mango
- To prepare & apply Bordeaux paste to the pruned branches

Course Content

- Concept of canopy management
- Pruning technology & its benefits
- Methods of pruning
- Pesticide application & after care

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

4. Course Code: THAMT -04

Title: Inflorescence Management in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June- July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know management practices for good inflorescence development
- To know pests & diseases affecting mango inflorescence
- To acquaint with inflorescence protection schedule

Course Content

- Concept of inflorescence management
- Use of hormones for development of inflorescence
- Surveillance of Pests & diseases affecting inflorescences
- Management of pests & diseases on inflorescences

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

5. Course Code: THAMT -05

Title: Management of Spongy Tissue in Mango

- Target group: Mango Growers
- Duration: One day
- Month: June-July
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To know causes for development of spongy tissue in mango
- To understand the role of micronutrients in quality fruit development
- To execute the practices for management of spongy tissue in mango

Course Content

- Causes for development of spongy tissue in mango
- Detection of spongy tissue in mango fruits
- Nutrition management
- Role of micronutrients in nourishment of mango fruits
- Role of Canopy management in spongy tissue management
- Package of practices for spongy tissue management

Resource Persons

Master Trainers from DoA and Mango experts from SAU

6. Course Code: THAMT -06

Title: Pre and Post harvest Management of fruit

- Target group: Mango Growers
- Duration: One day
- Month: February- March
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To acquaint with pre & post harvest management practices
- To know techniques for uniform ripening of mango fruits
- To know grading & packaging techniques for mango

Course Content

- Maturity signs
- Harvesting techniques
- Post harvest care of mango fruits
- Fungicide treatment to mango fruits
- Ripening technology
- Keeping quality of mango
- Grading of mango fruits
- Packaging material for mango

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

7. Course Code: THAMT -07

Title: Value addition in Mango

- Target group: Mango Growers
- Duration: One day
- Month: May -June

- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive mango grower

Objectives

- To impart knowledge about principles of preservation of mango fruits
- To know processing technology for mango fruits
- To facilitate trainees about preparation of project proposal for small mango processing unit

Course Content

- Principles of preservation
- Processing of raw mango fruits
- Processing of ripe fruits
- Recipes of byproducts from mango
- Packaging of byproducts
- Establishment of small mango processing unit
- Project preparation

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Owners of Processing units

B. Sapota

1. Course Code: THAST -01

Title: Integrated Nutrient Management in Sapota

- Target group: Sapota growers
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Horticulture Nursery/ SAU / KVK

Objectives

- To develop knowledge about nutrient & micronutrient requirement of Sapota
- To sensitize about use of organic nutrients in Sapota
- To impart skill for application of nutrients

Course Content

- Role of nutrients in Sapota production

- Role of micronutrients in quality Sapota production
- Deficiency symptoms
- Nutrient requirement & scheduling
- Methods of application of nutrients

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

2. Course Code: THAST -02

Title: Integrated Pest management in Sapota

- Target group: Sapota growers
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Horticulture Nursery/ SAU / KVK

Objectives

- To develop knowledge about pests and diseases of Sapota
- To impart skill for pest management of sapota

Course Content

- Pests of sapota
- Diseases of Sapota
- Management of Seed borer
- Methods of application of pesticides

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

3. Course Code: THAST -03

Title: Canopy Management in Sapota

- Target group: Sapota growers
- Duration: One day
- Month: September to November

- Venue: District Training Center/ SAU / KVK / Progressive farmer's orchard

Objectives

- To understand need for training and pruning in Sapota
- To perform different pruning practices in Sapota
- To prepare & apply Bordeaux paste to the pruned branches

Course Content

- Concept of canopy management
- Pruning technology & its benefits
- Methods of pruning
- Pesticide application & after care

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

4. Course Code: THNST-04**Title: Pre and post harvesting techniques in Sapota**

- Target group: Sapota growers
- Duration: One day
- Month: May- June
- Venue: District Training Center/ Horticulture Nursery/ SAU / KVK

Objectives

- To develop knowledge about preharvest care of Sapota
- To impart skill for proper harvesting and post harvest practices in Sapota

Course Content

- Maturity signs
- Pre harvest care
- Harvesting techniques
- Post harvest care
- Storage and ripening of Sapota

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Progressive Farmers

5. Course Code: THAST -05

Title: Value addition in Sapota

- Target group: Sapota Growers
- Duration: One day
- Month: May -June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery/ Agril. Res. Station/ Field of progressive sapota grower

Objectives

- To impart knowledge about principles of preservation of sapota fruits
- To know processing technology for sapota fruits
- To facilitate trainees about preparation of project proposal for small sapota processing unit

