

Project

“Increasing incomes and food security of small farmers in West and Central Africa through exports of organic and fair-trade tropical products”

GCP/RAF/404/GER

Project impact study in Ghana

Pineapple



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Project “Increasing incomes and food security of small farmers in West and Central Africa through exports of organic and fair-trade tropical products”
GCP/RAF/404/GER

Project impact study in Ghana; Pineapple

Trade and Markets Division

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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Introduction

The FAO project “*Increasing incomes and food security of small farmers in West and Central Africa through exports of organic and fair-trade tropical products*” has supported the Ekumfi Atwia WAD Organic Farmers Association (EAWOFA) and its exporter Weya Agricultural Development/African Foods Ltd (WAD). This report presents the results of a survey among a sample of the pineapple farmers on the impact of the project.

The report first gives an introduction of the pineapple sector in Ghana and the project partners and activities. Subsequently the survey results are presented. This is followed by an analysis of the economic aspects of organic pineapple production, using data from the survey, analysis conducted during the course of the project and external sources. Finally overall conclusions about the impact of the project are drawn.

Acknowledgements

The questionnaire was developed by Léa Jenin, Associate Professional Officer at the FAO Trade and Markets Division (EST). The interviews were held in the local language by Marian Kwaku, consultant in Ghana. Project assistant Antonia Caggiani input the data in the database and the analysis was conducted by Léa Jenin and Cora Dankers, project technical officer, who also wrote the report. Final editing was done by Ellen Pay, consultant, and Pascal Liu, trade economist in EST. The project was funded by the German government.

1. PRESENTATION OF THE PINEAPPLE SECTOR IN GHANA

Pineapple is the third most important agricultural export product of Ghana, after cocoa and palm oil. Ghana is also the third supplier of pineapples to Europe, after Costa Rica and Côte d'Ivoire. Still, pineapples are considered a non-traditional export crop.

The main exported variety was Smooth Cayenne. But as the main markets shifted to the MD2 variety, Ghana lost market share to Costa Rica and exports started to decline in 2005. The government launched a MD2 multiplication programme to provide its growers with the new variety. According to the Ghana Export Promotion Council, MD2 accounted already for more than half of the exports in 2007 and exports have picked up again. However, the shift to MD2 was mainly made by larger (new) companies and smallholders who continued to grow Smooth Cayenne saw their market reduced to processors¹.

Table 1. Exports of pineapples from Ghana and Côte d'Ivoire, 2002-2006 (in tonnes)

	2002		2003		2004		2005		2006	
Côte d'Ivoire*	173 829		173 518		158 736		132 077		115 604	
Ghana*	46 391		45 421		56 094	R	52 574		44 054	R
Ghana**	46 000				68 000					

Sources:

* FAOSTAT

R = Estimated data using trading partners database

** Danielou, M. & Rafry, C. 2005. *The rise of Ghana's pineapple industry. From successful takeoff*

to sustainable expansion. Worldbank, Africa Region Working Paper Series n° 93. Citing data from SPEG.

There have been a considerable number of organic and fair-trade initiatives in the pineapple export sector in Ghana, with various degrees of success. An overview of known organic and/or fair-trade certified producers and exporters currently operating in the country is provided in the annex to this chapter. The combined capacity of those certified suppliers is estimated to be more than 20 000 tonnes per year, but most fruits from the bigger Fairtrade certified suppliers are still sold in the conventional market.

Production of the Sugarloaf variety is concentrated in the coastal Ekumfi area in the Central Region (= southern Ghana). Here the pineapples are traditionally grown for the local market under an extensive cropping system with long fallow periods of up to ten years, and with hardly any use of chemical fertilizers or pesticides. Due to its green colour and short shelf life, the Sugarloaf variety is not normally exported fresh, but may be used for fresh cut and juice products.

