REPORT ON
SKILL–CUM TECHNOLOGY UPGRADATION PROGRAMME (STUP)

APICULTURE TRAINING & EXPOSURE TRIP CONDUCTED BY KEYSTONE WITH FINANCIAL ASSISTANCE FROM SIDBI, TIRUPUR

Keystone – A Group for Eco-development Initiatives
Post Box 35, Kotagiri,
The Nilgiris

HONEY HUNTERS TRAINING PROGRAMME

4th May 1998 at
Cintra, Kotagiri

Honey hunters from Kotagiri, Coonoor taluk and one person from Talawadi Hills participated in this one-day training programme. The Kurumba honey hunters collect honey from high rock cliffs and trees while the Irulas collect generally from trees. Each group has one or two skilled hunters who climb on the ladder to collect honey and the rest play different roles for a succesful harvest.

The main aim of the training programme was to expose the tribals to improved methods of honeyhunting, honey extraction and bees wax processing

The issues discussed in the meeting were as follows:

1. How to improve the quality of the honey while it is collected from the forest
2. How to extract wax - additional income
3. How honey can be collected with minimum damage to the brood portion
4. Value of pollen & its marketability
5. Feasibility of forming a network amongst honeygatherers in the Nilgiris

a. Hygenic Honey: Honey is a food item, it has to be clean and free from any foreign contaminating matter. This ensures the shelf life of honey. For this squeezing of the comb with hands has to be avoided. Instead, honey has to be extracted by cutting the mid-rib of the comb (lateral) and then cutting the comb into smaller pieces. These pieces have to be put together in a clean white cloth and suspended for selfdraining. The honey collected by this method ensures a better price for the tribals.

b. The part of the comb which contains pollen has to be removed before cutting the mid–rib Though all the pollen cannot be removed it can be separated from the honey from the surface after settling. Pollen has a high nutritive value and is marketed abroad.

c. Bees wax can not only extracted from honey combs but also can be taken from the brood part. Bees wax is also considered more valuable than honey, so should not be wasted. The different uses of wax were explained to the tribals, with the help of the product collection in The Hive.

d. When colonies are located on the tree branches it is possible to cut only the honey part of the comb. This is so that the honeyhunter can get a second harvest and also to keep alive a generation of brood.

e. The variations in the price received by the honeyhunters were discussed. Steps to undertake more organised honey collection to utilise all the existing resources. The idea of starting up a network amongst all the honey collectors to guard their price and share information on techniques, methods and equipment used.

f. Creating awareness about sustainability - the group discussed about leaving certain honey combs to maintain the strength of the population of bees. A number of cliffs are not harvested traditionally as they are considered sacred. This is the tribal's way of leaving a reserve or a sort of a gene pool.

The honeyhunter groups were shown the solar wax extractor and other simple equipment for honey and wax extraction.

List of villages and participants:

S. No.	Name of Village	Name of Participants	Number
1.	Vellericombai	Krishna, Jogi, Raman	3
2.	Vagapanai	Selvraj, Dandapani, Katturaja, Mahalingam	4
3.	Semmanarai	Visunathan, Mathan, Rengasamy, Rengan, Rasu, Mani, Cinnaraman, Balan, Ramasamy	9
4.	Nedungalcombai	Nanjundan, Masanan, Rengan	3
5.	Baviyoor	Allan, Mani	2
6.	Kozhikorai	Chandran, Mani, Rengan, Raju	4
7.	Sengal Pudur	Gopal, Mani, Raghu, Arjunan	4
8.	Kozhithurai	Lakshmanan, Raman	2
9.	Thalawadi	Sivakumar	1
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FIELD DIARY FROM THE
EXPOSURE TRIP TO KARNATAKA
by KEYSTONE STAFF

16th - 19th May, 1998

Members

Ayyasamy	- Village Kozhithurai
Chandran	– Village Kil Koop
R. Krishna	– Village Vellerikombei
J. Miller Ashok	- Marketing Assistant
Robert Leo	- Field Manager
Snehlata Nath	- Director

Route Taken

The team drove from Kotagiri- Ooty- Kallahati Road- Masinagudi- Theppakadu- Gudalur- Devar Sholai- Bider kadu - Sultan Battery- Mananthvadi- Kolpetta - Wyanaad Sanctuary - Kutta - Srimangala - Ponnampet- Virajendrapet- Kakkabe- Honey Valley Apiary- Baghamandala- Madikeri- Periyapatna- Hunsur- Mysore- Nanjungud- Chamaraj Nagar- Yelandur- B.R.Hills- Chamrajnagar- Pulanjur- Bannari- BhavaniSagar- Mettupalayam- Kotagiri.

