

A Report Submitted
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On
THE CAUSES OF BEES
ABSCONDING AND
RECOMMENDATIONS
To
Coastal Sustainable Landscapes
Project (**CSLP**) in the Western
Region of Ghana

Acronyms

Abbreviation

USAID

CSLP

CA

Meaning

United States Agency International Development

Coastal Sustainable Landscapes Project

Community Assistants



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1.0 INTRODUCTION

Bee keeping is becoming a very lucrative venture in Ghana. It is one of the ventures that can provide income, jobs and economic security to the rural farmers and their families (Martin Hilmi, 2012). In view of that many people have developed interest in the venture in order to use it as alternative livelihood option to generate additional revenue to supplement the income of their families. Unfortunately the technical knowledge and the skills to manage the apiaries to produce good honey is lacking among most beginners. To produce a good honey the beehive must colonize and the bees must remain permanently in the hives for years.

The Coastal Sustainable Landscapes Project (CSLP), a USAID funded project is currently undertaking beekeeping projects in the five Coastal Districts including Ellembelle, Nzema East, Shama , Jomoro and Ahanta West of the Western Region of Ghana. This organization has trained over 200 individuals (mostly farmers) in beekeeping (TOR CSLP 2016). Among them about 137 of the trained farmers within the districts established their own apiaries within various secondary forests and fallow lands. Some of the hives got colonized initially, developed some broods and even formed some combs. Unfortunately, after some time, it was observed that there was sudden departure of some colonies from the hives. Some of the bee colonies consumed the little honey they produced and departed from the hives to colonize somewhere and this was very worrying and frustrating amongst most beekeepers trained by CSLP.

It was against this background that the organization contracted a practitioner and experienced beekeeper Mr. Charles Anin-Agyei as a consultant to assess the situation and make recommendations for implementation in order to reduce or alleviate the problem.

2.0 METHODOLOGY

2.1 Assessment Team

The assessment team comprised:

Mr Charles Anin-Agyei : The Consultant

Mr Kwame Appia Owusu: CSLP Natural Resource and Community Benefit Specialist

Community Assistants of each community

Mr Joseph Armah: Driver of the CSLP

The method adopted includes group meetings where I had the opportunity to meet with the beekeepers to have face to face discussions.

2.2 Field visits with the bee keepers

This was done together with the beekeepers to their apiaries. On the field, hive observations were made and photographs of observable apiary management faults detected were taken.

2.3 Communities visited

Table 1 shows the details of the communities and the number of bee keepers visited.

Table 1

Political District	Name of community	Total number of bee keepers interacted with	Number of women	Number of hives inspected	Number colonized	Number absconded or not colonized
Ellembelle	Adubrim	15	3	5	5	0
Nzema East	Asonti	6	0	5	3	2
Jomoro	Navrongo	7	1	12	11	1
Jomoro	Tweako 1	4	0	4	3	1
Mbellebele	Sendu	7	1	5	3	2
Shama	Yabiw	2	0	3	1	2
	TOTAL	41	5	34	26	8

3.0 RESULTS AND THE POSSIBLE ROOT CAUSES OF THE PROBLEM

3.1 Weedy hive environment

The surroundings of most of the colonized hives were weedy and this could provide access to pests such as ants, lizards, snakes, mites etc to the beehives to attack the bees. The bees under attack by the pests for feed or any other purpose may kill them thereby causing a reduction in their population size and this can eventually result in the total collapse of the colony. This was observed in almost all the districts visited. The beekeepers attributed it to the absence of bee suits to dress for the cleaning of the hives.

3.2 Rampant use of agrochemicals

There was rampant use of agro chemicals by the cocoa farmers either as weedicides or pesticides on their cocoa farms and this practice could scare away the colony because of the disturbing scent of the chemicals. The chemicals are harmful to the survival of the bees as insects when they are sprayed. This practice was mostly observed in Ellembelle district.