¹ Fold, N. and Gough, K.V. 2008. *From smallholders to transnationals: the impact of changing consumer preferences in the EU on Ghana's pineapple sector. Geoforum, 39, 1687-1697.*

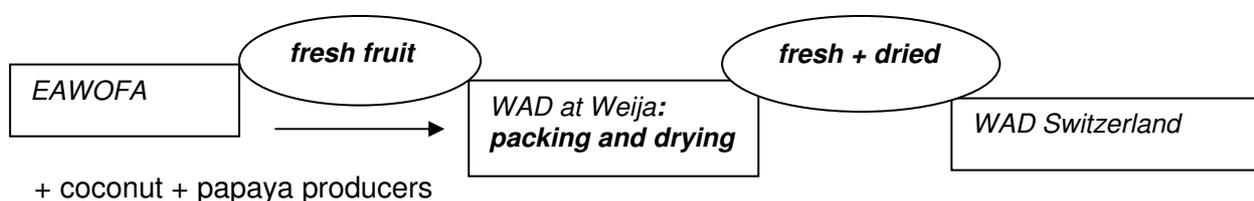
2. PROJECT PARTNERS AND ACTIVITIES

2.1. Introduction of WAD and EAWOFA

Weya Agricultural Development (WAD) is a small exporter of fresh and dried organic fruits. WAD sources organic Sugarloaf pineapples from farmers near Mankessim, in the Ekumfi area, Central Region. During the course of the project, the farmers officially registered their association as the Ekumfi Atwia WAD Organic Farmers Association (EAWOFA).

At the time of this study EAWOFA had thirty members, all smallholder farmers whose main commercial crop is sugarloaf pineapple.

Figure 1. Ghana - EAWOFA/WAD pineapple supply chain



At the first meeting in Atwia, the EAWOFA members told the project staff that their objectives were: being able to pay taxes and to undertake house improvements (cement and aluminium roof sheets), and giving youngsters incentives to stay in the village instead of migrating to Accra.

2.2. Main project activities and results

The project engaged the Ghana office of Agro Eco, a consultancy company advising in the field of organic agriculture, to provide technical assistance to WAD and EAWOFA. The following training sessions were organized:

Date	Theme	# participants
WAD		
2006: 28 June, 7 July, 8 August + days in Sept-Dec	Training/participatory development of internal control system	4
2008: 21 July	GlobalGap	11
EAWOFA		
2006 - 7 July, 11&15 Aug, 13&20 Sept + add. days in October	Development of the association (constitution) and organic farming practices	15-20/session
2007: 18 – 21 Dec 2008: 8 March	Production planning (measuring plots, planting distances, planting schedules)	?
2008: 15 May	Composting	15
9-11 July 08	GlobalGap	26

In October 2007, WAD recruited a field officer with project funds, who took over the training of farmers on organic farming methods.

EAWOFA received some financial support to purchase office furniture and farm tools. In November 2007, EAWOFA also signed a memorandum of understanding with the Department of Co-operatives of the Ministry of Manpower, Youth and Employment to train the executive committee on running meetings and basic financial management.

When the project started in 2005, 3 EAWOFA farmers and WAD's packing unit were already certified organic. The first external inspection took place in October 2006 and in January 2007 the whole group was certified, with the three farmers with full organic status and the rest "in conversion". Full organic status was obtained for the whole internal control system, including EAWOFA, in December 2007.

To be able to supply new clients, WAD also needed to expand its production capacity, and with project support it invested in an upgrade of its packing facility and a new fruit dryer.

Table 2. Organic pineapple exports by WAD, 2005-2008 (in tonnes)

Volumes in tonnes	2005	2006	2007	2008*
Fresh pineapple	24.6	23.2	21.3	46
Dried Pineapple	0.09	1.04	2.47	3.4
Total quantity bought from farmers	26	43	70	116

* Estimate.

3. RESULTS OF THE FARMER SURVEY

3.1. Characteristics of the sample

The sample for the survey was randomly selected by FAO. As EAWOFA has only 30 members, only 4 farmers were interviewed, two male and two female. The interviews were conducted in the local Akan language.

Three farmers had joined the group before 2001, the other farmer joined in 2006. The size of their farms is on average 2 hectares. Pineapple is the major source of income for all interviewed farmers, even if one has some other commercial activities (sale of maize, cassava, pepper and tomato).

3.2. Training results and the impact of organic methods

Of the four farmers, three were satisfied and one was very satisfied with the training received. Only one of the farmers said to have received similar training before.

The interviewed farmers declare having received the following types of training (specification of productions methods was spontaneous):

Type of training	Received by
Production methods, specified:	4/4
- mulching	2/4
- sanitation	1/4
- line planting/spacing	2/4
- weeding	2/4
- use of manure/no fertilizers	1/4
-gutters for drainage	1/4
Record keeping	4/4
Post-harvest techniques	3/4
Marketing	3/4
Standards and certification	3/4
Association management	2/4
Others, specify: use of protective clothes	1/4

Three out of four farmers answered they faced some difficulty with record keeping. One has a son to help, while another farmer complained that her “grandchildren [were] not any better in helping”.