Course Content

- Principles of preservation
- Processing of raw sapota fruits
- Processing of ripe fruits
- Recipes of byproducts from sapota
- Packaging of byproducts
- Establishment of small sapota processing unit
- Project preparation

Resource Persons

Master Trainers from DoA, Crop Scientists from SAU, KVK, Owners of Processing units

C.Cashew

1. Course Code: THACT -01

Title: Contour plantation of Cashew

- Target group: Farmers who have registered for Cashew plantation
- Duration: One day
- Month: May & June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery

Objectives

- To select and prepare proper land for cashew cultivation
- To impart skill to mark contours.
- To enable the trainees to prepare pits along the contours

Course Content

- Selection of site for cashew orchard
- Contour marking with A- frame or Tube level
- Preparation of contour trenches
- Preparation & Filling of pits
- Selection of good Cashew grafts
- Planting techniques for Cashew grafts
- Erection of fencing

Resource Persons

Master trainers, Horticulture officers and Cashew Scientists from SAU & KVK, Progressive Cashew growers

2. Course Code: THACT -02

Title: Rejuvenation of Senile Cashew Trees

- Target group: cashew growers
- Duration: One day
- Month: June to August
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery / Progressive Farmers' cashew orchard

Objectives

- To know causes of low productivity in old cashew trees
- To acquaint with the principles & practices of rejuvenation of cashew trees
- To improve nutritional management of senile cashew trees

Course Content

- Causes of low productivity in old cashew trees

- Nutritional management
 - Use of organic matter for old cashew trees
 - Conversion of local cashew trees into improved variety
 - Pest & disease management
 - Contour trenches & *Jalkunda* technology
 - **Resource Persons:**
Master trainers, Horticulture officers and cashew Scientists from SAU & KVK,
Progressive cashew growers
-

3. *Course Code: THACT -03*

Title: Integrated Pest Management in Cashew

- Target group: Cashew growers
- Duration: One day
- Month: May-June
- Venue: District Training Center/ Agropolyclinic / Govt. Horticulture nursery / Progressive Farmers' cashew plantation

Objectives

- To identify pests & diseases affecting cashew plants
- To know measure to manage the pests & diseases on cashew
- To acquaint with cashew plant protection schedule

Course Content

- Identification of Pests on cashew
- Identification of diseases affecting cashew
- Control measures for pest & diseases
- Use of neem oil
- Cultural practices for sanitation of cashew plantation
- Management of Tea mosquito on inflorescences
- Plant protection schedule
- Preparation of spray solution of pesticides

- Preparation of Bordeaux paste

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK, Progressive cashew growers

4. Course Code: *THACT -04*

Title: Cashewnut processing technology

- Target group: Cashew growers and willing entrepreneurs
- Duration: One day
- Month: December to March
- Venue : District Training Center/ Agropolyclinic / Cashew Processing Training center/
Cashew apple processing unit

Objectives

- To acquaint with the technology of processing of cashewnut
- To perform the operations involved in processing of cashewnut
- Prepare a project proposal for establishment of cashewnut processing unit

Course Content

- Scope for cashew processing industry
- Components of cashew processing industry
- Cashewnut processing technology
- Selection of cashew seeds for processing
- Boiling of cashew seeds
- Cutting of cashewnuts
- Drying of cashew kernels
- Grading of cashew kernels
- Packaging of cashew kernels
- Economics of small cashewnut processing unit
- Preparation of project proposal

Resource Persons

Master trainers, Horticulture officers and cashew Scientists from SAU & KVK,
Successful cashew apple processors

D. Vegetables

1. Course Code: THTVT-01

Title: Protected cultivation of vegetables

- Target group: Vegetable growers
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Agropolyclinic / ARS/ KVK

Objectives

- To acquaint the trainees to practices of Protected cultivation of vegetable
- To impart skill for establishment of shed net house & polyhouse

Course content

- Shednet house construction
- Polyhouse construction
- Good quality seed & seedlings
- Planting methods
- Preparation of beds
- Seedling treatment
- Uptake & requirement of nutrients
- Integrated Pest Management
- Harvesting techniques

Resource Persons

Master Trainers in DoA, Crop Scientists from SAU/ KVK, Progressive farmers

2. Course Code: THTVT -02

Title: Export Management in vegetables

- Target group: Vegetable Growers

- Duration: One day
- Month: January-February
- Venue: District Training Center/ Agropolyclinic

Objectives

- To create awareness about procedure for export of vegetables
- To impart knowledge & skill for grading and packing of vegetables

