PROJECT
ON PEPPER PRODUCTION
IN
IDUKKI DISTRICT OF KERALA
UNDER
NATIONAL HORTICULTURE MISSION

IMPLEMENTED BY

SPICES BOARD
GOVT. OF INDIA

PROJECT PLAN CONTAINING
BACKGROUND, PROFILE , MODE OF IMPLEMENTATION
AND
WORKING PROCEDURE
OF THE PROJECT

C O N T E N T S

PART-A

CHRONICLE OF THE PROJECT

Initial Proposal to MOC to meet competitive threat caused by ASEAN FTA	:	29.9.2008 vide letter No.DEV/VIP/01/07-08/4581
Modified Proposal to NHM based on NHM Norms	:	30-01-2009 vide letter No.DEV/VIP-ASEAN/08/9232
Revised Proposal to NHM	:	06-02-2009
Revised Proposal to NHM through SHM	:	18-02-2009
Approval from NHM	:	Vide letter No.45-2/2009-Hort. Dated 31st March 2009 from Ministry of Agriculture, Dept. of Agriculture and Cooperation (Horticulture Division) Krishi Bhavan New Delhi
Total Approved Project Cost	:	Rs.230.58 crores
Approved Financial Assistance from NHM	:	Rs.120.00 crores
Implementation period	:	Five years from 2008-09 to 2012-13 as per approval from NHM but the project will be completed only by 2013-14 since the formal approval has been received only on 6.4.09
Project Area	:	Idukki District of Kerala
Implementing Agency	:	Spices Board Ministry of Commerce & Industry Cochin

Introduction

Black pepper *(Piper nigrum L.)* famous as "Black Gold" and also known as "King of Spices" is one of the important agricultural commodities of commerce and trade in India since pre-historic period. The crop is the major source of income and employment for rural households in the predominantly pepper growing State of Kerala where more than 2.5 lakh farm families are involved in pepper cultivation. Karnataka, Tamil Nadu are the other major pepper producing States in the country. Kerala accounts for 80-90% of the total pepper production in the country. Idukki and Wynadu are the two major pepper producing districts in Kerala. The estimated area under pepper in India is 2,36,180 hectares (2006-07) and the estimated production is 50,000 tons (2007-08). The production of Indian pepper has come down from 80,000 tons (2002) to 50,000 tons (2007-08 estimates).

Climate and Soil

Black Pepper is a plant of humid tropics requiring adequate rainfall and humidity. The hot and humid climate of sub-mountainous tracts of Western ghats is ideal for its cultivation. It grows successfully between 20^{o} North and South latitude and from sea level up to 1500 metres above sea level. The crop tolerates temperature between 10^{o} and 40^{o}C. A well distributed annual rainfall of 125-200 cm is ideal for the crop. Ideal pH ranges from 4.5 to 6.5.

Varieties

Over 75 cultivars of Black Pepper are being cultivated in India. Karimunda is the most popular of all cultivars in Kerala. The other important cultivars are Kottanadan (South Kerala), Narayakodi (Central

Kerala), Aimperian (Wynadu), Neelamundi (Idukki), Kuthiravally (Kozhikode and Idukki), Balankotta, Kalluvally (North Kerala).

Sixteen improved varieties of Black Pepper have been released for cultivation from Pepper Research Station, Panniyur, Kerala and Indian Institute of Spices Research, Calicut such as Panniyur -1 to 7, Sreekara, Subhakara, Panchami, Pournami, PLD-2, Sakthi, Thevam, Girimunda and Malabar.

Propagation

Stem cuttings and rooted cuttings from runner shoots are mainly used. Terminal shoots can also be used.

Standards Used for Growing Vines

Erythrina Sp. (Murikku) or *Garuga pinnata* (Kilinjil) or *Grevillea robusta or Glyricidia sps*.

Pepper Production System in India

Pepper is a native of the Western Ghats in India, and is being produced:

i. as a backyard crop in every compound
ii. as a mixed or intercrop trailed on various trees (including arecanut and coconut) in the garden and homesteads
iii. as a pure crop on slopes and in valleys of low hills
iv. as a mixed crop on shade trees in cardamom, tea and coffee plantations

The commonly observed cultivation system in Kerala is the “extensive homestead cultivation” where pepper cultivation is taken up as a secondary crop interspersed with several other crops.

Indian Pepper Exports Facing Challenge

Major producers other than India are Brazil, Indonesia, Malaysia, Sri Lanka, Vietnam, Cambodia and China. Out of the world production of 2,62,900 tons (2008 – projection) Indian share is estimated at 50,000 tons. World export estimated is 1,90,800 tons (2008-projection). The balance is consumed within the producing countries. South East Asian countries like Vietnam, Cambodia, Thailand and China are emerging as major producers of pepper and their domestic consumption is practically nil. From 22,000 tons of production in 1998, Vietnam, has achieved a production level of one lakh ton during 2006. The traditional producers like India and Indonesia show a declining trend in production. Brazil, the only Latin American source stepped up the production during the last couple of years. The export from Vietnam has increased to1,16,617 tons(2006) from 98,494 tons (2004). From the above facts it is evident that other producing countries like Vietnam , Brazil etc. are posing serious challenge to Indian pepper export in the international market.

S W O T Analysis of Indian Pepper Industry

In view of the changed global market and shift in production , while planning for future and to convert the constraints into opportunity, a self appraisal is required and the assessment are as under:

Strengths

- ? Superior intrinsic quality of the product
- ? Good base in value added products
- ? High domestic demand
- ? Cultivation as inter/mixed crop

Weaknesses

- ? Low productivity
- ? Insufficient supply of elite planting materials
- ? Unscientific processing methods
- ? Weak promotional activities
- ? High dependence on weather
- ? Lack of technical knowledge/technology for mechanical farming/processing

Opportunities

- ? Increased global demand
- ? Change in life style and food habits
- ? Value added products
- ? Unconventional usage
- ? Organic production

Threats

- ? Increasing production and high productivity in competing countries
- ? Price fluctuations
- ? Increase in cost of production
- ? Pests and diseases
- ? Lack of sufficient experienced labour
- ? Depletion of water sources in pepper area
- ? Change in climate

Issues to be addressed and challenges to be met with

If Indian production decline further and current supplies could not cater the domestic demand, the low cost imported pepper from ASEAN

countries will affect the Indian pepper producers' economy further. The sustenance of Indian pepper is mainly due to its intercropping conditions. Price volatility and increase in cost of production tempts the pepper growers of the major pepper growing districts of Kerala viz. Idukki and Wynadu to switch over to other crops. In addition to this, low productivity of pepper to the tune of 267 kgs./hectare (National Average) is another challenge which has to be met with. The productivity of Vietnam and China is around 2000 kgs/hectare. The low productivity is mainly due to poor farm management, incidence of diseases & pests, senility of plants, non-popularization of elite cultivars as well as ill-maintained farms with traditionally available high yielding cultivars, depletion of soil fertility, damage of live standards due to pest attack etc. Scattered cultivation by small holders, lack of long term investments for improving the crop are some of the added perils.