Skills or methods they would continue to use after the project ended:

- production methods (4/4):
 - of which:
 - not specified (2/4);
 - line planting/spacing (2/4);
 - weeding (1/4);
 - no fertilizer use (1/4);
 - gutters for drainage (1/4);
- record keeping (2/4);
- post-harvest techniques (1/4);
- marketing (1/4);
- association management (1/4).

Farmers were also asked whether they would need training on some specific topic(s) in the future, but they declared they did not have any specific need. One said that his son was a member too so he could learn from him gradually. However, at the end of the interview, one farmer expressed the wish to have more training in “better innovations and improved technologies”.

Three farmers noted a positive effect of the new methods on the quality of the fruit:

- taste, sweeter (2/4)
- appearance (2/4)
- size (1/4)

One farmer declared that there was no change in quality, but that “the crop does not fall any longer”, which was confirmed by another farmer.

3.3. Changes in production area, yields and production costs

All interviewed farmers were producing pineapple before certification, although one declared that the quantities sold before were insignificant, while another producer joined the group in 2006 and has not yet sold pineapples through the group.

All declared that the area under pineapple has increased since they joined the project, due to new plantations. They also mentioned that the quantity produced annually has increased, mainly due to the expansion of the area under cultivation, but also the increase in yields (3 respondents out of 4) and the fact that they are now planting in rows, which increases plant population (2 respondents out of 4). It should be noted that one farmer who reported that planting in rows had increased production, did not know whether his yields had increased, giving rise to the suspicion that this question has not been well understood.

All mentioned a relative increase in production costs with organic farming and certification. The major reasons for this increase are:

- higher expenses for hired labour (3 out of 4);
- more time spent on cultivation, in terms of family labour (2 out of 4);
- higher cost of suckers (2 out of 4);

But on the other hand, there is a reduction in fertiliser expenses (mentioned by 2 out of 4) as well as in the cost involved in transporting the product to the market (2 out of 4).

3.4. Marketing and group dynamics

Before selling certified pineapples through the group, three of the producers interviewed were marketing through traders and one was selling only on the local market. No one mentioned exports. There is no significant increase in the quantity sold before joining the group and in 2007.

The answers concerning the change in marketing seem to refer as much to change since joining the group as to change since becoming certified. For all, the most significant changes are that prices are better and more stable and that there is less time spent on selling the product. All actually mention that the group helps them in selling their products mainly because of the benefits of selling collectively (as opposed to individual sales), and because they have better access to the market through WAD.

“We come together to sell and rotate harvest². No more unilateral sales”.

Changes observed in the group during the course of the project are:

- growth in membership (2/4);
- there is more commitment to meetings (2/4);
- the group is more educated/members learn from each other (2/4);

² This seems to refer to the developed planting schedule, to avoid that all farmers plant and harvest at the same time, which was causing oversupply at some times in the year and undersupply at other times.

- the group has more equipment (furniture, crates, tools, protective clothing).

In addition to the marketing benefits discussed in the last paragraph, other benefits derived from being a member of the group are the support from others when they most need it, for instance when they are sick, or, very concretely, access to protective clothing and Wellington boots.

3.5. Impact on income

Although the cost of production is reported to be higher, all farmers answered that their income from pineapple growing had increased since certification as a result of increased acreage, yields and better prices.

Income from pineapple sales is usually spent on (open question):

- school fees (3/4);
- food (2/4);
- reinvested in the farm (farm labour, suckers) (2/4);
- home maintenance, house building (1/4).

Additional income from increased sales is being used for (probed question):

- house improvements/building new house (3/4);
- school fees (2/4);
- paying debt or taxes (2/4);
- funeral expenses (1/4);
- purchase of suckers (1/4);
- other investments (1/4).

3.6. Other impacts of the project

Impacts on other crops

Three out of the four respondents noted a positive impact of certification on their food purchases and on food crop cultivation. The first type of impact on food crops is linked to an increase in income which allows the farmer to hire more labour to grow food crops (2/4). The second type of impact is technical: for the growing of the food crops a farmer replaced fertiliser by manure or compost (1/4).

