

Certification report

International Analog Forestry Network

International Standard for Forest Garden Products (FGP), "beyond organic"

Makaibari Tea & Trading (Pvt) Ltd.

Makaibari Tea Estate, Kurseong, Darjeeling, West Bengal, India

FGP Report No: FGP IC IND021 Code FGP.2009.01



Control by F.G.P Inspection & Certification (Pvt) Ltd.

International Analog Forestry Network Accreditation: No. C01A

**FGP IC Licensee No: FGP IC IND021 for IAFN Standard,
Forest Garden Production**

**Organic production Licensee No: Control Union 800308
for EEC Regulation 834/2007, 889/2008**

Place and Date: West Bengal, India

10 December 2009

Inspector/s:
Mr. Pankaj Sinha

Place and Date:
Colombo, Sri Lanka
15 February 2010

Certifier:
Mr. Deva Vikrantha

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01. Introduction to standards

This standard was developed by the International Analog Forestry Network (IAFN) in response to the demand for a certification system that confirms to the principles of Analog Forestry*. www.analogforestrynetwork.org

Analog Forestry is a management response to the increasing demand for agricultural products from land use that has Bio Diversity of flora & fauna, environmentally clean & sustainable and socially just with Fair Social standards. As Analog Forestry seeks to develop native biodiversity it precludes the use of synthetic chemicals or bio concentratable toxic substances.

This Standard lays down minimum principles which must be complied with before any agricultural or silvicultural products can be placed on the market with claims or labeling that implies that they have been produced by the practice of analog forestry.

02. Aim of the standards

To protect consumers against deception and fraud in the market place, from, unsubstantiated product claims.

To protect producers of Forest Garden Products (FGP's) against misrepresentation of other forest or silviculture products as being from certified Forest Gardens

To harmonize the goals of Sustainable Development, Biodiversity Conservation and Secure Livelihoods in the practice and labeling of FGPs

To ensure that all stages of production, processing and marketing are subject to inspection and meet minimum requirements and

To provide a guide to farmers, contemplating conversion to Forest Garden farming.

03. Scope of the standards

This standard applies to the following products which carry or are intended to carry descriptive labeling referring to Analog Forestry production methods for:

- a) Unprocessed plants, plant products of organic origin
- b) Animals or animal products,
- c) Bio diversity of Ecosystems or eco-systemic products and
- d) Processed products derived from (a,b,c)
- e) Fair Social Standards
- f) Clean Environmental aspects

04. Inspection criteria

All the farm operations have been inspected and verified that the production on land under certification comply with the inspection system given in section 5 of this standard.

Production and storage of certified produce take place in production and storage locations, which are clearly separate from those not producing in accordance with the requirements of this standard.

Products not covered by this standard are stored separately and both types of products must be clearly identified.

Processing and/or packaging premises may handle produce which is not in compliance with this standard provided such produce is handled quite separately, is clearly identified and documented and all equipment is pre cleaned to the satisfaction of the accredited certification organization.

An application has been submitted by this client to the inspection body with all the information required under paragraph 4.6 of section 4.

The inspection has been planned and carried out since the inspection body has been satisfied after the review of the application.

05. Assessment procedure

- Review the Forest Garden Farm Design and questionnaire with the producer noting misunderstandings, discrepancies etc.
- Conduct a visual survey of landscape, crop and flora & fauna biodiversity indicators
- Conduct a physical survey of the soil and water (annex VII of the standards)
- Examine livestock,
- Check sheds and stores for conformity
- Check farm & process records (derogation: this could be oral if it is presented by the community in unlettered communities)
- Check on maintenance of clean environmental aspects
- Check on maintenance of Fair Social standards
- Prepare a detailed inspection report and recommendation.

Apart from the regular visits, wherein the full physical inspections are done, unannounced inspection visits are carried out in order to verify the conformance to the standards with special attain to use of unauthorized substances.

06. Special conditions apply

It should be noted that the operations for which a certificate is granted herewith have to be carried out as per the standards as mentioned in the IAFN FGP standards.