The Mission on Action

Project on Improving Production and Productivity of Pepper in Idukki Dist. of Kerala Assisted under NHM

As an agency concerned about the plight of Indian Pepper industry and in response to the invitation from various quarters of the industry and directions from the Ministry of Commerce, Spices Board volunteered to workout a proposal on production development of pepper in Idukki District of Kerala in line with NHM guidelines which evolved as a project for implementation in the district with assistance under NHM.

Idukki District at a glance

Idukki District of Kerala being the core producing centre, is selected for implementation of the project. The district came into being on 26th January 1972.

Demography

Boundaries

North	:	Trichur District of Kerala and Coimbatore District of Tamil Nadu
South	:	Pathanamthitta District of Kerala
East	:	Madurai District of Tamil Nadu
West	:	Kottayam and Ernakulam Districts of Kerala
Geographical Area	:	4358 sq.kms
Head Quarters	:	Painavu
Taluks	:	4 (Thodupuzha, Devikulam, Udumbanchola, Peermedu)
Blocks	:	8 (Thodupuzha, Ilamdesam, Adimaly, Devikulam, Nedumkandam, Kattappana, Idukki, Azhutha)
Municipality	:	1
Panchayats	:	51
Revenue Villages	:	64
Post Office per Lakh population	:	27.62 Nos.

Population and Literacy (2001 Census)

Male	:	5.67 lakhs
Female	:	5.63 lakhs
Total	:	11.30 lakhs
Density of Population	:	259 per sq.km
Scheduled Caste	:	1.59 lakhs
Scheduled Tribes	:	0.51 lakhs
Households	:	2.65 lakhs
Literacy Rate	:	88.69%
Major crops	:	Cardamom, Pepper, Tea, Rubber, Coffee, Coconut

Climate

Temperature	:	Varies between 21^{o} to 27^{o}C with minimum seasonal variation (Eastern parts located in highland varies between -1^{o}C to 15^{o}C in November to January and 5^{o}C to 15^{o}C during March/April).
Annual Rainfall	:	Varies from 250 to 425 cms

Land Holding Pattern

Up to one hectare	:	80.42%
Between One & two ha.	:	14.34%
Above Two hectares	:	5.24%

Nearest Airport	:	Cochin 110 kms
		Madurai 200 kms
Nearest Railway Station:		Kottayam 114 kms
		Cochin 115 kms

Production and Area under Pepper in Idukki District

Year	Area (Ha)	Production (Tons)
2003-04	68,595	36,417
2004-05	82,316	38,787
2005-06	84,219	52,063
2006-07	83,652	35,299
2007-08	65,333	23,311

Source : Directorate of Economics & Statistics, Govt. of Kerala

Area under pepper had been increasing according to official statistics up to 2006-07 and it is showing a drastic reduction in 2007-08. Pepper is grown virtually in every farm holding or homestead garden and hence is deeply associated with income and livelihood of majority of farmers. Pepper is estimated to contribute about 20% of the agricultural income of the district. It is mostly an intercrop and a pure crop in un-estimated small area. Intercropping is mainly with coffee, tea and cardamom. Most commonly used standards for growing vines are dadaps (Erythrina sp.) and silver oak (Grevelia sp.) apart from common trees like mango, jack fruit tree etc. Pepper produced in Idukki has better quality and the productivity (357 kgs/ha -2007-08) is higher when compared to other districts of Kerala. The agro-climatic condition of Idukki district is suitable for investing on programmes for increasing the yield. Varieties widely grown in the district are local land races such as Karimunda, Neelamundi, Kuthiravaly, Narayakodi, Chengannooran etc.

Objective of the Project and Outcome Expected

The objective of the project is to address the issue of non-availability of sufficient planting material, low productivity/production, non-availability of organic inputs, adoption of Integrated Pest Management and bridging

the technology gap by implementing programmes like establishment of certified nurseries, replanting/rejuvenation of senile plantations, setting up of vermicompost units, promotion of Integrated Pest Management (IPM) and training on planting material production and good agricultural practices. Growers selected under the project will be given financial assistance as cash subsidy on satisfactory completion of the programmes in their plantations/farms. Production and distribution of disease free, healthy and quality planting materials will be taken up with the technical supervision of the Board and by the financial assistance under the project.

On completion of the project and adoption of the improved practices by the farmers the productivity is expected to increase from the present level of 357 Kgs./ha. to 700 Kgs./ha. After that the productivity is expected to increase to 1000 kgs/ha from the 8th year of completion of the activity components taken up under the project.

The package will also serve as a measure to mitigate agrarian distress in Idukki district as recommended by Dr.M.S.Swaminathan Research Foundation.

Activity Components

1. Production of Planting Material

Planting materials required for replanting/rejuvenation will be produced through small scale certified nurseries opened in growers' field where replanting/rejuvenation is proposed to be taken up under the technical supervision of Spices Board and financial assistance under the project. Growers who are having own arrangements for production of planting material could use planting material from the mother plants of their

farm which are identified by Spices Board. This approach will ensure use of high yielding good quality planting material acclimatized to the locality where replanting /rejuvenation takes place and will eliminate the chance of high rate (<30%) of mortality due to transportation shock.

2. Replanting/Rejuvenation of Senile Plantations

Under this component, senile, disease affected and poor yielding vines in the existing plantations will be replanted/rejuvenated with healthy, disease free planting materials of high yielding local cultivars and identified traditional/improved varieties which are adaptable to the habitat.

3. Promoting Production of Organic Inputs

Depletion of organic matter in the top soil of pepper farms is due to unscientific cultivation practices, excessive use of chemical fertilizers and opening of canopy. This has necessitated replenishment of organic matter/humus in the soil. This can be easily done through application of vermicompost.