Health

Certification and organic production have a positive impact on health for three out of the four farmers interviewed. More specifically because *“there is more income to take care of the health issues of the family”* and also because they are now more aware of the effect of chemicals on their health (*“I did not know that people who spray the agro-chemicals could suffer health hazards”*) and they presently do not use them.

Women

Concerning the impact on women, according to a woman farmer interviewed *“the project has given to women members the opportunity to gain knowledge and make some money from their farming”*. A farmer noted that *“women who*

retail non-organic pineapples feel threatened by WAD's activities, whereas members of the group benefit tremendously".

Community level

All see some impact at community level: there is communal work on farms and in the village and "other organic producers in the community also benefit from the demand for organic pineapple". People seem to be more interested now in growing pineapples: "Young men who in the past did not find farming attractive have now become motivated to go into farming".

They all mention that there are producers interested in joining the group, and apparently some have started using some of the improved methods such as planting in rows and fertilising with manure.

3.7. Problems and suggestions

A request was expressed by one of the farmers for financial assistance to obtain suckers for expansion.

4. ECONOMIC ASPECTS OF ORGANIC SUGARLOAF PRODUCTION / TRADE

4.1. Prices

We will consider 3 sizes of Sugarloaf pineapples:

Size	Weight*	Buyer
"Big"	Above 1.5 kg	Fruits for export (WAD or other exporter)
"Intermediate"	1 to 1.5 kg	Sold either to WAD or on local markets
"Small"	Below 1 kg	Sold to WAD for drying or on local market

* Source: Manual of EAWOFA farmers.

The interviewed farmers all reported the same prices paid by WAD. For the local market only one respondent specified price per size category. The consultant also gathered information on farm gate prices from other farmers and local traders in the area.

Table 3. Farm gate prices for Sugarloaf pineapples (in New Ghana cedis³ (GH¢) per fruit)

Size - weight	Price received before joining group*	Local market (farm gate)		WAD		Average WAD premium
		2007*	2008***	2007*	2008**	
large > 1,5kg	(from local trader) 0,02-0,1	0,25	0,10	0,28	0,234	70% (12-180%)
intermediate 1-1,5kg		0,10	0,08	0,18		100%

³ New Ghana cedis (GH¢): 1 GH¢ = 10 000 (old) cedis.

small < 1kg		0,05	0,05	0,15		200%
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* Source: farmer survey, for local market 2007 – only 1 farmer specified prices by size

** Source: WAD, fruit size not specified

*** Source: consultant

Farmers obtain significantly better prices from WAD than from selling on the local market. Price differences are most pronounced for smaller fruits, but it must be noted that WAD normally selects large and intermediate fruits only.

WAD did not increase its farm gate prices after obtaining certification. This may be explained by the fact that also WAD did not receive a higher price from its buyers. The rationale to invest in certification was to be able to deliver to a new client and trade larger volumes. However, this new client did not pay more than the original clients, who had already been paying an “organic premium” based on trust.

For the intermediate fruits we can convert the price into GH¢ per kilo and compare them with FLO Fairtrade prices. This indicates that WAD will have to increase prices in order to obtain FLO-Cert certification⁴.

Local market intermediate size		WAD intermediate size	FLO farm gate price for organic sugarloaf for processing	
2007	2008	2007	minimum price	premium
0,08 GH¢/kg	0,064 GH¢/kg	0,144 GH¢/kg	0,214 GH¢/kg (0,205 US\$/kg)	0,052 GH¢/kg (0,05US\$/kg)

As WAD is a vertically integrated company, the FOB price is not negotiated but set by the director (the director of WAD Switzerland is also the director of WAD Ghana) to optimize accounts for both the export and the import company.

4.2. Production costs and margins

The project did not calculate costs of production at the farm level. From other sources, only production costs for the intensive production of conventional Smooth Cayenne pineapples could be found. But these data are not very relevant for the discussion of production costs of Sugarloaf pineapples, as the farming systems are completely different.

