## **Training Schedule**

## Beekeeping (650)

S.No	Sche	dule	Theory (40	Hrs)	Practical (80 Hrs)		Instructions to the trainer	<b>Learning Outcomes</b>
	Week	Day	Торіс	Hours	Topic	Hours		(After going through the particular PCP learner will be able to)
1.	Week 1	Day 1	Introduction to beekeeping	2	<ul> <li>Visit to an apiary</li> <li>Identify various bee hive products</li> </ul>	3	<ul> <li>Use relevant PPTs/videos showing the usefulness of honeybees from agricultural, environmental and industrial point of view and scope of income.</li> <li>Show relevant success stories of nearby locality.</li> <li>Arrange visit to nearby apiary in advance.</li> </ul>	Display intellectual competence on the knowledge about the usefulness of honeybees in agriculture, environmental and industrial point of view and scope of income.
2.		Day 2	The World of honeybees	2	<ul> <li>Identification of honey bee species</li> <li>Identify different castes of honey bees</li> <li>Identify different body parts of honey bees</li> <li>Demonstrate life cycle of honey bees</li> </ul>	3	using models, charts and specimen.	<ul> <li>Identify honey bee species and different body parts of honey bees</li> <li>Compare between queen, worker and drone and distinguish egg, larva, pupae and adult</li> <li>Explain bee behaviour and evaluate</li> </ul>

								communication methods & style used by bees
3.	Week 2	Day 1	Beekeeping equipments	3	• Identification of beekeeping equipments and their use	2	<ul> <li>Use models and charts to explain different parts of hive, tools and beekeeping equipments.</li> <li>Explain and demonstrate handling bee-keeping tools.</li> <li>Demonstrate use of different beekeeping equipments and their maintenance.</li> </ul>	<ul> <li>Identify standard beehives and various parts of hive and tools and equipments</li> <li>Handle and maintain beekeeping tools for various systems</li> </ul>
4.		Day 2	-	-	<ul> <li>Assembling and dissembling a beehive</li> <li>Lighting a smoker</li> </ul>	5	<ul> <li>Demonstrate         Assembling and dissembling a beehive and allow learners to practice it.     </li> <li>Explain precautions to be taken while lightening a smoker.</li> </ul>	<ul> <li>Assemble and dissemble a beehive</li> <li>Light a smoker and take necessary precautions while lightening a smoker</li> </ul>
5.	Week 3	Day 1	Apiary site selection	3	Installing packaged bee colony	2	<ul> <li>Explain different sites suitable for beehives using PPTs/charts/videos etc.</li> <li>Explain precautions to be taken while handling beehives.</li> </ul>	Install packaged bee colony taking proper precautions while handling beehives.
6.		Day 2	-	-	• Catching a stray swarm from a post or tree	5	Demonstrate procedure and precautions to be followed.	• Catch a stray swarm from a post or tree taking precautions while demonstrating procedure

7.	Week 4	Day 1	Apiary management	2	<ul> <li>Transferring Nucleus to hive box</li> <li>Bee colony inspection</li> <li>Identification and selection of strong colonies</li> </ul>	3	<ul> <li>Explain concepts of apiary management using relevant ppts and videos.</li> <li>Explain precautions to be taken while doing various procedures.</li> </ul>	<ul> <li>Transfer nucleus to hive box</li> <li>Inspect Bee colony and identify and select strong colonies</li> </ul>
8.		Day 2	<ul> <li>Ensuring cleanliness and hygiene of beehive</li> <li>Maintenance of data and Record keeping</li> </ul>	2	<ul> <li>Divide/ multiply the bee colony</li> <li>Uniting the bee colonies</li> </ul>	3	<ul> <li>Explain precautions to be taken while doing various procedures.</li> <li>Demonstrate procedures to be followed to maintain cleanliness and hygiene of beehive.</li> </ul>	Divide/ multiply and unite the bee colonies
9.	Week 5	Day 1	Pollination process and construct a flowering calendar for various season	2	Preparation of comb foundation sheets Installing/ Fixing and storage of comb foundation sheets	3	<ul> <li>Explain concepts using relevant PPTs and videos.</li> <li>Explain precautions to be taken while doing various procedures.</li> </ul>	<ul> <li>Prepare comb foundation sheets</li> <li>Install/ Fix and store comb foundation sheets</li> </ul>
10.		Day 2	-	-	<ul> <li>Artificial feeding to honey bees</li> <li>Identification and management of pesticide poisoning in honey bees</li> </ul>	5	<ul> <li>Explain concepts using relevant PPTs/ videos.</li> <li>Demonstrate precautions while doing various procedures.</li> </ul>	<ul> <li>Feed honey bees     Artificially</li> <li>Identify and manage     pesticide poisoning in     honey bees</li> </ul>
11.	Week 6	Day 1	Pests and diseases in beehives	3	<ul> <li>Identification of Insect- Pests affecting bees</li> <li>Diagnosis of diseases in bees</li> </ul>	2	<ul> <li>Explain bee insect-pests, diseases and symptoms using videos/PPTs/charts and specimen.</li> <li>Explain precautions to be</li> </ul>	• Identify Insect- Pests affecting bees • Diagnose diseases in bees