One of the major bottlenecks in promoting organic farming is non-availability of organic input like vermicompost. It is therefore necessary to produce organic inputs in the farm itself to maintain soil fertility and to support organic production. Vermicompost is considered as a potential soil enrichment input as well as a soil re-conditioner. This component assists in setting up of vermicompost units.

4. Promotion of Integrated Pest/Disease Management

Indiscriminate use of chemicals especially copper based fungicides in the pesticides has resulted in the damage of micro flora and fauna in the soil. Proper cultivation practices and biological control of diseases can only revive the health of the soil and sustainability of the crop. Only in extreme cases farmers need to be advised to resort to chemical control of diseases. Through this activity farmers will be given bio-inputs such as trichoderma and pseudomonas as well as copper sulphate for preparation of Bordeaux Mixture, at subsidized rates.

5. Human Resources Development

The yield gap observed in between farmers' field with average maintenance, progressive farmer adopting optimum maintenance, elite farmers and research stations following high production technology is nothing but the technology gap, which can be bridged by well planned extension activities. Hence, training programmes on nursery management, good agricultural & post harvest improvement practices at various levels such as officers, farmers, representatives of NGOs etc. will be taken up under this component.

6. Functional Infrastructure

Under this component development of infrastructure for collection, processing and grading of pepper by Farmers' Associations/NGOs and other institutions under public/private sector will be assisted.

7. Project Implementation

Implementation of the project will be through the extension network operated under Extension Advisory Service of the Spices Board. For assisting the regular technical officers of the Board technical personnel will be outsourced and their service utilized for implementation of the project.

Area of Operation

Idukki District of Kerala State. The district is having 64 revenue villages falling under four Taluks viz. Thodupuzha, Devikulam, Udumbanchola and Peermedu. There are 51 panchayats under eight blocks viz. Thodupuzha, Ilamdesam, Adimaly, Devikulam, Nedumkandam, Kattappana, Idukki, Azhutha.

The project will be implemented in all the 64 villages from 2009-10 onwards.

List of Panchayats and villages are annexed.

Baseline Survey

Before the take off of the project, a baseline survey will be conducted only in six villages selected using Outsourced Technical Assistants under the guidance of Field Officers of the Board. The survey team will be divided into different groups with Field Officers of the Board as Group Leaders. The Group Leader has to make random checking to ensure that all the houses in the villages are covered. The proforma for collecting the details

will be provided from Head Office and the arrangements for the survey will be conducted as follows:

Preliminary meeting at ICRI	21.04.2009
Meeting of Panchayat Presidents at ICRI	23.04.2009
Date of Commencement of survey	28.04.2009
Date of Completion of survey	29.05.2009
Data entry in computer	Simultaneously with survey

The investigators (OTAs and Board's Staff) will have to maintain a diary in which the house name, name of the planter, telephone number, location etc. are to be recorded and submitted to the Group Leader for verification periodically.

PHYSICAL & FINANCIAL OUTLAY OF THE PROJECT

(Rs.Crs)

Sl. No.	Component	Physical Coverage	Total Cost 5 Yrs.	Assistance from NHM 5 Yrs.	
				Percentage	Amount
1.	Production of Planting Material – Establishment of small nursery units	300 Nos. (1 ha. each)	9.00	50%	4.50
2.	Replanting/Rejuvenation of senile plantations	60,000 ha.	180.00	50%	90.00
3.	Organic Farming – construction of vermi-compost units	3680 units	22.08	50%	11.00
4.	Promotion of IPM	50,000 ha.	10.00	50%	5.00
5.	Human Resources Development – Training on GAP, Planting Material Production etc.	25,000 personnel	1.00	100%	1.00
6.	Functional Infrastructure for collection, grading etc.	3 Units	2.50	100%	2.50
7.	Implementation Cost	--	6.00	100%	6.00
	TOTAL		**230.58**		**120.00**

PART-B

MODE OF IMPLEMENTATION & WORKING PROCEDURE OF THE PROJECT

Implementation of the Project

Implementation of the project will be monitored by a Committee constituted by Spices Board consisting of members from Spices Board, SHM, Kerala; Kerala State Agricultural University, IISR, Calicut; NHM and Directorate of Arecanut and Spices.

Implementing Department and Officer Responsible

The project will be implemented by the Development Department of Spices Board drawing required assistance from other Departments of Spices Board and the Officer responsible for implementation will be Director (Development), Spices Board, Ministry of Commerce & Industry, Palarivattom.P.O., Cochin – 682 025.

Dy. Directors (Dev.), Spices Board at Nedumkandam and Kumily will be coordinating project activities in the district under Director (Dev.) Under them Assistant Directors and Field Officers will work for the implementation of this project along with supporting staff and outsourced Technical Assistants.

Guidelines for Implementation of the Project are given below:

- *Under all the components number of standards per hectare is considered as 540 Nos. for calculating the subsidy eligible under the project as adopted by the Economics & Statistics Department of Govt. of Kerala.*

- *For availing subsidy under all the programmes, farmers have to submit copy of Electoral ID Card and latest tax paid receipt as proof for ownership of patta land they hold for pepper cultivation.*

1. Production of Planting Material

Type of Planting Material and Production System :

Planting materials suggested for use are :

- Priority will be for rooted cuttings produced from locally adaptable cultivars as well as improved varieties which are recommended for Idukki district.

- Disease free, healthy stem cuttings from locally adaptable traditional cultivars as well as improved varieties are also recommended where/when sufficient rooted cuttings are not available.

- The mother cuttings used are to be certified by Spices Board.

- Planting material from commercial nurseries will not be accepted under the programme.

Production System

Production of rooted cuttings in poly bags will be through small scale certified nursery units raised by the beneficiary growers and maintained under the technical supervision of Spices Board following nursery

management practices recommended by Kerala State Agricultural University/ Indian Institute of Spices Research.

Eligibility for raising Nursery :

The eligibility for raising nurseries will be only for beneficiaries who are taking up replantation/rejuvenation in their plots under the project. These nurseries are expected to produce limited number rooted cuttings for use in the nearest vicinity of pepper farms where replantation and rejuvenation are taken up. In no case commercial production and supply of rooted cuttings will be allowed under the programme.

Production Target of a Nursery

The maximum number of rooted cuttings in poly bags eligible for subsidy under the programme will be 5000 per beneficiary. Initial planting in the nursery should be 20% more than the final production target for achieving 100% stand at the final stage.

Along with raising pepper rooted cuttings in nurseries, the nursery owners may be persuaded to raise saplings of silver oak also in poly bags for facilitating replanting and rejuvenation (as sustainable standards).