Production costs are difficult to calculate for traditional extensive Sugarloaf production. Because no flower induction is used, flowering – and thus harvesting – is very irregular. Harvest will peak around 22 months after planting. The crop is left in the field for up to 6 or even 8 years, while the number of fruits and suckers harvested declines constantly and also crop husbandry activities are reduced. After this, the crop is left to overgrow during the fallow period, which last 4 to 10 years. The field is cleared ahead

⁴ At the time of writing WAD has applied for FLO-Cert certification to supply a new client in the Fairtrade market.

of the next planting. Collecting data regarding labour and other costs over a 10 to 14 year cycle is very difficult, which explains why data on Sugarloaf production costs could not be found.

Due to increased land pressure and a growing demand for pineapples, the fallow period has a tendency to get shorter. Under an intensified Sugarloaf production system, flowering is induced to ensure all plants can be harvested around 14 months after planting. This is followed by sucker production, after which the whole crop is removed. Such an intensified production cycle is similar to those of the Smooth Cayenne and MD2 varieties. So far, flower induction has not been used by EAWOFA farmers.

The project did help the WAD management to conduct an analysis of WAD-Ghana's production and marketing costs for its pineapple products. Even if this analysis confirmed the director's impression that profits per kg of dried pineapples are higher than those per kg of fresh pineapples, the analysis also showed that the difference was not as large as anticipated. Due to the high variable and fixed costs linked to the production of dried pineapples, returns on investment were found to be higher for fresh pineapples. In addition, the profitability of dried pineapples varied significantly across the range of products, from rings to pieces, hard or soft bite etc., and final package size.

Nevertheless, WAD was keen on expanding its drying business, because there was a demand in the market and because it permitted WAD to buy smaller size pineapples from the farmers who continued complaining that WAD bought too few fruits from them.

Table 4. WAD production costs 2007(in US\$)

VARIABLE COSTS			
Fresh pineapple	US\$	Dried pineapple	US\$
Cost of produce	4 667	Cost of produce	8 813
Carriers & transportation to pack house	1 621	Carriers & transportation to pack house	1 420
Casual labour	300	Casual labour	3 450
Cartons	2 700	Packaging material	940
Export charges	720	Energy for drying	1 000
Other	200	Other	480
Total per year	10 208	Total per year	16 103
FIXED COSTS		Fixed costs for drying operations (all fruit types)	
		Salaries	6 000
		Amortizations	4 500
		Other fixed costs	300
		Total	10 800
		% attributed to pineapples	30%
		Fixed costs drying attr. to pineapples	1 440
General fixed costs*: 14 986			
Attribution	25%		25%
	3 747		3 747

Total production costs 2007	13 955	Total production costs 2007	21 290
Production (kg)	21 312	Production (kg)	2 467
Price per kg	0,9	Price per kg	9
Revenue	19 180	Revenue	22 203
Net profit	5 223	Net profit	913
Return on investment	37%	Return on investment	4%
Cost per kg	0,655	Cost per kg	8,63
Net profit per kg	0,245	Net profit per kg	0,37

** General fixed costs include rent, permanent staff, organic certification costs and amortization of vehicles. 50 percent of these have been attributed to mango, papaya and coconut products.*

5. CONCLUSIONS

Farmers have received training on how to intensify the organic production of Sugarloaf pineapples, and intend to continue using these new methods. With the help of the project, WAD has recruited a field officer, who is expected to continue training the farmers.

The EAWOFA farmers obtain a considerably higher price for pineapples sold to WAD, compared with local market prices. However, WAD was only buying the largest fruits, and farmers complained WAD was buying too few fruits. The project and WAD invested in organic certification and an increase in drying capacity, in order to supply larger clients and increase the volume bought from farmers.

This approach has been successful given that purchases from farmers have increased by over 350 percent since the start of the project. Surveyed farmers reported increased production since the start of the project due to increased area under cultivation and higher yields. Although they mentioned a rise in production costs, all surveyed farmers reported an increase in income derived from pineapple since certification as a result of increased sales volumes and better prices.

The impact of the project on food security is reported in two ways. Income from pineapples is used for food purchases and/or for more hired labour for food crops. The original objectives, as expressed in November 2005 by EAWOFA members, of improving housing and offering a future for young men in agriculture have indeed been reached through the sales of pineapples to WAD.