Course Content

- Harvesting techniques in vegetables
- Grading of vegetables
- Packing techniques
- Export procedure

Resource Persons

Master Trainers in DoA and Crop Scientists from SAU

E. Jasmine

1. Course Code: RGDJGT-01

Title: Package of Practices for production of Jasmine

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: September-October
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To create awareness about scientific production technology for Jasmine
- To orient the trainees about marketing management for Jasmine

Course Contents

- Selection of site for Jasmine cultivation
- Selection of varieties
- Layout for Jasmine cultivation
- Nutrition management

- Plant protection
- Harvesting techniques
- Packaging of Jasmine flowers

Resource Persons

Master trainers from DoA, Technologists from SAU/ Progressive growers

F. Special Activities

1. Course Code: THACTT -01

Title: Establishment of Community Tanks

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about selection of site for community tanks
- To enable the trainees to prepare estimates of construction of community tank
- To facilitate the trainees in planning for construction of community tank

Course Contents

- Selection of site
- Design of community tank
- Estimation of earthwork
- Preparation of estimate
- Planning for construction of community tank

Resource Persons

Master trainers from DoA

2. Course Code: THAGHT-01

Title: Construction & Management of Green House

- Target group: Beneficiaries under NHM
- Duration: Two days
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Green House Technology
- To know various components of Green House construction
- To facilitate the trainees in selection of crops to be grown under Green House conditions
- To impart skill for execution of various practices in Green House

Course Contents

- Principles of Green House construction
- Selection of site for Green House
- Components of Green House
- Selection of crop & varieties for cultivation in Green House
- Preparation of beds
- Fertigation management
- Plant protection in Green House

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

3. Course Code: THAPHT-01

Title: Construction & Management of Pack House

- Target group: Beneficiaries under NHM
- Duration: One day
- Month: October to December
- Venue: District Training Center/ Agropolyclinic / Horticulture Nursery/ SAU/ KVK

Objectives

- To impart knowledge about Pack House Technology
- To know various components of Pack House construction
- To impart skill for preparation of project for Pack House

Course Contents

- Scope for Pack House construction
- Selection of site for Pack House
- Components of Pack House
- Scheduling of crop & varieties for storage in Pack House
- Preparation of project proposal of Pack house

Resource Persons

Master trainers from DoA, Experts from Horticulture Training Center- Talegaon, Technologists from SAU/ Private firms

Project on Farmers Field Schools in Mango

Horticultural crops provide higher monetary returns consistently on a long term basis to farmers. Mango is grown widely and being promoted on large scale in Maharashtra. Recently both area and production of Mango is increasing, however farmers are facing problems like low productivity and low monetary returns mostly due to poor management of the orchards and weak linkage with market structure. A need for integrated approach for management of fruit crops is felt then. Considering the constraints in the area of quality production, productivity, and customer satisfaction there needs serious attention to integrated crop management in general and integrated pest management in particular.

Various approaches are being adopted for dissemination of technology and its adoption. However when problems need to be addressed holistically, and when management also becomes crucial, traditional methods of technology transfer becomes less effective. In case of Mango we need to address issues like:

- Nutrition management
- Pest management
- Management of Special Horticultural practices
- Intercropping
- Post harvest technology, grading, packing, processing & marketing etc.

Under such scenario we have to choose one of the best effective methods of technology transfer. With the initiative from Food and Agriculture Organisation the concept of Farmers' Field School has been widely adopted in India as an innovative extension tool. The FFS tool is well adopted by Department of Agriculture in Maharashtra especially for Cotton, Paddy and Sugarcane. The Experience of farmer's field school (FFS) in cotton has proved that it is one of the best approaches to disseminate sustainable technologies like IPM, INM, Agro-ecosystem analysis, monitoring and decision making accordingly. With adoption of farmer field school (FFS) approach farmers were not only trained in techniques of IPM, but they became trainers and partners in IPM movement which brought out a considerable relief on the front of pest management and also helped in spread of sustainable technologies like integrated crop

management which includes INM and organic farming. The theme of FFS is learning through participatory way. The features of FFS approach are as follows..

- Agro-ecosystem analysis and monitoring
- Use of indigenous exogenous pest management practices
- Farmers can develop their own IPM package
- Use of bio-pesticides & pesticides as per need
- Identification of friendly insects and ways to protect them
- Group dynamics- need for collective action

The FFS approach include-

- On farm training on a staggered basis throughout growing season of a crop
- Experiments to draw desired learning on farm visits
- Observation of agro-ecosystems & its analysis (AESA)
- Enabling farmers to take up decisions based on AESA
- Elements of group dynamics
- Farmers are encouraged to become trainers and to form partnerships with Govt. agencies and NGOs for further spread of technologies

Based on this experience now it is being proposed to introduce farmer field school concept in horticultural crops for their better management. To start the FFS approach on pilot basis the task group proposes 4 crops viz. Sweet Orange, Mandarin Orange, Pomegranate and Mango under National Horticultural Mission.