Places Visited

Coorg	Honey Valley Apiary, Suresh Chengappa's Farm
	Baghamandala - Beekeeping Training Institute Progressive Beekeepers Co-operative Society
	Talai Cauvery - Few Beekeepers & Honey Trader, Mr. Naik
	Madikeri - Vasanth Industries
B.R. Hills	BCN Project related to Honey and other NTFPs
	Activities of Vivekanand Girijan Kalyan Kendra (VGKK)

Notes from along the way

Gudalur area has some undisturbed patches of Shola and bamboo patches, interspersed with coffee plantations. There are also large areas taken over by TanTea and the Woodbriar Estate for tea plantations. Further down there are paddy fields in the valley and tea on the slopes. This is also a dense tribal zone. We saw some tribal communities in the market, mainly Paniyas.

Before Sultan Battery, there are big bamboo plantations and good forest. Also begins a typical Kerala type of vegetation. This also is a big coffee belt, mainly robusta, starting at Gudalur and ending at Madikeri. The whole economy and industry revolves around coffee. There was also some timber logging from coffee areas.

The Waynaad Sanctuary area is full of teak plantations which are also being logged. This is much greener than the adjacent two sanctuaries - Mudumalai and Bandipur. and is undeveloped for tourism. Inner areas are forests and bamboo - typical elephant habitat.

I. Suresh Chengappa's Farm: Honey Valley Apiary

Once the largest producer of honey in Asia, his farm had more than 500 colonies of *Apis cerana*. After the Thai Sac Brood Virus destroyed most of the colonies, he has lost interest in beekeeping and all the boxes are piled up outside. In some of the supers with combs, bees have started staying again. We saw 3 such colonies.

We also saw some bees in very old boxes with broken frames. He has placed newspapers above the colony, under the top cover, to prevent sunlight, and make it dark. On discussions, he advised the following:

* Remove all 1 year old combs from the boxes
* Check the box every 10 days

We observed, that the colonies and boxes are kept in the open with no protection from ants, animals, etc. They are treated more naturally, yet the colonies do not abscond. In our area - we take a lot of care yet the colonies go away. What could be the reason?

He has a large area - 60 acres, so he is sure that even if there is absconding it will remain in his land. In our villages, which are small and have a lot of households it is difficult for this to happen. A large area of undisturbed land could be a factor which increases bee populations.

He also has his own biogas and hydropower, which the team saw.

II. Baghamandala/ Talai Cauvery

On arrival, we met Mr. Naik at his hotel and he told us about the olden days of beekeeping in his area when he used to collect large quantities (upto 2 lakh kgs) of AC honey. Now the production is down to

5000 Kgs. At Talai Cauvery way we saw two working bee hives. The bees of this area are very dark. From one one box with 3 supers they get 5-6 kgs of honey during one extraction. They can do two such extractions in a year.

However, now the focus has shifted to *Apis dorsata* and traders, like Mr. Naik, employ local tribals and villagers to collect honey. We met one such collector - they make a fire under the comb to drive away bees, which usually nest on trees. The practice sounds very destructive. Mr. Naik sells this honey under the brand of Sri Cauvery, buying honey for 60/- from tribals and selling for Rs. 100/- in bulk.

Sri Cauvery rates

200 gms	Rs. 34.00
500 gms	Rs. 74.00

In his shop, he has local AD honey without label and proper bottle. The sales prices were as follows:

180 ml	Rs. 25.00
750 ml	Rs. 80.00
1000 gms	Rs.110.00

The local rates in the Society, without labels are:

AD - 1000 gms - Rs. 50.00
AC - 1000 gms - Rs. 70.00

These rates were taken in detail, to compare with our rates and turnovers.