07. Certification report

This report covers the criteria covered in section 01 to 07 of FGP Standards and the annexes there in. This certification report explains the inspection findings and the certification decisions made based on the inspection findings during this inspection.

08. Overview of the inspection

Name of the FGP Project	Makaibari Tea & Trading (Pvt) Ltd.
Address	Makaibari Tea Estate, Kurseong, Darjeeling, West Bengal, India
Main country	India
Legal representative	Mr. Raja Banerjee
Contact Person	Mr. Raja Banerjee (Owner), Mr. Dev Majumder (Manager)
Tel	+91-354-2330181
Fax	+91-354-233018
e-mail	makaibari@sancharnet.com
Inspection Program	International Analog Forestry Network (IAFN), Costa Rica, International Standard for Forest Garden Products (FGP), inclusive of Organic, Bio diversity, Fair Trade Social criteria and Environment
Inspection dates	4 & 5 May 2009
Agricultural, Processing and Administration Units inspected	<p>Agricultural: Makaibari Tea Estate, Kurseong, Darjeeling, India FGP IC IND021- AG001 / CU 800308F-01</p> <p>Processing: Tea processing factory of above tea estate</p> <p>Administration: Farm Garden Farm Plan, Bio diversity & Ecosystem maintenance, Environmental & Fair Trade Social standards maintenance</p> <p>Bookkeeping of agricultural and process activities</p> <p>Administration and export / local sale of Forest Garden Product standard tea and spices</p>
Exporter	<p>T'CLASSIC (DARJEELING) PVT. LTD. 'ANANDLOK' ~ 2ND FLOOR, FLAT # 207 227, A.J.C. BOSE ROAD KOLKATA - 700020, INDIA PHONE: 0091-33-22878560 FAX : 0091-33-22870695 E-MAIL: tclassic2@gmail.com URL : www.makaibari.com</p>

09. General Description of the Project and positive findings / Inspection recordings

The Makaibari Tea Estate Organic and Demeter Tea growing project, is owned and managed by Makaibari Tea & Trading (Pvt) Ltd.

The estate is located in the climatically flavoured foot hills of the Himalayan range of mountains in the cool, foggy and steep Darjeeling hills, in the hamlet of Kurseong, surrounded by tropical rain forests and other organic Tea gardens, in the District of Darjeeling, India, at an elevation of 700 – 1260 meters above sea level.

248.18 ha have been cultivated to date with a commercial crop of Tea of seedling tea and VP tea varieties out of the originally granted with an area of 828.18 Hectares, in 1859. The balance remains as large patches of primary forests and valleys, infested with natural wild flora and fauna of a vast variety of soil macro organisms, birds, animals from rabbits to tigers, forest herbs and spices etc.

The mixed cropping made in the otherwise mono cropped Tea fields, is mainly of shade trees and forest trees, gravilea, neem, and leguminous plants like crotolaria, Indigofera, clover, some fruit trees etc.

The tea factory was established in 1857 at an elevation of 1260 meters, within the Tea garden.

Rain fall in this area is between 200 – 250 cms and temperatures are from 2 to 28 deg C between the winter and the hot summer season.

Certifications held: The project is already certified for EEC Regulation 834/2007, 889/2008 (formerly EEC Regulation 2092/91 Organic, USDA/NOP and JAS organic, Demeter and Fair Trade, Naturland certified. They also hold a host of other certifications inclusive of HACCP monitoring system for food safety. Record keeping is maintained separately for the above certifications.

FGP Bio diversity of all indicators of flora and fauna have been identified.

FGP Clean Environmental standards are being maintained and conformance noted.

FGP Fair Trade Social standards are being maintained and conformance is noted. The unit is already Fair Trade and Naturland certified.

Forest Garden Farm Plan is not updated. This is to be readied along with the soil maps for the next inspection, so that carbon base load can be measured, if desired by the client, at a future inspection.

09.1 Bio Diversity Indicators

Both lands consist of anthropogenic, forest and natural ecosystems consisting of an entire assemblage of organisms with tea bushes, trees, shrubs, herbs, micro organisms, animals etc including people in their environment, caused by direct

human interaction with the ecosystems and land covers of organic agriculture with bio diversity, forestry etc.