Objectives

- To develop healthy horticultural orchards
- To introduce integrated approaches to farmers for management of horticulture crops
- To increase productivity and quality of fruit crops
- To promote integrated pest management approach
- To promote integrated nutrient management approach
- To promote Post harvest technologies and marketing skills and there by increase net monetary returns of farmers
- To reduce cost of production

Training of Facilitators Curriculum For ToF Mango

Duration :- 90 days

I Fortnight (10th June – 30th June)

Technical Inputs	Group Dynamics	Participatory Activities / Skills
<ul style="list-style-type: none"> ○ Discussion on ToF selected fruit crops ○ Selection of field of new plantation, unmanaged and healthy orchard ○ Agro Eco-system (AES) concept ○ Agro Eco-system analysis (AESA) ○ Types of soil ideal for fruit crop ○ Collection of soil sample ○ Discussion on soil testing report ○ Preevaluation Test ○ Ballot Box Test ○ Pruning techniques in old orchards ○ Inter cropping of Cowpea, Soyabean for conservation of friendly insects 	<ul style="list-style-type: none"> ○ Introduction by chain ○ Grouping by Animal sounds or fruit crop ○ Nine dot game ○ Pen in bottle ○ Longest chain ○ Ten horses ○ Hot potato ○ ICM mantra ○ Drawing without lifting Pen ○ Broken Squares ○ Hot chili 	<ul style="list-style-type: none"> ○ Inauguration of ToF ○ Pre-programme or Pre-FFS discussion with farmers ○ Listing of 25 Mango growing farmers ○ Training Methodology ○ Visit to selected garden for crop study ○ Generally weekly frame work ○ Objectives of ToF and quality indicators ○ FSM (Facilitating Scientific Methods) ○ What is this? ○ What is that? ○ Difference between Teacher and Facilitator

II Fortnight (1st August to 20th August)

Technical Inputs	Group Dynamics	Participatory Activities / Skills
<ul style="list-style-type: none"> ○ Methods of plantation ○ Digging and filling of pits (one by each participants) ○ Short term experiment on Root & Plant vessels ○ Integrated nutrient management in Mango ○ Diseases of Mango fruit trees (specially new planted crop) ○ Weeds observation in Mango ecosystem & their management ○ Short studies on Aphids & Jassids ○ Disease Triangle ○ Short study on Bordeaux paste ○ Special horticultural practices (Ringing & culture application) 	<ul style="list-style-type: none"> ○ Water bridge ○ Longest line ○ Balloon bursting ○ Whisper communication ○ Drawing without lifting the pen 	<ul style="list-style-type: none"> ○ AESA observation drawing and presentation (2 times) ○ Effects of pesticides on human health ○ Experimental learning cycle ○ Adult learning principles ○ Practice FFS, village visits (2 times) ○ Motivation skills ○ NSKE preparation ○ Difference between Teacher & Facilitator ○ NSKE preparation ○ Short study on Neem and NSKE

III Fortnight (10th October to 30th October)

Technical Inputs	Group Dynamics	Participatory Activities / Skills
<ul style="list-style-type: none"> ○ Short Study on Bacterial Blight ○ Types of fungicides & their use ○ SS on biopesticide & biofertilizers ○ Special Topic on Drip Irrigation ○ Short Term experiment on Seed Germination to show bad effects of excessive irrigation ○ Study on types of pesticides & their mode of action ○ Mulching & its importance ○ Shed net/ Shed preparation ○ Spongy tissue management 	<ul style="list-style-type: none"> ○ Pen in Bottle ○ Talat malat ○ Blind walk ○ Three G ○ Musical chair 	<ul style="list-style-type: none"> ○ Special topic on vermicompost & vermiwash ○ BD compost & CPP preparation ○ AESA in 3 types of Orchards ○ FFS village visits (2 times) ○ AESA discussion follow up ○ Facilitation skill ○ Communication skills ○ Practice FFS planning

IV Fortnight (1st December to 20th December)