							taken while handling bees.	
12.		Day 2	-	-	Management of major insect- pest and diseases by preventive and curative methods	5	<ul> <li>Explain bee pests and diseases management using videos, PPTs, charts and specimen.</li> <li>Explain precautions to be taken while handling and treating bees.</li> </ul>	Manage major insect- pest and diseases and applying preventive/ curative methods
13.	Week 7	Day 1	Bee breeding and queen rearing	2	Different methods for breeding and queen rearing	3	<ul> <li>Explain topic using videos/ PPTs /charts and specimen.</li> <li>Explain precautions to be taken while handling bees.</li> <li>Explain Artificial insemination technique using videos/ PPTs.</li> </ul>	<ul> <li>Explain different methods for breeding and queen rearing</li> <li>Explain Artificial insemination technique</li> </ul>
14.		Day 2	Migration of bee colonies	2	Procedure for migration of bee colonies	3	<ul> <li>Explain purpose for migration of bee colonies and quarantine procedure using suitable audio video aids.</li> <li>Explain precautions to be taken while handling bees.</li> </ul>	<ul> <li>Explain purpose for migration of bee colonies and quarantine procedure</li> <li>Handle bees with recommended precautions</li> </ul>
15.	Week 8	Day 1	<ul> <li>Packing of beehive while migration</li> <li>Practice precautions</li> </ul>	2	<ul> <li>Packing of beehive while migration</li> <li>Practice precautions while migration</li> </ul>	3	<ul> <li>Use relevant videos/ PPTs for explaining the topic.</li> <li>Demonstrate procedure for packing of</li> </ul>	Pack beehives while migration taking recommended precautions

			while migration				beehive while
							migration.  • Explain and show
							precautions to be taken while migration.
16.		Day 2	Harvest, Processing and Marketing of Honey	2	Apiary and processing plant visit for overview of the harvesting and processing of bee hive products	3	<ul> <li>Explain right time and right equipments to be used to harvest, process and market honey using relevant videos/ppts etc.</li> <li>Arrange for apiary visit in advance.</li> <li>Explain and show precautions to be taken while following</li> <li>Predict right time and right equipments to be used to harvest, process and market honey</li> <li>Explain and take precautions while different procedures.</li> </ul>
17.		Day 1	-	-	<ul><li> Harvesting of a honey comb</li><li> Extraction of honey</li></ul>	5	<ul> <li>Explain and demonstrate procedure for harvesting of a</li> <li>Explain and demonstrate procedure for harvesting of a</li> <li>Harvest honey comb and extract honey taking precautions for</li> </ul>
					from honeycomb		honey comb and harvesting quality extraction of honey. honey.
							<ul> <li>Explain handling of accidents and necessary actions to be taken to reduce further danger.</li> <li>Handle accidents and take necessary actions to reduce further danger.</li> </ul>
	Week 9						<ul> <li>Explain precautions to be taken for harvesting quality honey.</li> </ul>
18.		Day 2	-	-	• Processing of extracted honey	5	• Explain and demonstrate procedure honey and test for
					<ul> <li>Packaging and storage of honey</li> </ul>		for processing of quality. extracted honey.  • Adopt recommended
					• Quality testing of		<ul> <li>Explain and demonstrate proper</li> </ul> Packaging and storage

					honey		storage and packaging of honey.  Explain Trade mark details and how to maintain quality of honey.  Explain precautions to be taken while following different procedures.	techniques of honey
19.	Week 10	Day 1	Harvesting and Processing of bees wax	2	Extraction and purification of beeswax	3	<ul> <li>Explain right time and right equipments to be used to harvest the other beehive products using videos PPTs etc.</li> <li>Demonstrate extraction and purification of bee wax.</li> <li>Explain precautions to be taken while following extraction and purification of beeswax.</li> </ul>	<ul> <li>Predict right time for harvesting of honey and other bee hive products</li> <li>Use correct equipments for harvesting of honey the other beehive products</li> <li>Extract and purify bee wax.</li> </ul>
20.		Day 2	Harvesting and storage of other beehive products	2	Harvesting and storage of other beehive products	4	<ul> <li>Demonstrate harvesting and storage of different beehive products.</li> <li>Explain precautions to be taken while following procedures.</li> </ul>	<ul> <li>Harvest and store different beehive products at appropriate time taking precautions while doing procedures.</li> </ul>
21.		Day 1	• Key- Entrepreneurshi p skills	3	Communication and writing skills	2	• Explain Key- Entrepreneurship skills using PPTs/ videos/	<ul><li>Develop basic entrepreneurial skills</li><li>Use effective</li></ul>

			Communication				role play	communication and
	Week 11		and writing skills				Explain effective communication and writing skills using relevant PPTs/ videos.	writing skills
							• Conduct pre and post training test to assess the understanding of learner to run an enterprise.	
							<ul> <li>Explain appropriate ways to establish cordial relations with various clients for developing the business.</li> </ul>	
							<ul> <li>Explain learners to ensure quality of the produce to get higher returns.</li> </ul>	
22.		Day 2	-	-	• Field visit to get prices of various inputs from the market and to assess the need and requirement of the client.	5	<ul> <li>Arrange market visit to get prices of various inputs from the market.</li> <li>Demonstrate to assess the need and requirement of the client.</li> </ul>	<ul> <li>Perform market survey for demand analysis</li> <li>Calculate the Cost-Benefit ratio of Beekeeping business</li> </ul>
							<ul> <li>Explain ways to identify appropriate buyers for the</li> </ul>	

							produce.	
23.	Week 12	Day 1	Business plan to start a beekeeping enterprise	1	<ul> <li>Make a business plan to start a beekeeping business.</li> <li>Make a financial and budget plan to start a beekeeping farm.</li> </ul>	4	<ul> <li>Explain, prepare and share a business proposal for easy understanding of learner.</li> <li>Explain record maintenance.</li> <li>Demonstrate best ways of marketing one's produce.</li> </ul>	• Prepare a business plan for small beekeeping enterprise
24.		Day 2	Revision and doubt clearance	5	-	-	<ul> <li>Revision of tough topics to be done.</li> <li>Class test may be conducted.</li> </ul>	doubts cleared
		Total		40		80		