Satisfactory environmental aspects of soil chemistry soil compaction, rooting density, organic matter, the canopies & seral covers of vegetation, natural corridors etc are noted in the two lands and are referred to in the FGP assessments, indicating signs of a mature ecosystem.

Many species of soil macro organisms, insects, invertebrates, vertebrates, woody and non woody vegetation, aquatic organisms etc are noted in the two lands and are referred to in the FGP assessments, indicating an organically maintained natural and chemical free eco systems.

09.2 Vertebrates Invertebrate, Birds and Insects:

Presence of vertebrates of birds like wood pecker, doves, parrots, crows, mynas etc, animals like wild boar, porcupine, rats, leopard, bear, barking deer etc. reptiles like bufo spp., various varieties of snakes are signs of development of mature ecosystems without any chemical usage.

Presence of butterflies, moths, bees, Christmas flies etc indicate the availability of active breeding habitats in the environment.

09.3 Physical survey of the soil and water:

The organic matter horizon existing is significantly distinctive. The AO horizon is significant in the mature vegetation but is low in the developing anthropogenic ecosystems.

Erosion is controlled along the mountainous slopes by contour drains, rock terraces, SALT rows, live green hedges of vegetation, grass covers etc.

The humus organic matter content consists of low to high strata due to the varied general types of vegetation, demarcated by the slope of the land. The soil in much of the area is quite well covered and preserved with many grass types and not exposed to heavy rainfall all year round. As a consequence, the retention of organic matter in the soil is good. The organic matter and nutrient is held in the living root mass of the heavy forest trees and mature fruit trees that grow in the region.

Root density of top horizon of the soil (AO to B horizons) is medium in both field units. Bulk density of soil is medium and this has led to a medium compaction of soil and is a good indication of accumulation of organic matter.

Pockets of original forestry are maintained. Primary and secondary forests are established, the initial organic horizon was measured at about 1 to 04 cms.

Clarity of water is clear and with no evidence of any pollution since there is no visual observation of turbidity, eutrophication, bacteria bloom etc. in the fields.

Condensation of fog and mist, due to the foliage of trees in the hilly mountains is noticed. The medium to high density of trees, in these areas, result in the conservation of upper watersheds.

There is management to maintain the fertility of the production system by slashing down weedy annuals and by removing parasites and pruning of tall trees within this ecosystem growing areas. The soils have no activity of chemical fertilization, chemical weeding or chemical pest control.

The traditional practice of burning the residues has been done away with. Instead all tree lopping, fallen leaves from the shade canopy of forest trees, plant residues etc are composted with dried animal waste for soil fertility improvement and upkeep.

Cattle maintained within the lands are allowed free graze and the animal waste is collected for composting and application for fertility improvement and enhancement of the structure of the ecosystems.

Wild animals gain access from the surrounding forests and there are signs of such activity.

The visual survey conducted of the landscape, crop and bio diversity indicators show that Organic production as per EU Regulation 834/2007 (formerly 2092/91) and Sustainable development, biodiversity conservation etc are maintained. Secure livelihoods are offered to the rural population, who work within this ecosystem.

09.4 Emission Control and GHG gas absorption:

Greenhouse gases are gases in an atmosphere that absorb and emit radiation within the thermal infrared range. The main greenhouse gases in the Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, ozone and CFCs. However there is a critical difference between biotic & fossil generated carbon dioxide that the FGPIIC system takes into consideration.

Burning of fossil fuels and deforestation leads to higher carbon dioxide concentrations. Anaerobic fermentation and manure management, paddy rice farming, land use and wetland changes and covered vented landfill emissions leads to atmospheric methane concentrations of biotic carbon. Use of CFCs in refrigeration systems and use of CFCs and halons in fire suppression systems can increase the amount of CFC in the atmosphere, whilst agricultural activities such as use of inorganic fertilizers can lead to higher nitrous oxide (N₂O) concentrations in the atmosphere.