Technical Inputs	Group Dynamics	Participatory Activities / Skills
<ul style="list-style-type: none"> ○ Short study on Mango flowers & use of NAA to prevent flower drop ○ Special Discussion on fungicides ○ Types of traps ○ Mid evaluation test ○ Short term experiment on moisture holding capacity ○ Special Discussion on Insecticides & their mode of action ○ Short study on stone weevil ○ Special Discussion on biofertilizer & its role in mango production ○ Short study on Nursery Management ○ Special Discussion on rejuvenation of old Mango trees 	<ul style="list-style-type: none"> ○ Role play ○ What do you see ○ Zibbresh language ○ Tying Knot ○ Horse riding 	<ul style="list-style-type: none"> ○ Preparation of different ppm concentration solutions ○ AESA in 3 selected orchards ○ Installation in orchards ○ Visit to FFS village ○ AESA follow up ○ Visit to local orchards with scientists ○ Practical on grafting in mango ○ Study tour to other ToF

IV Fortnight (1st December to 20th December)

Technical Inputs	Group Dynamics	Participatory Activities / Skills
<ul style="list-style-type: none"> ○ Maturity Index ○ Marketing, grading, Handling of fruits & Export standards ○ Discussion on fruit processing ○ Methods of protection of young plants from high temperature ○ Irrigation methods for fruit crops ○ Post evaluation test ○ Field Day 	<ul style="list-style-type: none"> ○ Tower building ○ Watch the face ○ Psychological of farmers after losing coins in water ○ Role play 	<ul style="list-style-type: none"> ○ Visit to Mango processing unit

Farmers Field School (FFS)

The third and crucial phase of the FFS project is actual implementation of Farmers Field School. Essentially the FFS is organized at the farmers field. Each FFS is of 20 days duration during which 20 field visits are organized. The field visits are coincided with the production cycle of the fruit crop. The period from harvest of previous crop upto the harvest of next crop is treated as production period. The FFS is also organized in newly planted orchards. The decision is based on the local needs. At the end of FFS a Field Day is organized.

The FFS approach include-

- On farm training on a staggered basis throughout growing season of a crop

- Experiments to draw desired learning on farm visits
- Observation of agro-ecosystems & its analysis (AESAs)
- Enabling farmers to take up decisions based on AESAs
- Elements of group dynamics
- Farmers are encouraged to become trainers and to form partnerships with
- Govt. agencies and NGOs for further spread of technologies

Objectives:

- To enable the growers observe and analyse the Agro-eco System existing at his farm
- To enable the growers to understand the concept & principles of Integrated Crop management in fruit crops
- To enable the growers to take decisions based on Agro-eco System Analysis (AESAs)
- To enable the growers to execute the technological practices on his farm

Training Methodology

- Participatory training
- Discovery based learning through small experiments and exercises.
- Experiential learning
- Field work
- Interactive learning
- Sharing of experiences.
- Case studies.
- Inputs by Scientists/ Course co-ordinator

Management of FFS

- **Facilitators**

The Facilitators who are trained through ToF programmes will be given responsibility to organize the Farmers Field Schools. Each facilitator will conduct two FFS simultaneously in a year.

- **Farmers' Fields:**

The basic requirement of experiential learning during FFS is Farmer's field. It is proposed here to identify the orchards at different growth stages so as to save time. One of the orchards may preferably be belonging to Progressive growers and the other rather poorly managed.

Plan of Farmers Field Schools for Mango

Sr, No.	District	No. of Tahsils having dominant srea under Mango	No. of Facilitators	No. of FFS	No. of farmers
1	Sindhudurg	8	8	8	240
2	Ratnagiri	9	9	9	270
3	Raigad	8	8	8	240
4	Thane	5	5	5	150
	Total	30	30	30	900

List of Tahsils where FFS for Mango are proposed

Sr. No.	Name of District	Name of Tahsil	Name of Facilitator
1	Sidhudurg	1. Devgad	
		2. Kankavali	
		3. Malwan	
		4. Vaibhavwadi	
		5. Kudal	
		6. Vengurla	
		7. Sawantwadi	
		8. Dodamarg	
2	Ratnagiri	1. Mandangad	
		2. Dpoli	
		3. Khed	
		4. Chiplun	
		5. Sanameshwar	
		6. Guhagar	
		7.	
		8. Ratangiri	
		9. Lanja	
		10. Rajapur	
	Raigad	1. Mahad	
		2. Poladpur	
		3. Shriwardhan	
		4. Mangaon	
		5. Pali	
		6. Pen	
		7. Khalapur	
		8. Karjat	
	Thane	1. Wada	
		2. Vikramgad	
		3. Jawhar	
		4. Murbad	
		5. Shahapur	
	Total	30	30