ANNEXES

Annex 1. Overview of organic and fair-trade certified pineapple producers, processors and exporters in Ghana

Producers	Organic or fair-trade	Product & variety	# out-growers	Certified area, ha*	Export through	Export, tonnes/yr
Bomarts Farms Ltd. ⁵	FT	fresh MD2 + in-vitro suckers	0	566	Ghana-Coop HPW Services ⁶	2 500
Jei River Ltd	FT	fresh MD2?	0	?	HPW Services	15 500 but most sold as conventional ⁵
Georgefields Ltd.	FT, organic	fresh MD2?	0	?	HPW Services	
Milani Ltd.	FT	MD2?	0	?	HPW Services	
Bio-Exotica ⁷	organic	MD2	0	110	Bio-Exotica	?
VREL/BioFair Fruits ⁸	FT, organic	fresh MD2		30	VREL	('08 f'cast) 700
Tacks Farms	organic	Smooth Cayenne + MD2	10	?	various	?
Shared Vision/Eloc Farms ⁹	FT, organic	fresh Smooth Cayenne	100	372 + 121 in convers.	Eloc Farms	?
Athena Foods Ltd. ¹⁰	organic	juice, Sugarloaf(+S.C.?)	311 (pinea. + citrus)	?	Athena Foods Ltd	?
BS Organic Collective Ass. ¹¹	FT, organic	fresh cut Sugarloaf	80	112	Blue Skies Ltd.	> 2 000
Blue Skies ¹²	fresh cut, FT MD2, conventional Cayenne		80	?		
EAWOFA/WAD	organic	fresh & dried Sugarloaf	30	35	WAD	116

* Certified area normally includes fallow areas and rotation crops.

⁵ <http://www.ghanacoop.it/>, accessed June 2009.

⁶ According to: http://www.swissinvestforum.ch/downloads/S1_agroprocessing/5-Werder%20HPW.pdf, HPW exported a total of 15,500 tonnes in 2007, but according to FLO (2009) global FT sales were only 9 200 t/yr in 2008, including other origins. Therefore apparently most HPW fruit was sold as conventional, despite coming from FT certified suppliers.

⁷ <http://www.natureandmore.com/growers/bio-exotica>, accessed June 2009.

⁸ <http://www.wienco.com>, accessed June 2009.

⁹ <http://eloc.smallholders-go4quality.org/cat/112/Welcome>, accessed June 2009.

¹⁰ www.technoserve.org/africa/ghana-pineapple.html, accessed 2005.

¹¹ http://www.fairtrade.org.uk/producers/pineapples/blue_skies_products.aspx, accessed June 2009.

¹² <http://www.bsholdings.com/index.aspx?page=2&lang=1>, accessed June 2009.

Annex 2. Individual farmer questionnaire

Questionnaire number: _____ Country: Ghana

Code questionnaire (do not fill):

1. Date of the interview (dd/mm/yy):

2. Name of the interviewer:

2a. Interview start time: _____

2b. Interview end time: _____

3. Name of the farmer:

4. Sex: Female (1) Male (2) (circle number)

5. Age: (Circle number in the first column)

1	Below 25
2	26-30
3	31-35
4	36-40
5	41-45
6	46-50
7	51-55
8	56-60
9	Over 60

6. Village:

7. Group:

8. Responsibility in the group: _____

9. Date joined group: _____

10. Export product concerned (Circle): **Pineapple / mango**

11. Have you heard of the project with FAO and Agro Eco on export of organic products?

(Circle number)

1	No	2	Yes	3	Don't know
---	----	---	-----	---	------------

→ If no, please briefly describe the project

→ If yes, proceed to the next question

12. If yes, in which project activity did you take part?

Type of activity	Fill with Yes...1 or No...2
1. Training	
2. Meeting	
3. Other, <i>please specify:</i>	

⇒ If NO is the only answer to Question 11 and 12, the interview cannot continue.

Please select another farmer from the list that was given to you.

SECTION 1 –TRAINING & CAPACITY BUILDING

13. If you received one or more training organized by FAO, please specify the type of training received:

Type of training	<i>Fill with</i> Yes...1 or No.....2
1. Production methods	
2. Record keeping	
3. Post harvest	
4. <i>Collect of organic shea nut</i>	<i>Not applicable</i>
5. <i>Production of organic shea butter</i>	<i>Not applicable</i>
6. Marketing	
7. Standards and certification	
8. Association management	
9. Other, <i>please specify</i>	

⇒ If answer is No to all, go to Question 26

14. If yes, to what extent where you satisfied with the training received?

(Circle number)

1	Very unsatisfied
2	Unsatisfied
3	Neutral
4	Satisfied
5	Very satisfied
6	Don't know

15. If Unsatisfied/Very unsatisfied, please explain why:

16. Did you already receive this type of training before attending the training organised by FAO? *(that is: before this project)*

(Circle number)

1	No	2	Yes	3	Don't know
---	----	---	-----	---	------------

17. What are the new methods that you learnt in the training organised by FAO?

18. If you started using these methods, did you face some specific difficulties?

1	No	2	Yes	3	Don't know
---	----	---	-----	---	------------

19. If yes, could you please explain?

20. After the project is completed, do you think you will continue to use the new skills or methods you learned with the project?