However, greenhouse gases can be removed from the atmosphere by various processes. As a consequence of a physical change; condensation and precipitation the water vapor remove from the atmosphere while the photo-chemical reactions in the atmosphere, combustion or biological decomposition can degrade CH₄ to CO₂ and water vapor. Finally, CO₂ can be captured by photosynthesis of plants. These techniques either directly remove greenhouse gases or alternatively sequester them so that these gases are kept out of the atmosphere.

The tea fields which are maintained with organic and bio dynamic Demeter certified management systems can be examples of landscapes that are self sustaining forest gardens rich in bio diversity and containing a vegetation that is comprised of a wide variety of taller trees, without any genetically modified plants and animals.

These management activities that focus on the beneficial features of the surrounding primary and secondary forests, assure a healthy relationship being maintained with the natural environment and the productive environment that these tea fields represent. These landscapes are very effective at providing other environmental services such as hydrology control, erosion control oxygen generation and bio diversity conservation.

The vegetative cover (of the bio diversity of tea bushes and shade trees) in the estate, can control and mitigate the gasses emitted by both natural and production process.

Furthermore there is system to produce bio-gas using the plant residuals and animal waste before applying to the field. This can convert CH₄ to CO₂. It will also help to save some energy and the digested residuals of the bio-gas plant for its use as organic manure.

In the tea factory, dried wood from the wood lots and from the fallen trees in the surrounding primary forests, are in use to drive the tea dryers and the boilers.

In the tea factory processing, no fumigated ingredients, additives, processing aids nor processing agents are used.

Further in the tea factory the dust produced during the various dry processes is extracted and collected into bags and this is used in the compost making process. The air stream from the production unit is also regularly cleaned before even a minimum percentage is released into the environment.

These measures too have a direct bearing in controlling factory emissions.

10. Sampling

Initial chemical residue testing could be restricted to Organochlorine (OC), Organophosphate (OP) and heavy metal residues in products. However additional sampling is done when there are specific indications that residues may exist from other agricultural and environmental sources.

Certified products are also randomly tested based on a 5 per cent of farms per annum. In addition, a testing program is carried out where there is any basis for concern.

Below is a summary of the test reports of the samples drawn during this inspection.

Samples and date/s	Black tea from Makaibari Tea factories on 8 and 10 April 2009
Report date	4 May 2009
Sample code	CU 0507042
Sample	Made tea sample
Finding	Use of un-allowed chemicals is not detected

The analysis report received by Control Union Inspections (Pvt) Ltd has indicated that un-allowed residues of chemicals were not detected.

11. List of improvement actions

Find below a list of non-compliances applicable for this project

Number	N0.1
Date detected	4 May 2009
Category	Farm Garden Farm Plan (FGFP)
Non-compliance (finding)	Comment on finding: FGFP needs to be prepared even though shade trees are maintained, so as to evaluate the future tree planting that has to be under taken
Status of the non-compliance	Recommendation
Dead line	Next inspection 2010
Implementation	As above
Sanctions applied (if any)	None

12. Yield estimate

This gives an estimate of the FGP products that can be obtained from the certified units:

Makaibari Tea Estate: FGP IC IND021-AG001/CU 800308F-01

Unprocessed agricultural crops (Sec 1.1 a)	Quantity (T)
Raw Tea leaves	537
Cinnamon	0.9
Bay leaves	0.5
Ginger	2
Turmeric	2
Lemon grass	2.5
Amla	3
Yarrow	3
Chamomile	2.9
Nettle	4
Valerian	2

Dandelion	2.5
Oak	4
Equisetum	3.5
Processed FG products >95% (Sec 1.1 d)	Estimated quantity (T)
Tea (green Tea, Black Tea) Withering / steaming, cooling, rolling, breaking, fermentation, oven drying, sifting, grading, storage, labeling, administration	123
Cinnamon	0.3
Ginger	0.5
Turmeric	0.5
Lemon grass	1
Amla	1.5

13. Name of Exporter:

T-Classic (Darjeeling) Pvt. Ltd
'ANANDLOK' ~ 2ND FLOOR, FLAT # 207
227, A.J.C. BOSE ROAD
KOLKATA - 700020, INDIA

PHONE: 0091-33-22878560
FAX : 0091-33-22870695
E-MAIL: tclassic2@gmail.com
URL : www.makaibari.com

C/O Makaibari Tea & Trading (Pvt) Ltd.