Rate of Subsidy:

Subsidy will be provided only for production of rooted cuttings in poly bags through certified nurseries as above, towards 50% of the cost ie. 75 paise per rooted cutting which are suitable for planting in the main field.

Production target of planting material under the project:

During the project period a total number of 600 lakhs planting material will be produced as worked out below:

Type of planting material	Area to be covered under replanting/ rejuvenation	Planting material required	Amount of Subsidy (Rs.Crs)
Rooted cuttings @ 2 Nos. per standard and 540 standards per ha.	55,556 ha.	600 lakh Nos.	4.50
Vegetative cuttings from healthy, disease free plants	4,444 ha.	48 lakh Nos.	--
TOTAL	**60,000 ha.**	**648 lakh Nos.**	**4.50**

Field Inspections:

Preliminary Inspection of Nursery Site & Mother Vines FOs/EAs/FAs/OTAs of Spices Board (October).

Based on preliminary inspection report, Field Officer will issue permit order (December) to raise the nursery. Periodic inspections/visits to the nurseries are to be conducted by officers concerned (January to March).

Final Inspection (April, May) for recommending subsidy – 100% by Field Officers and 25% and 2% are to be test checked by concerned Assistant Director and Deputy Director respectively.

Inspection Committee for ensuring quality of mother vines

An Inspection Committee with members as follows will identify mother plants for collection of runner shoots for raising nursery at farm level:

1. Concerned Deputy Director (Dev)

2. Concerned Assistant Director (Dev)
3. Concerned Field Officer
4. A Scientist from ICRI

The Deputy Director concerned will be the Chairman of the Committee. Farmers who wish to procure runner shoots can collect the same from the identified farms if the owner of the identified farm is willing to share the material. This arrangement is only for farmers who are not having their own mother vines suitable for collecting runner shoots.

Farmers who are having their own quality vines could use the same in the nurseries or farms with the approval of the concerned Filed Officer of Spices Board.

ELISA test at random will be undertaken on the plants in the nurseries by scientists of ICRI (2% of the total nurseries).

Payment of Subsidy:

In a single installment during (May, June) subsequent planting season, on satisfactory production of disease free, healthy rooted cuttings which are suitable for field planting through e-payment.

Planting Material Production Schedule:

Year	Rooted Cuttings (Nos. in Lakhs)	Amount of Subsidy (Rs.Crs)
2009-10	200	--
2010-11	200	1.50
2011-12	100	1.50
2012-13	100	0.75
2013-14	--	0.75
Total	**600**	**4.50**

2. Replanting/Rejuvenation of Senile Plantations

The activities under the component will be like:

- ✍ Entire replanting of senile plantations
- ✍ Selective replacement of senile/disease affected/poor yielding vines in the existing plantations with quality planting materials. The planting materials permitted for use under the programme are rooted cuttings produced in the certified nurseries/stem cuttings which are certified by the Field Officer concerned or the Inspection Committee.
- ✍ Planting has to be taken up as per the Package of Practice recommended for pepper by KAU/IISR.

Eligibility:

- ? Pepper growers having valid land documents to prove ownership of land.
- ? Minimum standards required to join the project – 10 Nos. (2 vines per standard).
- ? The maximum number of standards (planted with two vines each) eligible for subsidy by a single beneficiary under replantation/rejuvenation will be 1080 Nos irrespective of size of the holding (this is calculated as per the norms of 540 standards in a mixed plantation of pepper in one hectare).
- ? The minimum spacing of plants in the farm will be 2.5 x 2.5 meters.
- ? Area coverage during the project period: 60,000 hectares
- ? When planted on fresh standards (erythrina etc) a sapling of silver oak or jack has to be planted adjacent to that for transferring the grown up vines to these trees at a later stage to ensure survival of plants even if erythrina or the support is damaged.

Rate of Subsidy :

Subsidy will be Rs.15,000/- per hectare (50% as per NHM norms) and the plant population per hectare will be 540 standards planted with pepper vines (two rooted cuttings/stem cuttings per standard) as adopted by Economics & Statistics Department of Kerala.

Payment of Subsidy :

Payment of subsidy will be on per standard basis which is planted with a minimum of two rooted or stem cuttings. Subsidy per standard replanted/rejuvenated will be Rs.28.00 which will be paid in two annual installments of Rs.16.00 during the year of planting and Rs.12.00 during the subsequent year.

The non- established plants if any found at the time of inspection for recommending 2nd installment for which 1st installment has been given should get gap filled before recommending 2nd installment. This matter should be informed to the beneficiary at the time of inspection for recommending 1st installment.

Subsidy disbursement will be through e-payment. Only in exceptional cases payment by crossed cheques would be done. The disbursement of subsidy will be done on the basis of the recommendations of the inspecting officers and test checking officers.

Field Inspections:

On hearing of completion of replantation and rejuvenation by the applicant, the inspections will be conducted as follows:

1st Installment

Up to 0.25 ha. (135 standards):		Outsourced Technical Assistants
Above 0.25 to 0.50 ha. (270 standards)	:	Field/Extension Assistants
Above 0.50 to 2.00 ha. (1080 standards)	:	Field Officers

2nd Installment

Up to 0.50 ha.	:	Outsourced Technical Assistants
Above 0.5 to 1.00 ha.	:	Field/Extension Assistants
Above 1.00 to 2.00 ha.	:	Field Officers

Test Checking of Replanted/Rejuvenated Area as follows will be obligatory for releasing subsidy:

1st installment	:	Minimum 25% of the cases inspected by OTAs and EAs/FAs are to be test checked by Field Officer
		10% of the total cases inspected by various officers as above are to be test checked by concerned Assistant Director
		2% of the total cases inspected by various officers as above, are to be test checked by the Dy.Director in charge of the Region.

2nd installment : Field Officer may test check 25% of the cases inspected by OTAs/FAs/EAs

Assistant Directors have to test check 10% of all the cases.

Dy.Director may check 2% of the total Cases.

Coverage of Replantation/Rejuvenation during the Project Period

Year	Area to be covered (ha)	Amount of Subsidy (Rs.Crs)
2009-10	4500	3.86
2010-11	18,500	18.75
2011-12	18,500	27.75
2012-13	18,500	27.75
2013-14		11.89
Total	**60,000**	**90.00**

(First installment Rs.8573/- per hectare and second installment Rs.6427/- per hectare- for calculating budgetary outlay)

3. Promotion of Organic Farming – construction of vermicompost units

Vermicompost is considered as soil enrichment/reconditioning input. On-farm production of vermicompost is very much needed for application of organic input for sustainability of pepper cultivation. Hence under this component, construction of vermicompost units will be assisted.