III. Progressive Beekeeper's Co-operative Society, Baghamandala

Once, the Society had 6000 members, now they have 1500 members only. This has reduced due to low beekeeping activity in the area. The society acts like a nodal point for both sale of honey and for providing tools and equipment for beekeeping. Now the Society receives only *Apis dorsata* honey. They process the honey in the conventional manner - with Purohit Machinery - i.e. heating the honey in a double boiler upto 60°C, pressure filtering the honey and then allowing it to cool. The honey is allowed to settle before it is bottled. This machine has a 300 kgs processing capacity per 8 hours. The bottles are of standard Agmark/Khadi type.

Purchase price: They buy honey for Rs. 62.50 per kg. At the end of the year, they distribute bonus. Last year it was more than R. 6.00 per kg.They buy wax for Rs. 70.00 and process and sell for Rs. 110.00. They also make wax foundation sheets - 1 super sheet costs Rs. 3.00. The tanks for processing bees wax are well constructed–the tanks are inside the building, whereas the firing with wood is done from outside.

Coorg Honey Rates - *Apis dorsata*

50 gms	10.00
100 gms	16.00
200 gms	28.00
500 gms	55.00
1000 gms	134.00
Loose honey	75.00 per Kg

Packaging

Carton 200 gms x 36 bottles - 4mm thickness carton
100 gms x 50 bottles - 4mm

The team saw different items - comb foundation sheets, smoker, extractors, etc. and purchased a sample bee box and queen gate.

IV. Beekeeping Training Institute, Baghamandala

We met some teachers and saw the museum of beekeeping. In the museum there were many kind of boxes and equipment:

1. Himachal Pradesh - Italian Bees with a frame of approx 2'
2. Ooty/Coonoor - small boxes of 6.5"
3. Coorg Pattern Bee Hive
4. British Bee Hive
5. Double Wall Langstroth Hive
6. Bee Pot
7. Log Hive
8. Mating Nucleus Hive
9. Alexander Feeder
10. Miller Feeder
11. Bottle Feeder
12. Top Round Feeder
13. Bee Swarm catcher

(These are some types noted down by Miller)

The team saw many books and posters on beekeeping. The FAO Programme has put up a big mesh in which they keep the colonies. There are training schools and classes in which regular training programmes are held. These are diploma beekeeping courses.

V. Sannapulikottu

This is a small village 3 kms before Baghamandala, where an Apiary has been set up through the FAO project. This place is maintained by D.B. Raju and his wife, Mala. We also stayed the night at the centre and the couple was very co-operative and friendly. Next morning Raju showed us the apiary and the following main points emerged:

* The centre has 20-25 working hives
* There is no need to put a top cover in summer
* He prepares feeding syrup by mixing 1:2 sugar to water and boiling the solution
* He fights disease by changing the bees into a new box and destroying the affected combs. In certain cases he has done this 4-5 times
* There are 2 seasons of honey flow - March to May and in December. A total of 10 Kgs per box is the average production from a bee box.

Interestingly all the beekeepers we met in Coorg area, said that the yield from a Newton hive is 20-30 Kgs per year. This is a very high figure, but it may be possible due to the good flora around – both cultivated and wild.

VI. Vasanth Industries, Madikeri

This is a small scale unit that manufactures beekeeping equipment. Some of the items are – comb foundation sheets, half queen gates, full length queen gates, queen excluders, queen cage, queen rearing boxes, smokers, etc. They sell comb foundation sheets for Rs.4.00 for a super size and Rs.8.00 for brood size. He explained to us a different process of making sheets - they melt the wax and dip the wooden board in it for 40 times, each time a layer forms. This is kept for 40 days for curing. This is then immersed in lukewarm water before passing through a flat roller to make thin sheets. These sheets are again pressed through a cell embossed roller. The only soap used is Mysore Sandal or Pears, due to their low alkaline content.

VII. B.R.HILLS

We reached the checkpost at 7 pm, not knowing it was a sanctuary and no vehicles were allowed after 6 p.m. However, the tribals with us, spoke to the guard and we got special permission. This is a dry deciduous forest type, with rich riparian forests and high diversity in NTFP and medicinal plants. As we went up the 21 kms ghat road to the project office - we saw a huge herd of bison (atleast 20-25). The BCN centre is a nice comfortable place with guest rooms, a office and mess. We met Siddappa and Pooja Batra. The latter is working on AD and its foraging behaviour.

