

# **Beekeeping**

## Five month plan for March – July 2011



### **Project Location**

El Ojochal del Listón, El Ñajo, Agua Fría & El Caracol

### **Plan Submitted**

March 2011

## Summary

The five month beekeeping plan for March – July 2011 builds on the work carried out from February 2010 to February 2011, financed through the initial donation of £8000 from New Hope Llantwit Major for the project's pilot phase and its continued monthly support to the present. The main project activities will remain unchanged from the initial months of work with the communities, and will include: supervised training in basic beekeeping techniques; management of apiary health and growth, and the provision of hives, protective gear, and other beekeeping equipment. The most notable additions to the next months' activities will be a small reforestation project, to improve future honey production, and a higher level of instruction for those beekeepers who have advanced the most to date, with an emphasis on apiary management and increasing honey production. Aside from the beekeepers' education, our main goals for this period are to increase the size and number of apiaries and to increase the number of active participants.

## Progress to Date

### *Activities*

Project activities to date have focused on:

- project development
- promoting the concept of beekeeping as an alternative, environmentally friendly source of income in the Telica-Rota Protected Area, specifically to the communities of El Ojochal del Listón, El Ñajo, El Caracol and Agua Fría
- establishing two apiaries, one in El Ojochal del Listón, and the other in Agua Fría
- providing instruction and supervised training in basic beekeeping and honey production techniques

From February to May 2010, the design for the beekeeping project was developed and the Nuevas Esperanzas beekeeper was hired.

Meetings were held in all of the communities to establish interest and select appropriate sites for the apiaries in May and June of 2010. Training sessions and delivery of hives for the communities of El Ojochal del Listón and El Ñajo began in July and August. Due to initial misconceptions concerning the goals of the project and difficulties of transporting hives to Agua Fría during last year's heavier than normal rains, project implementation was postponed for Agua Fría and El Caracol until December. In December, training sessions and delivery of hives began for the communities of Agua Fría and El Caracol, while in December and January project participants from El Ojochal del Listón and El Ñajo saw their first honey harvests.



Small group instruction has continued to date for all communities. Attendance for training sessions was initially low in Agua Fría and El Caracol, so additional meetings were needed in January and February to increase participation. Since then, we have seen increases in participation in both communities.

### ***Project Expenses: February 2010 – February 2011***

	<b>Total</b>	<b>Staff time</b>	<b>Vehicle Use</b>	<b>Direct Expenses</b>	<b>Indirect Expenses</b>
<b>Funding Received</b>	£11,000				
<b>Project Expenditure</b>	£8,247	£4,248	£915	£2,008	£1,076
<b>Balance</b>	<u>£2,753</u>				

## **Results**

### **Participation**

Participation has varied significantly across the communities. Of the 38 individuals who originally expressed an interest in participating in the project, 10 have shown particular commitment to becoming beekeepers. While we don't yet fully understand the factors affecting participation in all the communities, we have noted that most of those who have regularly attended classes live relatively near the training apiaries. This is part of the reason we plan to start another new apiary in El Ojochal del Listón and move the current apiary in Agua Fría to a more accessible location.

Of the 10 who have regularly participated, 8 from the communities of El Ojochal del Listón and El Ñajo have expressed that they would like to work together as a beekeeping group over the long-term. It is these 8 individuals who will be receiving higher level instruction over the next five months.

### **Participation in Training Sessions**

	<b>El Ñajo</b>	<b>El Ojochal</b>	<b>Agua Fría</b>	<b>El Caracol</b>	<b>Total</b>
Total participants	9	7	10	12	38
Total training sessions provided	20	20	7	4	31
Participants beyond introductory meeting	9	5	3	7	24
Attended at least 50% of classes provided	5	3	2	7	17
Average classes attended by each participant	10	8	2	2	NA
Average class attendance	5	3	3	5	6

## **Honey Harvest**

There have been two honey harvests to date, both in the apiary located in El Ojochal del Listón. In each harvest, honey was taken from two hives, with an average of 11.9 kg (8.3 liters) harvested from each hive, for a total of 47.4 kg (33 liters) between the two harvests.