The type of units which are assisted under the project will be tank type units. The cheapest structure of tanks are ferro cement tanks.

Recommended size of the tank is as follows:

Length: 2.70 metres
Width 0.90 metres
Height 0.90 metres

The tank is to be erected on a raised stable concrete slab with a provision to store water on the sides of four outer sidewalls at the base, to protect organic matter and earthworms in the tank from ants [diagram attached]. The tank can be covered using any roofing material like polythene sheets, light roof etc. Cost of construction of such a tank is estimated as Rs.6000/-.

Composting technique:

Both one time feeding or feeding at intervals can be followed, based on the availability of organic waste. On the bottom of the tank, burnt bricks/roofing tiles may be placed to facilitate collection of 'vermi wash' –

which is an exudation of earthworms. Coconut husks and cow dung/compost are placed above this layer as bed for the earthworms. Then earthworms are introduced to the bed. Organic matter mixed with cow dung (60:40 ratio ideal) is fed to the tank. Weekly watering is suggested to retain moisture. The process of composting will be completed in 45 to 60 days.

Output of the unit:

One ton compost can be collected in two cycles(half ton per harvest). Five to six harvests are possible annually. From each cycle apart from vermicompost around 10 litres of vermi wash also can be collected by providing a pipe and tap at the bottom of the tank

As the structure is a permanent one, the units will be sustainable. Further, it is well protected from ants as water is stored around the tank in the channel provided at the base, and from rats as the tank could be well covered with wire mesh.

Rate of Subsidy:

50% of the cost subject to a maximum of Rs.3000/- per unit.

Maximum number of units that can be availed by individual beneficiary depending upon number of standards will be as follows :

Up to 540 Nos.	:	One unit
Above 540 to 1080 Nos.	:	Two units
Above 1080 to 2160 Nos.	:	Three units
Above 2160 to 4320 Nos.	:	Five units

Construction of vermicompost units by NGOs/SHGs/Farmers' Group:

These groups could set up vermicompost production units which are having bigger capacity. Field Officer will assess the requirement/ facilities of the group and recommend such cases to Assistant Director for necessary approval. The maximum number of units that can be allotted to a group depending upon the number of farmers in the group will be 10 Nos. and maximum subsidy eligible will be not higher than Rs.30,000/- or 50% of the actual cost whichever is less. These ten units can be constructed separately depending upon the availability of enough space or as a single/split units having a capacity corresponding to that of ten individual units.

Supply of Worms : Supply of worms will be assured from sources like NGOs, KVKs, KAU, ICRI etc.

Payment of Subsidy:

Subsidy will be paid in a single installment on satisfactory completion of construction and loading of organic waste and introduction of earthworms in the unit.

Field Inspections:

All the vermicompost units are to be invariably inspected by the Field Officer.

Wherever the number of units allotted are more than four, concerned Assistant Director has to inspect the units before releasing the subsidy.

Test Checking:

5% of the units are to be test checked by concerned Assistant Director and 2% by Deputy Director before release of subsidy.

Coverage during the project period:

Year	No. of units	Amount of Subsidy (Rs.Crs)
2009-10	11666	3.50
2010-11	15000	4.50
2011-12	3333	1.00
2012-13	3333	1.00
2013-14	3333	1.00
Total	**36665**	**11.00**

4. Promotion of Integrated Pest/Disease Management

Integrated Pest/Disease Management involves a combination of various measures to ensure effective pest/disease management without disturbing the eco system, reducing environment pollution and eliminating direct and indirect health hazards to human beings. The methods employed are observation, prevention and intervention.

Identification, surveillance and forecasting of pests/disease can be done through observation, whereas, scientific cultural operations like use of tolerant varieties, water management etc. can be used as preventive measures. Pest management can be done through intervention method like mechanical control, biological control and need based chemical control.

Out of the pests and diseases affecting pepper cultivation, the most dreaded ones are 'foot rot' and 'slow wilt'. Damages to the feeder roots is the root cause of sudden death or slow decline of vines. The damage to the feeder roots is caused by nematodes and *Phytophthora capsici* either independently or in combination. There is no spatial segregation of plant parasitic nematodes and *Phytophthora capsici* in the soil under field conditions. Hence, it is necessary to adopt a combination of fungicide and nematicide application for the management of the disease. In addition, pests like 'pollu beetle', 'top shoot borer', 'scale insects' are also to be controlled by integrated means. The control measures suggested are like application of neem cake and trichoderma in the soil, aerial spray /drenching of pseudomonas, spraying of Bordeaux mixture/ Copper oxichloride. Suitable botanical pesticides can also be used. Build-up of adequate organic matter in the soil should be ensured for getting desired results from the application of bio-agents (Trichoderma, Pseudomonas).

Eligibility:

Maximum eligibility per beneficiary will be standards up to 2160 Nos. and minimum 10 Nos. irrespective of the size of the holding.

Assistance will be once in a year and continuously for 3 years for a farm during the project period.

Those who wish to get assistance under IPM/IDM should:

- Remove unproductive/senile vines/vines which are irrecoverably damaged by pest & diseases and replant/rejuvenate with quality planting materials.

- Be willing to take up IPM/IDM practices as recommended by Spices Board.
- Attend training programmes on GAP/IPM practices organised by Spices Board.
- Beneficiaries of replanting/rejuvenation as well as other components are also eligible
- Shall agree to operate IPM continuously for three years from inception.

Assistance available under IPM/IDM:

Farmers will be given assistance for adopting the above integrated pest/ pest induced disease management practices in their farms. The assistance will be Rs.1000/- per 540 standards (maximum eligibility per beneficiary will be for 2160 standards irrespective of size of the holding at a ceiling of Rs.4000 towards 50% of the cost of IPM/IDM kits containing trichoderma/ pseudomonas/ copper sulphate.

The actual subsidy eligible by the grower will be proportionate to the number of standards assessed by Spices Board in the pepper garden owned by the farmer.

Mode of Providing the Assistance:

The assistance will be as IPM/IDM kits containing IPM/IDM inputs such as trichoderma, pseudomonas and copper sulphate.

Production& Supply of Bio-agents

Trichoderma and pseudomonas required for the kits will be supplied by ICRI Myladumpara.