Biligiri Rangan Hills BCN Project

Honey is sold to the LAMPS society by the tribals for Rs.30-35 per kg. This is bought by private parties, including the project at BR Hills. Honey is bought from 3 Societies - Chamrajnagar, Yelandur, BR Hills.

The tribal honeyhunters receive two kinds of payments, first, when they sell the honey to LAMPS and secondly, a share of the profit, once the honey is sold by VGKK. According to the in-charge, they keep track of the honeyhunters through records from LAMPS. Last Year Rs. 1.5 Lakhs was shared amongst the honeyhunters of this region.

Through the project they have formed a society for the tribals to take care of the honey enterprise. In this society only tribals are employed for management, accounts & marketing. Through the project they also train the tribals to strain honey without squeezing the comb and how to cut only the honey part, without destroying the brood.

They have bought a processing machine, including a dehumidifier, for 300 kgs per day capacity just like the one seen in The Progressive Beekeepers Society at Baghamandala. The pollen is filtered through a pressure filter, with 6 layers of viscose filter discs. These have to be cleaned after 3 to 6 shifts depending on the clarity of the honey. On observation the honey gets thicker and darker after this processing. The reduction in the moisture content is 2-3%, but the taste and colour is not so pleasant.

They sell their honey under the brand name of **Prakruti**

50 gms	Rs. 10.00
100 gms	Rs. 15.00
200 gms	Rs. 32.00
500 gms	Rs. 62.00
1000 gms	Rs.115.00

The value of bees wax is not realised by the BCN project. They make candles out of paraffin wax in one of their other units.

They also make pickles – *Nellikai* , *Mahavali kilangu*. The other items made from other NTFP are - dry *Nelli* chewables, *Nannari* juice, *Amla* juice, *Shikakai* powder, *Manjhal* powder. However they do not process the *Shikakai* in their centre to make the herbal hair wash, instead they buy the ingredients and mix it and package it under their name. This was quite disappointing to the team members of the team.

The VGKK work has several other aspects: tailoring, handmade paper, candle making, screen printing (honey labels), health care, education centre, etc. They are a 16 year organisation in the hills and have done a lot to improve the standard of living for tribals in the area.

We visited a village closeby to meet the honeyhunters of that region - The Sholigas. Our tribals explained how they do honeyhunting and that got them very interested. A strange conversation followed in Tamil and Kannada, Kurumba and the language of the Sholigas. It was interesting to see how quickly they became friendly with us – as we were talking about honey collection!

The Sholigas collect honey, mainly from trees, in the months of May-June and in a smaller season in Deepawali.

* The area of collection is restricted by the Taluka boundaries
* They cut the bark like steps and climb up the tree. Plant fibre ropes are also made to tie a stick and climb up, a similar rope is used to come down after harvesting.

The main trees on which *apis dorsata* settles are - Bagge (Albizzia lebek), Acrocarpus, T. Bellerica, Garunga

* They go in groups of 5-10 people
* They take with them - Tin/Jar, Vessel, Knife, Match box
* If they go far - they do not come back from the forest for a few days.
* After harvesting they cut the honey part and spray the honey in 3 directions and pray to the God. This is while they are on top of the tree. They also pray to the honey god at the bottom of the tree.
* Honeyhunting from a cliff is a big affair - a goat is usually sacrificed on the occasion. Usually a cliff is taken on contract by a group of honeyhunters from the land owner.
* They squeeze the combs with hand and filter through a gunny sack.
* The group divides the honey equally
* The young brood is eaten with honey
* Wax is used in their houses and sold outside at Rs.60/- per Kg. It is purchased by the fisherfolk to prevent leaks in their boats. Most of the wax is sold in Kerala.
* From a single comb they can get anywhere in between 1-15 Kgs of honey.
* In B.R. Hills there are more combs available than were earlier found. This could be due to the rich flora and the protected status of the area.

The tribal culture is a bit different from that of the Nilgiris. They depend on their land for food crops and wage labour is scarce. Dependence on forests is quite high during certain seasons (like in the adjacent areas of Nilgiris).

Our team members, especially, Chandran and Krishna were excited to hear that the drivers, masons, carpenters, tailors, electricians etc. are Sholigas. These activities, including the accounting and management aspects of the production unit, also managed by Sholigas, which enthused them a lot.