The average expected yield for hives like the ones in El Ojochal del Listón is 25 kg (17 liters) per hive per year. At the current yield we would expect to harvest 35.6 kg (24.8 liters) from each of the two hives in one year, which equals approximately 140% of their expected capacity under normal circumstances. It has been a pleasant surprise to see such an excellent yield in the first year, especially considering that the hives have been used primarily for training and have experienced more disturbance in a typical week than would be normal for a hive dedicated exclusively to honey production. It is still too early to say whether the yields will remain at these levels over the long-term, but such a high level of honey production at this early stage provides a strong support for the viability of beekeeping in the area.

## **Five Month Plan**

### ***Objectives***

- Establish a second training apiary of five hives in El Ojochal del Listón.
- Move the training apiary in Agua Fría to a location better suited for honey production, and which would allow easier access for participants from El Caracol.
- Integrate the current participants from El Caracol and Agua Fría into a single coordinated group.
- Increase participation in El Ojochal del Listón and Agua Fría.
- Establish five hives in El Ñajo dedicated to honey production.
- Increase the number of hives in the current El Ojochal apiary to eight, with four training hives and four hives dedicated to honey production.
- Conduct an inventory of trees around all apiaries.
- Establish nurseries with all interested participants in preparation for reforestation of melliferous trees in August.

### ***Project Duration***

March – July 2011

### ***Activities***

#### **Beekeeping Training**

Over the next five months, small group instruction and hands-on training for beekeeping will be provided for four separate groups. The first group consists of the eight individuals from El Ñajo and El Ojochal who have participated actively since the beginning of the project, and as a consequence have advanced beyond a basic level. The major learning goal for this group during the project period is to produce their own calendar of activities, which is the first step towards independent management of their own hives.

The second and third groups consist of participants from El Ojochal del Listón, Agua Fría and El Caracol who still need additional time to learn the basics of beekeeping. The curriculum will follow the lessons for beginners originally provided to the first group of participants.

The fourth group consists of five women from El Caracol who have expressed interest in learning to make sub-products taken from the hives, derived from pollen, propolis and wax. Our beekeeper will travel to El Caracol once a month to provide instruction specifically on this topic. Of the five women, three were only interested in learning to make sub-products, while the others will also be learning beekeeping with the other participants from the community.

### **Division, Capture and Transport of Bee Colonies**

Our team will be helping the communities directly in the process of increasing the number of active colonies. Our options for increasing the size of the apiaries include: dividing large colonies between two hives, capturing colonies from the wild, or purchasing the colonies and transporting them to the community. Each of these processes requires a certain skill and care, as well as an investment of time. We will be taking responsibility for increasing the number of colonies, or working very closely with the participants, until each group has gained the skills needed to manage the population of its apiaries independently.

### **Tree Inventory & Reforestation**

In order to increase the overall capacity for honey production and begin regenerating dry tropical forest in the Telica-Rota Protected Area, we will begin implementing small reforestation projects as part of our long-term economic and environmental strategy for the area. The specific activities for the next five months will include establishing and monitoring small nurseries of melliferous trees with the project participants in preparation for reforestation this August and September.

In conjunction to the reforestation, we plan to carry out an inventory of the nectar producing tree species within a 1.5 km radius of the apiaries, in order to be able to make a better estimate of the area's potential for honey production, and to help us plan for reforestation projects in the coming years.

### **Provision of Materials and Equipment**

While the project participants continue to become more confident of their skills, and as honey production increases, we will continue to provide the needed materials and equipment. We will continue to do so until production has risen adequately and connections to local markets have been established, in order to avoid undue financial risk to the participants.