1	No	2	Yes	3	Don't know
---	----	---	-----	---	------------

21. If Yes, what are they? List example(s)

22. If No, why not?

23. Has the training/assistance you received from this project helped in improving “quality” of the crop produced?

1	No	2	Yes	3	Don't know
---	----	---	-----	---	------------

24. If not, why not?

25. If Yes, what aspect of product “quality” has changed most?

26. Is there a subject on which you think you need training, but that was not included in the training organized by FAO? (Answer should be related to the export crop targeted by the project)

SECTION 2 – PRODUCTION, MARKETING, COST OF PRODUCTION

27. What are the major crops that you grow on your farm? (Indicate the 3 most important)

1. _____ 2. _____
3. _____

28. What is the total area of land that you own or work?

_____ (Specify unit: hectare
acre other:.....)

29. What is the acreage presently dedicated to pineapple/mango production?

_____ (Specify unit: hectare
acre other:.....)

**** The questions that follow focus exclusively on sugarloaf pineapple or mango production ****

- for EAWOFA farmers BEFORE CERTIFICATION
- for VOMAGA farmers BEFORE BECOMING A MEMBER

30. EAWOFA farmers: Before starting to sell certified pineapple through the group, what was the quantity of pineapple that you used to sell every year?

Vomaga farmers: Before becoming member of VOMAGA, what was the quantity of mango that you used to sell every year?

_____ (Specify unit: kilo tonne other:.....)

31. How did you usually market your products before certification/group membership?

(Circle number (s))

1	State/marketing board
2	Local market
3	Private firm
4	Producers' group without certification
5	Trader
6	Other, specify.....

32. What was the price that you did usually get before being certified in organic agriculture / being a group member (in local currency)?

_____ (Specify unit: kilo tonne other:.....)

- **HANGES OCCURED WITH CERTIFICATION/the project**

33. Since you joined the project, the area dedicated to pineapple/mango production has:

(Circle number)

1	Decreased
2	Not changed
3	Increased

34. How do you explain this change?

1	Bought new land
2	New planting
3	Sold land
4	pineapple/mango replaced by other crops
5	Other, specify:

35. Since you started producing organic pineapple/mango, the quantity you produce annually has: (Circle number)

1	Decreased
2	Not changed ⇒ Q37
3	Increased
4	Don't know

36. How do you explain this change? (Only if answer 1 or 3 to Q35)
(Specify it is linked to a change in yields, area under cultivation, etc.)

37. Do you think that with organic production methods, the yield has:

(Circle number)

1	Decreased
2	Not changed
3	Increased
4	Don't know

(If necessary explain: Yield = production per unit of land or per tree, expressed in ton/ha, kg/tree, etc...)

38. The cost of producing pineapple/mango has changed with organic production methods?

(Circle number)

1	Decreased
2	Not changed ⇒ Q40
3	Increased
4	Don't know

39. If there had been a change in production costs, what has changed exactly?

Review the different types of cost of production and for each line write in the right column the number corresponding to the answer (1,2,3, or 4):

Increase...1 Decrease...2 No change...3 Don't know... 4

		Select one answer per line			
		<input checked="" type="checkbox"/>			
		1	2	3	4
1	Purchase of seeds and young trees				
2	Time spent: weeding, harvesting, etc. (only family labour)				
3	Cost of hiring external labour				
4	Purchase of specific equipment				
5	Fertiliser purchase				
6	Purchase of phytosanitary products				
7	Transportation costs to the market				
8	Interests on loans				
9	Other, specify :				

40. MARKETING:

EAWOFA: What has changed for you in the marketing of pineapple when you started selling a certified product with the support of the group (EAWOFA/WAD)?