Curriculum For FFS in Mango

Sr. No. of FFS	Technical Inputs	Participatory Activities
FFS-1 June 1 st FNT	1.Selection of field for new plantation. 2.Selection of one unmanaged & one healthy garden for study. 3.Visit to selected fields. 4.Drawing of soil sample.	1.Preprogramme discussion with farmers village leaders about FFS, decides time & day of FFS. 2.Listing of Twenty-five farmers for FFS.
FFS-2 June 2 nd FNT	1.Special discussion on soil types & ideal soil for fruit crop. 2.Discussion on soil testing reports.	1.Discussion of problem faced by the farmers. 2.Grouping of farmers by animal sound & give name to these groups by fruit crops. 3.G.D. Introduction by chain method.
FFS-3 July 1 st FNT	1.AESA in new unmanaged & healthy garden. 2.B.B.T. (Ballot Box Test) to evaluate depth of farmers' knowledge for planning. 3.Discussion on varieties of Mango & their significance. 4.Interculture operation in sick gardens.	Practical filling of pits & plantation. (Some of plants) G.D. Longest line.
FFS-4 (July 2 nd FNT)	1.AESA in old orchards. 2.Intercropping of short duration crops Viz. Onion, Tomato, Cowpea, Watermelon etc.	G.D. Water Bridge
FFS-5 (August 1 st FNT)	1.AESA in unmanaged & new-planted garden. 2.Short study on Aphid & Jassid.	1.Participatory preparation of NSKE. 2.G.D. Balloon Bursting

	3.NSKE preparation.	
FFS-6 (August 2 nd FNT)	1.AESA in unmanaged healthy & new garden. 2.Discussion on special horticultural practices like ringing in Mango and Cultar (Paclobutrazol) application. 3.Integrated nutrient management and role of micronutrient.	1.G.D. Whisper Communication. 2.Cultar application in some of plants.
FFS-7 (September 1 st FNT)	1.AESA in unmanaged healthy & new garden. 2.Short study on bacterial blight of Mango. 3.Types of fungicides & their use.	G.D. Drawing without lifting pen to understand planning is essential before any work.
FFS-8 (September 2 nd FNT)	1.AESA in all three orchards. 2.Short term expt. Of seed germination to show the bad effect of excessive irrigation. 3.Special discussion on types of pesticides & their mode of action.	G.D. Blind Walk
FFS-9 (October 1 st FNT)	1.AESA in all three orchards. 2.Short study on Biopesticides & Biofertilizers. 3.Special tonic on drip irrigation.	G.D. Talat Malat
FFS-10 (October 2 nd FNT)	1.AESA in all three orchards. 2.Short study on earthworm. 3.Special topic on vermicompost & vermiculture.	G.D. Pen in Bottle
FFS-11 (November 1 st	1.AESA in all three orchards.	G.D. Tower Building

FNT)	2.Short study on Tricoderma production & use. 3.B.D. Composting C.P.P., Nadep etc.	
FFS-12 (November 2 nd FNT)	1.AESA in all three orchards. 2.Short study on Inderbela (Boric borer). 3.Special discussion on Bordopaste & Bordo mixture application.	1.Participatory preparation of Bordopaste & Bordo mixture. 2.G.D. Talat Malat
FFS-13 (December 1 st FNT)	1.AESA in all three orchards 2.Short study on mulching & its importance 3.Importance of pruning & field sanitation	Psychological testing for lose of Water & Coins
FFS-14 (December 2 nd FNT)	1.AESA in all three orchards 2.Short study on Mango flowers & use of NAA to prevent flower & fruit drop 3.Special study on types of traps specially for fruit fly	G.D. Longest Line
FFS-15 (January 1 st FNT)	1.AESA in all three orchards 2.Short study on mulching of fruit trees in old & new gardens 3.Methods of protection of small plants of 1-2 years from high sunlight	G.D. Gibbrish Language
FFS-16 (January 1 st FNT)	1.AESA in all three orchards 2.Short study on rejuvenation of old trees 3.Special topic & pesticides recommendation & protection of flowers	G.D. Balloon Bursting

FFS-17 (February 1 st FNT)	1.AESA in all three orchards 2.Short study on moisture holding capacity to decide irrigation interval 3.Special study on stem parasite Bandgul and its management	G.D. Tying Knot
FFS-18 (February 2 nd FNT)	1.AESA in all three orchards 2.Vermiculture & Vermicompost study and use	G.D. What do you See
FFS-19 (March 1 st FNT)	1.AESA in selected three orchards 2.Short study on nursery management & grafting methods 3.Discussion on fruit processing & marketing	