### **Monitoring and Technical Assistance**

As has been the case to date, regular visits will be made to the community in order to monitor the health of the hives and help participants troubleshoot as they practise apiary management. Regular visits will also be made to monitor the tree nurseries over the next five months and help the participants prepare the saplings for transplanting.

### ***Expected Outcomes***

- The eight advanced students have created a calendar of activities.

- Three nurseries are established with the capacity to plant 2000 trees.
- At least five more participants from El Ojochal del Listón are actively engaged, having participated in the majority of training sessions.
- At least three more participants from Agua Fría are actively engaged, having participated in the majority of training sessions.
- There is a single, coordinated group of beekeepers from El Caracol and Agua Fría.
- There are four established apiaries: two in El Ojochal del Listón with a total of 13 hives, one in Agua Fría with 4 hives and one El Ñajo with 5 hives.
- A total of 9 hives are dedicated exclusively to honey production.

## **Budget**

<b>Staff Time</b>	Hours	Rate/Hour	Cost
Beekeeper	546	£3.46	£1,889
Agricultural Engineer	306	£6.14	£1,879
Support Staff	225	£3.72	£837
			<u>£4,605</u>
<b>Materials</b>			
Hives			£742
Nursery			£116
Harvest Equipment			£78
Protective Gear			£200
Other			£25
			<u>£1,161</u>
<b>Meals</b>			£168
<b>Transport</b>			£1,016
<b>Indirect at 15%</b>			£1,043
<b>Total</b>			<u><b>£7,993</b></u>

## **Budget Note**

The project management for the project will be provided as a donated service by Nuevas Esperanzas US.

## **Beyond July: El Ojochal & El Ñajo Three Year Plan**

Our long-term goal for the beekeeping project in the Telica-Rota Protected Area is to leave an independently operating honey cooperative, which is both generating a significant income for its members and promoting environmental protection in the area. While we are hopeful that at the end of July 2011 we will have at least three highly active groups in the area, it is yet to be seen how the new participants in El Ojochal del Listón, Agua Fría and El Caracol will engage with the project. We do, however, already have a group of eight committed beekeepers from the communities of El Ojochal del Listón and El Ñajo, who have each shown initiative and expressed a commitment to working together for the long-term. In order to give an idea of how

we envision the continued progression of the project, in this section we will give a summary of our objectives and expected outcomes for this group of eight beekeepers through 2013.

### ***Summary of Objectives***

The next big steps for this group toward becoming an independently operating cooperative are: increasing the size of the apiaries, increasing overall production, ensuring honey quality, establishing connections to markets, and teaching business skills.

In 2011 and 2012 our focus will remain on helping the group to grow their apiaries, increase production, and monitor their own progress. Ensuring that the honey is of a marketable quality will be a primary focus in 2012, and we will begin to work out a long-term sales strategy for honey and hive sub-products. In 2013, after the group has had practice selling honey to the most easily accessible markets, we will begin to work with them to get a better price for their goods and also begin selling sub-products like pollen, propolis and wax. We will also begin to talk more about formally establishing a cooperative and teaching financial management so that the group starts to save towards recurring costs which it will incur in the future.

### ***Summary of Expected Outcomes***

By the end of the 2013 we would like the group to begin to see significant financial returns which have the potential for continued growth into the future. As a result of the benefits they are receiving from the environment, we would also hope to see some changing environmental attitudes and signs that beekeepers are seeing the value in protecting this resource.

The following are some of the specific outcomes expected by the end of 2013:

- Twenty-five hives are dedicated to production with an average yield of 25-35 kg of honey per hive for the year.
- The eight beekeepers are each receiving an annual income of \$250-\$400 from beekeeping.
- The producers are directly selling at least a portion of their honey.
- The group has made steps towards formally establishing a cooperative.
- The group has established a system to save money towards future expenses.
- The group has made visible steps toward greater environmental protection in the area, including greater care for melliferous trees on their properties.