Time of Supply : May- September

Supply Monitoring Committee(SMC)

An IPM/IDM input Supply Monitoring Committee with three members, two members nominated by Director(Res.) and third member nominated by Director (Dev) will:

- ✍ Assess year-wise/ total requirement trichoderma and pseudomonas during the project period
- ✍ Prepare month-wise production schedule of the above inputs
- ✍ Ensure and certify quality of every batch of the above inputs to be supplied
- ✍ Arrange and co-ordinate timely supply

The committee will work under the guidance of Dir. (Res.). He will ensure supply of the required quantity of quality inputs in time in consultation with Director (Dev.)

The approximate quantity of inputs estimated is as follows:

Trichoderma : 25 Kgs./540 standards(For direct application to the soil)
Pseudomonas : 2 litres/540 standards (Dilution 1:100 @ 2 litres/plant)

The actual quantity of supply will be proportionate to the number of standards assessed by Spices Board in the pepper garden of the beneficiary.

Non-Subsidy Portion of Inputs

50% of the cost of trichoderma and pseudomonas towards non-subsidy portion has to be borne by the beneficiary and is to be paid to ICRI. The Supply Monitoring Committee will formulate suitable mechanism for collection and remittance of the non-subsidy portion from farmers to ICRI.

Outsourced Technical Assistants for Bio-agent Production at ICRI and their remuneration

ICRI will utilize the services of three Outsourced Technical Assistants trained on Microbiology, per year for a period of 11 months on contract basis for production, quality checking and regular supply of IPM inputs.

The income generated by supplying trichoderma/pseudomonas will be used for paying the remuneration of OTAs. Director (Res) may workout the amount of remuneration to be paid to the OTAs and get it approved by Chairman for effecting the payment. The remuneration will be on par with similar employment in ICAR or elsewhere.

Supply of Copper Sulphate for Aerial Spray of Bordeaux Mixture

Under organic management and certification provisions are there for restricted use of copper based fungicides (NPOP). In IPM/IDM, copper sulphate for preparation of Bordeaux mixture will be supplied at 50% subsidy.

Quantity Supplied : 5 Kgs. Per 540 standards
Type of Material : Copper Sulphate with ISI Mark
Time of Supply : May-June/August-September

Nature of Application : Only for aerial spray of Bordeaux Mixture

Precaution : Drenching of Bordeaux Mixture should not be done in IPM/IDM plots where trichoderma is applied in the soil.

The actual quantity of supply per beneficiary will be proportionate to the number of standards as assessed by Spices Board in the pepper garden of the beneficiary.

Mode of Supply

Spices Board will invite competitive quotations every year (March) for copper sulphate with ISI Mark and rate finalized for the season. List of suppliers willing to supply the prescribed material at the rate fixed will be approved. Supply will be arranged through these approved suppliers under the strict supervision of Board's staff.

There will be a start off and cut off date for the supply to commence and completed during the supply period which will have to be strictly adhered to. These dates will be fixed by the Dy. Director concerned with approval from Head Office.

After processing applications eligible beneficiaries will be issued permit orders by the Field Officers for purchase of copper sulphate from the authorized suppliers. The permit order should specifically contain the name of the shop to which the allotment is made, the quantity allotted and validity period.

While purchasing the material by the beneficiary using the permit order, non-subsidy portion has to be paid by the beneficiary to the supplier and subsidy portion will be reimbursed to the supplier by the Board. For reimbursement non-subsidy portion, the bills are to be certified by the

supplier, staff of the Board who supervised the supply and concerned Field Officer. These bills are to be forwarded to the concerned Assistant Director along with list of beneficiaries and copy of permit orders which are also certified by the above mentioned.

IPM/IDM Input Application Campaigns

For ensuring application of inputs received by the farmers, campaigns are to be organized in various locations of each Field Office, simultaneously with supply of inputs. Schedule of these campaigns are to be informed in advance to concerned Asst. Director. After completion reports need to be send by the Field Officer to the Asst. Director. Assistant Directors concerned will also attend such campaigns and send report to the Dy. Director.

Field Inspections

Field inspections as follows are to be conducted after supply of inputs, for assessing application of inputs in the IPM/IDM plots:

60% : EAs/FAs/OTAs (report submitted to FO)
30% : Field Officers (report submitted to AD)
8% : Assistant Director (report submitted to DD)
2% Dy.Director

Misuse of Inputs

If any farmer is found misusing the inputs or keeping it unused, he/she will be debarred from availing any assistance under the project and a notice to the effect shall be served by the Field Officer citing the reason with copy to Asst. Director.

Coverage under IPM during the Project Period

Year	Area (ha)	Amount of Subsidy (Rs.Crs)
2009-10	15000	1.50
2010-11	23750	2.37
2011-12	4000	0.40
2012-13	4000	0.40
2013-14	3250	0.33
Total	**50000**	**5.00**

5. Human Resources Development – Training for Planting Material Production , Good Agricultural Practices (GAP) IPM, Bio-input/Vermicompost Production

Good Agricultural Practices and scientific nursery management practices on pepper are developed by Kerala Agricultural University as well as Indian Institute of Spices Research. Scientific information on Integrated Pest/Disease Management practices, bio/organic input production methods are also available. Awareness needs to be created on post harvest/quality improvement aspects also. To bridge the technological gap, these practices are to be followed by the farmers. This needs sufficient awareness and training programmes for farmers as well as extension workers.

Technology Gap Bridging Groups (TGBGs)

Under the jurisdiction of each field office, a TGBG as follows will be organized. Maximum number of members of the group will be ten.

Chairperson : Field Officer concerned
Technical Adviser : Agriculture Officer of the Krishi Bhavan

Scientist : A Scientist from ICRI
Members : One representative each from active and credible NGOs.

Progressive Pepper Growers' Representatives within the age group of 20 to 30 years, 30 to 40 years, 40 to 50 years and 50 to 60 years

Concerned Assistant Director of the Board will be the patron of the TGBG.

Functions of TGBG

- ? Plan, co-ordinate and facilitate conduct of meetings, seminars, campaigns and trainings in the area under it's jurisdiction
- ? Provide feed back on effectiveness of implementation of the project to the Board
- ? Medium of communication with farmers, NGOs, State Agri. Dept. etc.

Meetings of TGBG

Field Officer will arrange meeting of TGBG every month for discussion and interaction.