Visit to the All India Honey Festival (Apiexi '98)
30th July to 5th Aug, 1998 at Dharwad, Karnataka

This exhibition was organized by:

The Directorate of Industries & Commerce, Govt. of Karnataka, Bangalore
Centre for Entrepreneurship Development of Karnataka, Bangalore (CEDOK), Dharwad
Karnataka State Beekeepers Federation, Bangalore
All India Beekeepers Association, Pune

Keystone was invited to put up an exhibition of its products as part of this festival. A large no. of beekeeping co-operative societies had put up their stalls. A number of interesting exhibits was put up the Central Beekeeping Research and Training Institute, Pune while most of the others had put up only honey on display. This was slightly disappointing as there were no value added products of honey or bees wax. Keystone was the only organisation that had brought items made from bees wax like candles and diyas. As these products attracted a lot of attention, it would seem to suggest that there is a vast potential for these goods in the market which has not yet been tapped.

A number of beekeeping cooperative societies had brought their honey. The bulk of the honey that was sold was in the smaller pack sizes. There might be a couple of reasons for this - honey did not form part of the staple diet and they wanted to just taste the different kinds of honey. The exhibition, though spread over five days, attracted very little participation from the local population.

BEEKEEPING TRAINING PROGRAMME

22nd August, 1998 at
Cintra, Kotagiri

A one-day apiculture orientation, skill cum technology upgradation training program was conducted for tribal communities, by Keystone. 43 villagers from six villages located in Kotagiri taluk, participated in the training program.

Mr.Ramesh Dharmaji, DeputyGeneral Manager, SIDBI, Tirupur inaugurated the session. He and his colleagues asked questions regarding honey and beekeeping and discussed with them other/new skill upgradation avenues.

Dr.Mohandoss, Director, Tribal Research Centre (TRC), M.Pallada and Rev.Philip Mulley, Anthropology Advisor also attended the programme and addressed the people.

Pre lunch session:
Mr.Dharmaji's interest was to look for new avenues to promote skill development and learning opportunities for the tribal communities. Discussions revolved around silk cotton, tailoring and other village produce. The potentiality of honey and wax as an enterprise was seen to be ideal. Mr. Dharmaji suggested increase in the procurement of honey and bees wax and discussed the possibility of opening more collection cum training centres in the district.

Dr.Mohandoss expressed his anguish about traders and non-tribals corrupting the tribals. He said, the main reason was lack of awareness and education. Alcoholism is a weakness amongst the tribals and increased income has no long term effect. He offered all assistance from TRC.

Post lunch session:
This was mainly a participatory session-the main issues discussed were as follows:
* what are the tips for successful hivings - still it is a problem.
* role and responsibilities of the village co-ordinators and responsibilities of beekeepers.
* seasonal management and ideal time for hiving.
* bee nursery and dividing, preserving colonies in the wild.
* starting beekeeping programs in new villages like, Vellaricombai and Iddukorai.
* announcement of best beekeeper in 1997 and 1998/village club and award for 1999
* what is organic produce and how Keystone is promoting such items.

The beekeepers expressed a need to raise the procurement price – but after discussions amongst themselves, they realised that Keystone was giving the highest price in the district.

Due to bad weather the demonstration of solar wax extractor and comb foundation mill could not be done and video viewing also had to be cancelled.

List of Participants for the Beekeeping Training Programme:

S. No.	Name of Village	Name of Participants	Number
1.	Vellericombai	Krishna, Jogi, Raju, Manikkam, Ponnan	5
2.	Iddukorai	Murugan, Mathan, Raman	3
3.	Semmanarai	Rangasamy, Rangan, Krishna, Mani, Durai, Arjunan, Balan, Dharmaraj, Gopal, Cinnaraman, Ramasamy, Visu, Dalarai Balan	13
4.	Kilkoop	Chandran, Rangan, Raju, Shanmugam, Babu	5
5.	Attadi	Ramasamy, Maran, Kanje rangan, Masnan, Subramani, Raju, Raman	7
6.	Thalamukhu	Rangan, Kuchan	2
7.	Sengal Pudur	Gopal, Mani	2
8.	Kozhithurai	Raman, Ari, Ayyasamy, Rangan, Ponnan, Karamadai, Ramasamy, Babu	8
			45