Model Calendar of Work

Amaravati

Course Code: AMROT-01

Title: Phytophthora Control in Orange

- Target group: Orange growers
- Duration: Two days
- Month: September – October
- Venue: District Training Center/ Agropolyclinic / KVK /ARS/ NRC/ SAU Farm/ Progressive Farmers' Orange orchard

Objectives

- To develop understanding about causes & symptoms of Phytophthora disease in Orange
- To develop knowledge & skill in pruning of decayed roots & dried branches
- To develop knowledge & skill in application of Redomil & Bordeaux paste

Course Content

- Symptoms of Phytophthora
- Causes of Phytophthora
- Pruning of shoots
- Digging of Beds
- Pruning of roots
- Drenching with Ridomeal
- Application of neem cake, biopesticide & biofertilizers
- Application of Bordeaux paste
- Drenching of Bordeaux Mixture
- Irrigation methods to prevent Phytophthora

Training Plan

Session	Time (min.)	Topic	Training Method	Training Aids	Resource Person	Place
<i>Day 1</i>						
	09.00-09.30	Registration, Inauguration	-	-	SDAO/ TAO/ TO	
	09.30-09.45	Icebreaking, Pre evaluation	-	-	Course Coordinator	Training Hall
I	09.45-10.45	Symptoms & Causes of Phytophthora	Interactive Lecture, Demonstration	Chart, Photograph, CD/ Film	Scientists from SAU, KVK	Farm
	10.45-11.00	Tea				
II	11.00-13.00	Pruning of shoots	Demonstration	-	Master Trainer	Farm
	13.00-13.30	Lunch				
III	13.30-14.30	Digging of Beds	Demonstration, Hands on exercise	-	Master Trainer	Farm
IV	14.30-15.30	Pruning of roots	Demonstration, Hands on exercise	-	Master trainer	Farm
	15.30-15.45	Tea	-			
V	15.45-16.45	Drenching with Ridomeal	Demonstration, Hands on exercise	-	Master trainer	Farm
VI	16.45-17.30	Preparation of Bordeaux Paste (Soaking of ingredients)	Demonstration, Hands on exercise	-	Master trainer	Farm
	17.30	Consolidation of Learning			Course Coordinator	
	18.00	Close				
<i>Day 2</i>						
	09.00-09.30	Recap of Day1	-	-	Course Coordinator	-
VII	09.30-10.45	Preparation of Bordeaux Paste & B. Mixture	Demonstration, Hands on exercise	-	Master trainer	Farm
	10.45-11.00	Tea				
VIII	11.00-13.00	Application of Bordeaux Paste to stem	Demonstration, Hands on exercise	-	Master trainer	Farm
	13.00-13.30	Lunch				
IX	13.30-14.30	Application of neem cake, biopesticide & biofertilizers covering the roots	Demonstration, Hands on exercise	-	Master trainer	Farm
X	14.30-15.30	Drenching of Bordeaux Mixture to root zone	Demonstration, Hands on exercise	-	Master trainer	Farm
	15.30-15.45	Tea				
XI	15.45-17.00	Irrigation Methods to prevent Phytophthora	Demonstration,	-	Master trainer	Farm
	17.00-17.15	Course Evaluation	-	-	Course Coordinator	-
	17.15-17.30	Concluding	-	-	SDAO/ TAO/ TO	-

- **Training Material required** : Implements for digging of beds, sand paper to scrap the gum, water, wooden stick, copper sulphate, lime, neem cake, biopesticide (Trichoderma spp.) biofertilizers (PSB) litmus paper, etc.

Course Code: AMROT-03

Title: Rejuvenation of Declined Orchards

- Target group: Orange growers who have applied for rejuvenation
- Duration: One day
- Month: September to December
- Venue: District Training Center/ Agropolyclinic / KVK / Progressive Farmers' Old Orange orchard

Objectives

- To develop knowledge and skill in effective pruning of Orange trees
- To motivate farmers to adopt rejuvenation practices for old gardens

Course Content

- Pruning
- Application of fertilizers
- Plant protection
- Preparation of Bordeaux Paste & use
- Time of pruning