Different Programmes to be Organized under HRD

(In all the programmes quality improvement aspects will be discussed)

(i) Master Training Programme (MTP)

Participants : All the Officers , staff and OTAs of Spices Board working in Idikki District

All the Agricultural Officers / Staff of all the Krishibhavans of Idikki District and all the Asst. Directors of State Agri. Dept. working in Idikki District.

Institute : Kerala Agricultural University/IISR

Duration : Three Days

Course Fee : As per estimates of conducting Institute/ provisions and approval of Chairman , Spices Board.

The programme will be organised from Head Office and officer responsible will be Dy. Director (Dev.) H.O.

(ii) Training to Members of TGBG

Participants : All the members of Technology Gap Bridging Group except the officer members.

Venue : Indian Cardamom Research Institute, Myladumpara

Duration : Two days

Faculty : From KAU, IISR and ICRI

Remuneration: Actual bus fare and DA @ Rs.100/- per day per participant

Food & Accommodation: Free food & accommodation will be arranged at ICRI

Expenses for Food : Expenses for food for two days will be not higher than Rs.200/- per participant

Syllabus : GAP, Planting Material Production, IPM, Post Harvest Handling/Quality Improvement and other relevant aspects.

Deputy Director (Dev), Kumily/Nedumkandam will prepare schedule of the programme in consultation with Field Officers, Assistant Directors and Director (Res), ICRI and make necessary arrangements.

Director (Res) will make available suitable faculties based on the syllabus of the training.

TA & DA on actual and honorarium at the rate of Rs.250/- per hour will be given to the faculties. For exclusive subject experts and celebrity technical experts honorarium up to Rs.1000/- per faculty can be given.

(iii) Farmers' Training (50 Nos. per training)

Participants	:	Pepper Growers of a particular locality
Venue	:	Within the jurisdiction of the Field Office
Duration	:	Half day programmes
Faculty	:	Master Trainers trained under the project, skilled members of TGBG trained under the project and scientists from relevant institutions
Budget per Programme	:	Maximum of Rs.2500/- for meeting expenses on Hall rent, hiring charges, refreshments, invitation/ Publicity, honorarium for specially invited faculties with approval of Assistant Director concerned and other incidental expenses.

Training on vermicompost production will be handled in all the programmes.

Field Officer concerned with the participation of TGBG will organize and conduct the programme.

Deputy Director (Dev), Kumily/Nedumkandam in consultation with Field Officers and Assistant Directors will prepare annual schedule of farmers' training and will get it approved by Director (Dev).

(iv) Training on Production of Bio-inputs

Participants	:	Selected farmers willing for on-farm production of bio-inputs like trichoderma and pseudomonas.
Venue	:	ICRI, Myladumpara

Duration : One day

Faculty : From ICRI

Remuneration : Actual bus fare and DA @ Rs.100/- per day per participant

Food : Working lunch will be arranged at ICRI

Deputy Director (Dev), Kumily/Nedumkandam will prepare schedule of the programme in consultation with Field Officers, Assistant Directors and Director (Res), ICRI and make necessary arrangements.

(v) Short Film on GAP, IPM, Bio-input/Vermicompost Production & Quality Improvement

A short film covering various aspects on Good Agricultural Practices, Integrated Pest Management, production of Bio-inputs & Vermicompost and Quality Improvement will be shot and released in the form of CD. The entire expense for the film will be met under the project.

The CD will be distributed free of cost to the participants of various training programmes organized under the project.

Deputy Director (Publicity), Spices Board in consultation with Director (Dev) and Director (Res) will prepare script for the film and get the same approved by Chairman, Spices Board. Dy.Director (Pub) will make arrangements for releasing the CD following all the procedures and formalities.

(vi) Publishing Extension Materials

Cost incurred for extension materials like package of practice, audio visual aids, pamphlets, booklets, folders etc. will be met under the project. The requirements of the above will be assessed by Dy.Director (Dev), Kumily/Nedumkandom and Dy.Director (Pub) will make arrangements for printing/publishing of the material after obtaining necessary approvals and sanctions from competent authorities. Purchase of audio-visual aids will be through the regular system functioning in the Board. Indents for the same may be forwarded to Director (Dev) for necessary action.

Budgetary Outlay under the component

Year	Programmes	Outlay (Rs.Crs)
2009-10	Based on annually prepared schedules	0.25
2010-11		0.20
2011-12		0.20
2012-13		0.20
2013-14		0.15
Total		**1.00**

6. Functional Infrastructure

Under this component financial assistance will be given to Farmers' Associations/NGOs representing pepper growers and other institutions under public sector for establishing collection, processing and grading centres of pepper. The centre should have a godown with a capacity of 2000 tons. These centres can have add on facilities for primary

processing and middle level value addition to counter distress sale and chances for wastage. Assistance from NHM is for an amount of Rs.2.50 crores towards 100% of the cost by which it is proposed to establish three such units during the project period as follows:

Devikulam/Thodupuzha Taluks	:	One Unit
Peermade Taluk	:	One Unit
Udumbanchola Taluk	:	One Unit

Selection of Units

Out of the three units, the unit proposed in Udumbanchola taluk will be set up in the cardamom complex (For Common Cleaning, Processing and Grading facility) established by Spices Board at Puttady in Vadanmedu. The other two units will be selected based on project proposals from eligible beneficiaries.

Completion of the Unit

The unit shall be functional in all aspects within a period of **twelve** months from the date of approval.

Assistance

Assistance will be 100% of the capital cost on building and plant & machineries or Rs.0.83 crores whichever is less.

The beneficiary should have a minimum of free hold land of one acre to construct building for housing processing and packing of pepper from the nearby locality. The land should have access to road, water and

power. Once the application is cleared by the Spices Board the beneficiary has to mortgage the title deed of the above said land, building, godown, plant & machinery to Spices Board for a period of minimum five years.

The beneficiary should also ensure regular collection and processing of 6000 tons of green pepper during harvesting season (October to April).

Schedule of payment of assistance will be as follows:

- 10% on handing over the documents to Spices Board
- 30% on completion of building
- 10% on placement of supply order for the plant & machinery. The manufacturers list (Plant and machinery) will be short listed in consultation with Spices Board
- 40% on installation of the machinery and satisfactory functioning (test run) of the unit.
- 10% (balance) will be paid on successful operation of the unit for three months.