14. Units/ Operations added to Certification programme

Below is a list of Units/ Operations added to Certification Programme during this inspection:

Unit Number	FGP IC IND021-AG001/CU 800308F-01	
Unit Name & Address	Makaibari Tea Estate, Kurseong, Darjeeling, India	
Unit type	Operation (s)	

FGP Production & Processing of black & Green Tea	Cropping, harvesting, receiving, withering, steaming, cooling, rolling, fermenting, drying, grading, packing, storing
Status	FGP Certified status inclusive of Organic, Bio diversity, Fair Social criteria and Environment
Land extent	Total grant: 828.18 ha, Cultivated 248.18 ha. Balance is under original forests & land vested with the workers
Crops added	As detailed in item number 12
Animals added	Not applicable

15. Operations withdrawn from the Certification Programme

Unit Number	No units have been withdrawn from the certification programme.	
Unit Name & Address	--	
Unit type		Operation (s)
--		--
Status	--	
Land extent	--	
Crops added	--	
Animals added	--	

16. Points for attention (if any)

1. Sufficient tall tree bio diversity is to be developed and maintained in a few fields of Makaibari Tea Estate so as to be in conformance with the standards of the International Analog Forestry Network, as the required minimum 40% shade is made up from the dense live hedges and pockets of forests within this land.

2. Farm garden Farm Plan and soil map are to be readied for the 2010 inspection.

Though the establishment of Forest Garden concepts have already taken place under organic production methods as per EC Regulation 834 & 889/2008, without any non conformance with the desired effects of the implemented organic, the various canopy

layers of shade for environmental bio diversity & indicators, fair trade socially just practices and etc., the updating of information provided in the Forest Garden Farm Plan (FGFP) of each small farmer agricultural unit holding, needs further attention and clarity to serve as a detailed design map that records the existing physical and ecological structure of the lands and to provide a clear work plan for the future.

A completed Forest Garden Farm Plan is deemed to have the following updated features at a minimum: Annex V!

1. existing drainage patterns
2. existing buildings
3. existing roadways
4. existing vegetation patterns
5. ecological valuation
6. Analog Forestry design
7. Implementation plan

17. Certification decision

Conformance to the IAFN standards and EU Regulations 834/2007 & 889/2008 are maintained in the under noted:

Conformance to the cropping systems of the forest garden concept of laid down minimum principles are in compliance in the production units, with land use that is under organic production and forest garden methods, free from toxins, environmentally sustainable, with the various shade canopy layers & biodiversity indicators, biodiversity conservation, implemented and maintained.

Socially just and responsible fair trading practices are maintained and implemented with auditable records to ensure full customer confidence.

Clean toxic free environment practices are maintained inside and outside the storage and processing units, with no chemical additives, preservatives etc used in processing.

Use of the labelling & IAFN FGP logo is recommended without change of the colour.

The foregoing conformance to the laid down criteria of the International Analog Forestry Network standards enable the issue of the Forest Garden Product Certificate inclusive of organic and the labelling of products in accordance, to the client.

18. Carbon

In the production units inspected Soil Carbon has been identified as a very significant sequestered pool of atmospheric carbon. Therefore the:

1. Client is to indicate if the inspection of biotic carbon base load is to take place and be measured for certification.
2. Establish a monitoring program as designed by Forest Garden Product Inspection & Certification (Pvt) Ltd., for evaluation of increments of the biotic carbon base load.
3. Monitor the increment of sequestered carbon annually.



F.G.P Inspection & Certification (Pvt) Ltd.

www.forestgardencertification.com



International Analog Forestry Network

www.analogforestrynetwork.org

Signed on behalf of :

F.G.P Inspection & Certification (Pvt) Ltd.

Deva Vikrantha

Certifier