Training Plan

Session	Time (min.)	Topic	Training Method	Training Aids	Resource Person	Place
	09.00-09.30	Registration, Inauguration	-	-	SDAO/ TAO/ TO	
	09.30-09.45	Icebreaking, Pre evaluation	-	-	Course Coordinator	Training Hall
I	09.45-10.45	Need for Rejuvenation	Interactive Lecture, Demonstration	Chart, Photograph, CD/ Film	Scientists from SAU, KVK	Training Hall
	10.45-11.00	Tea				
II	11.00-13.00	Pruning Technology	Demonstration	-	Master Trainer	Field
	13.00-13.30	Lunch				
III	13.30-14.30	Application of Fertilizers	Demonstration, Hands on exercise	-	Master Trainer	Field
IV	14.30-15.30	Application of Fertilizers	Demonstration, Hands on exercise	-	Master Trainer	Field
	15.30-15.45	Tea	-			
V	15.45-16.45	Preparation of Bordeaux Paste	Demonstration	-	Master Trainer	Field
VI	16.45-17.30	Application of Bordeaux Paste	Demonstration, Hands on exercise	-	Master Trainer	Field
	17.30-17.45	Course Evaluation	-	-	Course Coordinator	-
	17.45-18.00	Concluding	-	-	SDAO/ TAO/ TO	-

- **Training Material:** Secator, saw, fertilizer, CuSo₄, Lime, Brush, water etc.

Proforma I

(To be filled in by trainee before start)
Pre training Evaluation

- ✚ Title of the course _____
- ✚ Duration _____, Period _____
- ✚ Name of Trainee _____, Village _____
- ✚ Age _____, Education _____
- ✚ Experience in Training _____
- ✚ Land Holding _____
- ✚ Address: - _____

Proforma II

(To be filled in after training)
Post Training Evaluation

- ✚ Title of the course _____
- ✚ Duration _____, Period _____
- ✚ Name of Trainee _____, Village _____
- ✚ Age _____, Education _____
- ✚ Experience in Training _____
- ✚ Land Holding _____
- ✚ Address: - _____

1. Practicewise Knowledge, Skill and Adoption

Sr No.	Practice/ Subject to be covered in training	Knowledge			Skill			Adoption Yes/ No
		1	2	3	1	2	3	

(Note: 1-Low, 2-Moderate, 3- High)

2. Immediate needs of training with regard to subject to be taught

3. Expectations from the training course

Signature

Coverage and utility of training contents.

Sr. No.	Subject Taught	Practical utility			Coverage		
		MU	U	NU	WC	PC	NC

(MU- Most Useful, U- Useful, NU- Not useful
WC- Well Covered, PC- Partially Covered, NC- Not Covered)

Opinion about auxiliary aspects

- **Lodging - Satisfactory / Unsatisfactory**
- Boarding - Satisfactory / Unsatisfactory
- Transport- Satisfactory / Unsatisfactory
- Classroom teaching- Satisfactory / Unsatisfactory
- Use of AV Aids- Satisfactory / Unsatisfactory
- Reading material- Satisfactory / Unsatisfactory
- Conduct of Demo/practical/Field visits- Satisfactory / Unsatisfactory
- Punctuality in conducting programme- Punctual/ Unpunctual
- Suggestions for future :

Signature

List of Agriculture Research Stations in Konkan

Sr. No.	Name and Address of Research Station	Contact No.
1.	Director Of Research, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli	0258-282026/282411
2.	Head, Department of Horticulture, Dr. BSKKV, Dapoli	0258-282026/282415
3.	Farm Director, Central Research farm, Wakavali Tal. Dapoli	02358-286824/ 286843
4.	Associate Director of Research, Karjat Dist: Raigad	02148-222035/220862
5.	Associate Director of Research, Vengurla, Dist: Sindhudurg	02366-262234
6.	Agronomist, Agriculture Research Station, Palghar Dist: Thane	025255-22397
7.	Agronomist, Regional Coconut Research Station, Bhatye Dist: Ratnagiri	02352-235077
8.	Agronomist, Agriculture Research Station, Phondaghat Tal: Kankavali Dist: Sindhudurg	02367-235236
9.	Horticulturist, Mango Research Station, Girye Tal: Devgad Dist: Sindhudurg	02364-245247
10.	Kharland Scientist, Kharland Research Station, Panvel	022-27452775
11.	In Charge, Agriculture Research Station, Muldye, Tal: Kudal Dist: Sindhudurg	02362-222464

List of Agro-Polyclinics in Konkan

Sr. No.	District	Agropolyclinic
1.	Thane	Khutal
2.		Wada
3.		Palghar
4.		Pelhar
5.		Dapcheri
6.		Chavindra
7.	Raigad	Khopoli
8.		Lonere
9.		Vaishvi
10.		Kondivate
11.		Dehen
12.		Killa
13.	Ratnagiri	Palshet
14.		Bharane
15.		Mundhe
16.		Pomendi
17.		Nive
18.		Juvati
19.	Sindhudurg	Mangaon
20.		Dhamapur
21.		Nandgaon