VOMAGA: What has changed for you in the marketing of mango since you joined VOMAGA?

(for instance: less time spent selling on the spot market, transporting products to the market easier, negotiating prices, price stability, etc.)

➤ **HARVEST 2007**

41. EAWOFA: What was the quantity of pineapple sold to WAD in 2007?

VOMAGA: What was the quantity of mango sold to exporters in 2007/08 (= 2007 large season + dec07/jan08 small season)

_____ (Specify unit: kilo ton
other :.....)

42. During 2007 campaign, did you also sell pineapples to other buyers or on local market?

1	No	2	Yes	3	Don't know
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43. EAWOFA: What was the price paid by WAD for organic pineapple in 2007 (in local currency)?

VOMAGA: What was the price paid by the exporter for your mangos in 2007?

_____ (Specify unit: kilo ton
other :.....)

44. How much did you receive in total from pineapple/mango sold in 2007 (local currency)?

45. Do you know the price of “non-organic” pineapple/mango on local market in 2007?

_____ (Specify unit: kilo ton
other :.....)

46. Do you have any other commercial activity (apart from pineapple/mango sales)?

1	No	2	Yes
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47. If yes, could you please specify what are these activities?

48. The income that you earn from selling pineapple/mango represents what share of your total income: (Circle number)

1	A small part (<50%)
2	About half (50%)
3	The major part of my total income (>50%)
4	Don't know

49. EAWOFA: Has the income you obtain from selling pineapple changed since you got certified as an organic producer?

VOMAGA: Has the income you obtain from selling mango changed since you joined VOMAGA?

(Circle number)

1	Decreased
2	Not changed ⇒ Q51
3	Increased
4	Don't know

50. How would you explain the difference?

51. How do you usually spend the money you receive from selling pineapple/mango (specifically before certification)?

52. What are the additional expenses that you managed to afford since you started producing organic pineapple/mango?

(Select number(s))

1	Purchase of agricultural equipment
2	Purchase of fertilisers and phytosanitary products
3	Purchase of land
4	Household improvements
5	Other investments, specify
6	Health expenses
7	Schooling fees
8	Clothing items
9	Food purchase
10	Paying debt or taxes
11	Funeral expenses
12	Other, specify:

53. Has the project had any impact on your food purchases?

1	No	2	Yes	3	Don't know
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54. Has the project had any impact on the production of other food crops?

(For instance if organic production methods are used to grow food crops or if you managed to buy fertilisers, etc.)

1	No	2	Yes	3	Don't know
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55. If yes, please explain

56. Do you feel that the training/new production methods have had an effect on your or your family's health?

1	No	2	Yes	3	Don't know
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57. If yes, please explain

SECTION 3 – GROUP development

58. Have you noticed any change in your group since you joined it?

(if possible try to see if these changes are specifically linked to project activities)

1	No	2	Yes	3	Don't know
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59. If yes, what are these changes?

60. Being a member of the group, does it help you in selling your products?

1	No	2	Yes	3	Don't know
---	----	---	-----	---	------------

61. Could you please explain?

SECTION 4 - IMPACT

62. Does organic certification/being member of the group bring you some other benefits that were not mentioned before? *(We already talked about changes in production, marketing, prices, and income)*

1	No	2	Yes	3	Don't know
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63. If the answer is yes, could you explain what other benefits?

64. Are there negative impacts, problems, difficulties?

1	No	2	Yes	3	Don't know
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65. If the answer is yes, could you explain which one(s)?

66. EAWOFA: Do you think that organic certification has had any impact(s) on your community/village?

VOMAGA: Do you think that VOMAGA has had any impact on your community/village?

1	No	2	Yes	3	Don't know
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67. If Yes, what are they? List example(s)

68. Can you think of any ways that women could have specifically benefited from the project?

1 No	2 Yes	3 Don't know
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69. If yes, how? List example(s)

70. Has the project created new job opportunities in your community?

1 No	2 Yes	3 Don't know
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71. If yes, for whom and doing what exactly?

72. Have you noticed if some new people are interested in joining the group?

1 No	2 Yes	3 Don't know
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73. Do you know if some people who are not members of the group and do not participate in the project have also adopted these new techniques (organic production methods in particular)?

1 No	2 Yes	3 Don't know
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74. If yes, which technique(s)?

75. Is there anything else that you would like to add to help improve project implementation?