3.3 Short distances left as buffer zones

The distances left as buffer zones between the hives and the cocoa farms were very short. The obnoxious scent of the chemicals after spraying the farms and application of the weedicides could scare them away because the agrochemicals are deadly to the bees.

3.4 Openings of the hive lids

Some of the lids of the hives had openings due to either shrinkages of the wood due to drying or improper construction and resulted in rainwater entering the hives through those openings. The bees may feel insecure when water is drained into their habitat and this can cause absconding of the bees to another location.

3.5 Inadequate top bars to completely cover the hives

Some of the top bars were not enough to cover the hives completely. This then allowed flow of water into the hives during rainfall and this can cause the bees to leave the hives.

3.6 Irregular baiting of the hives

According to some of the responses from some beekeepers during the meetings, regular baiting of the hives was not done after the placement of the hives. One farmer reported that for more than six months he never did any baiting and that could delay colonization as well.

3.7 Improper Hive orientation.

It was observed that most of the hives were not properly positioned to enable the bees to receive adequate sunlight. Bees need morning sunlight to keep them active for the day's activities. This practice was mostly observed in all the districts.

3.8 Hot temperatures within hives.

The location of one hive was within open sunlight area. The bees have a tolerable temperature within which they can endure. When the hive temperature is too high they cannot withstand it and therefore cause them to leave the hive. This was observed in Shama district.

3.9 Attack by ants

Some hives were observed to have been severely invaded by ants after colonization due to poor site study prior to mounting of the hives. The possible causes of their departure could be the same as that in 3.1 above.

4.0 DE BRIEFING

Debriefing was done on the field with the beekeepers right at the beehive stand to discuss the reasons for the absconding and the delay in colonization. Recommendations were made to them at the community levels after the apiary visits. After the field visits, a meeting was held with the CSLP management and power point presentation was made in the CSLP conference room. The management was taken through the general observations made during the field visits and the possible recommendations to be implemented by CSLP.

After the presentation the floor was opened for questions, contributions and clarification while answers were provided.

4.1 CONCLUSION

From the above observations made it can be concluded that the three most common causes of the absconding of the bees were:

1. Weedy beehive environment and pests attack
2. Disturbances due to the use of agrochemicals
3. Wrong citing of beehive direction.

5.0 RECOMMENDED ACTION PLANS TO BE IMPLEMENTED BY CSLP

Based on the observations made from the various apiaries and responses from the beekeepers, the under listed recommendations are made for implementation:

1. The surroundings of the bee hive should be well cleared of all weeds and obstacles which serve as entry points for pests into the hives.
2. The use of agrochemicals around the hives should be done with caution in order not to disturb the bees.
3. The buffer zones retained between the cocoa farms and the hives should range between twenty and fifty meters.
4. The lids of the beehives should be well constructed to ensure that the hives are properly covered and that no leakages of water into the hives occur.
5. The top bars should be properly arranged to completely cover the hives to prevent leakage of water and pests into the hives.
6. The mounted hives should be regularly baited at least every three weeks and regular visits should be done on the hives till the hives are colonized.
7. Areas of ants and termites prevalence should be avoided through critical site study prior to the placement of the hives.

8. The entrance of the hives should be made to face East to West Direction when mounting the hives
9. The honey should be harvested in January every year because of the wet nature of the ecological zone. Any delay will result in the consumption of the honey by the bees due to the early downpour of rains in the ecological zone.
10. Bee suits should also be provided to the beekeepers if possible to enable them use for the cleaning of the hives and for doing harvesting on time.

6.0 REFERENCES

Martin Hilmi, N. B. a. D. M. (2012). *Beekeeping and sustainable Livelihoods* (Second ed.).

CSLP (2016) Terms of Reference submitted to the consultant for bidding

7.0 APPENDECES



Fig 1 Meeting with the communities prior to the visit to the apiaries



Fig 2 Advising the beekeepers on the field



Fig 4 Rampant use of agrochemicals as weedicides



Ants invaded the hive after colonization



Weedy hive environment



Some of the Sendu Community Beekeepers in photograph with the Consultant well dressed in Bee Suit.