Submission of Application

Eligible beneficiaries may apply to the concemed Field Officer, Spices Board with the following documents:

a) Application in the prescribed format
b) Project Report apprised by Financial Institutions/Chartered Engineer or approved consultancy firms
c) Original title deed, encumbrance for immediate 13 years, tax paid receipt, possession certificate and site plan of the land in which the unit is proposed to be established

d) Flow chart relating to collection, grading/processing and other activities of the unit
e) Plan and Estimate of the processing unit and godown
f) List of equipments/machinery proposed to be installed/set up indicating make and the cost.
g) Copies of quotations for machineries/equipments from minimum two suppliers
h) Registration Certificate, Bye-Law , Organogram, Profile and previous years balance sheet/audited accounts of the NGO/ Organization certified by a Chartered Accountant
i) No Objection Certificate from Revenue Department/Local bodies
j) Details on arrangements for collection of pepper from farmers and marketing
k) List of pepper growers who are proposed to be catered through this unit
l) Any other relevant information pertaining to the project

Applicant is liable to produce any other documents required by the Board at the time of evaluation of the application.

Field Officers on satisfactory scrutiny of the documents, will forward it to Director (Dev) through concerned AD/DD

Evaluation for Approval

A Committee consisting of Director (Dev), Director (Mktg) and Director (Fin.), Spices Board will evaluate the proposal and eligible application will be recommended to Chairman, Spices Board for his approval. On receipt of intimation of approval of the project, the beneficiary may carry out the project and complete the same within the stipulated period of 12 months.

Payments under the Project

All payments for plant and machinery, equipments, consultancy charges etc. shall be made by crossed cheque/demand draft/e-payment which

should be entered in the bank statement. Other petty cash transactions will be limited to Rs.1000/- per transaction and should be supported by proper bills/vouchers.

Inspection on Completion of the Project

The beneficiary, on completion and functioning of the unit shall submit the following documents to Director (Dev), Spices Board through concerned FO/AD/DD:

a) Completion Report
b) Self certified copies of Bills/Vouchers
c) Expenditure Statement audited and certified by Chartered Accountant
d) Bank Statement detailing payments released for approved activities/components of the project or copies of Demand Drafts relating to the payment effected for the project
e) Details on collection of pepper from farmers planned for the ensuing season

The inspection team will consists of an Officer from Spices Board nominated by Chairman, representatives from DAS & SHM. For technical evaluation of the plant & machineries technical personnel from National Institute for Interdisciplinary Science And Technology/Industries Department can be inducted.

Working of the Unit

Payment of wages for the workers and supervisory staff engaged in processing of pepper and value addition, water & electricity charges etc. will be met from the user fee collected from the beneficiary growers. The user fee can be fixed on approval from Spices Board. The unit can be expanded to a commercially viable unit by branding the produce, packed

and sold for which further assistance is possible from Board's market promotion schemes.

Coverage of Units under the Project

Year	No. of units	Assistance (Rs.Crs)
2009-10		1.25
2010-11	1	0.50
2011-12	1	0.50
2012-13	1	0.25
2013-14		-
Total	**3**	**2.50**

7. Implementation Cost

The implementation will be through the extension network of Spices Board available in Idukki District with the assistance of Outsourced Technical Persons preferably youngsters having agriculture background and qualification up to graduate level. Overhead expenditure for implementation of the project will also be met under this component.

Budgetary Outlay under the component

	Outlay (Rs.Crs)
2009-10	1.00
2010-11	2.00
2011-12	1.00
2012-13	1.00
2013-14	1.00
Total	**6.00**

General Instructions

- ✍ Applications are to be submitted in the prescribed format.
- ✍ Sanction of assistance will be as per terms and conditions laid down in the working procedure of the project.
- ✍ Mere submission of application does not warrant sanction of assistance to any beneficiary.
- ✍ Beneficiaries are liable to submit documents prescribed by Spices Board to prove ownership of land along with application for consideration.
- ✍ Payment of cash subsidy will be through e-payment or other instruments as per the payment mode available with Spices Board.
- ✍ Board has the right to make amendments in the working procedure as and when required based on practical field situation and feedbacks.
- ✍ It will be discretion of the Field Officer to deploy staff under his control for conducting inspections under various components as given in the working procedure. However, the upper ceiling of the area fixed for each category of staff should be strictly adhered to. Supporting staff are required to conduct inspections based on instructions from the Field Officer.
- ✍ The inspection reports prepared and signed by the supporting staff are to be invariably countersigned by the concerned Field Officer while recommending payment.
- ✍ All the beneficiaries are required to open a bank account in scheduled banks for arranging e-payment of subsidy.

****

Year-wise Coverage and Assistance from NHM during the Project Period

(Rs.Crs)

Sl. No.	Programme	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1.	Production of Planting Material (Rooted cuttings Nos. in lakhs)	200	--	200	1.50	100	1.50	100	0.75	--	0.75	600	4.50
2.	Replanting/ Rejuvenation of Senile Plantations (Area in hectares)	4500	3.86	18500	18.75	18500	27.75	18500	27.75	--	11.89	60000	90.00
3.	Promotion of Organic Farming – Construction of Vermicompost Units (Nos)	11666	3.50	15000	4.50	3333	1.00	3333	1.00	3333	1.00	36665	11.00
4.	Promotion of Integrated Pest/ Disease Management (Area in ha.)	15000	1.50	23750	2.37	4000	0.40	4000	0.40	3250	0.33	50000	5.00
5.	Human Resources Development (Training Programmes based on annually prepared schedules	--	0.25	--	0.20	--	0.20	--	0.20	--	0.15	--	1.00
6.	Functional Infrastructure (Collection, Grading & Processing Centres-Nos)	--	1.25	1	0.50	1	0.50	1	0.25	--	--	3	2.50
7.	Implementation Cost	--	1.00	--	2.00	--	1.00	--	1.00	--	1.00	--	6.00
	TOTAL		**11.36**		**29.82**		**32.35**		**31.35**		**15.12**		**120.00**

ANNEX

TALUKS AND VILLAGES IN IDUKKI DISTRICT

Sl. No.	Taluk	No. of Villages	Name of Village
1.	Thodupuzha	19	Kumaramangalam, Kodikkulam, Vannappuram, Kanjikuzhi, Udumbannoor, Neyyasseri, Karimannoor, Karikkode, Thodupuzha, Manakkad, Purappuzha, Karinkunnam, Muttam, Alakkode, Velliyamattam, Idukki, Arakkulam, Kudayathoor, Ilappilly
2.	Devikulam	12	Mankulam, Mannangaddam, Anaviratti, Vellathooval, Kunjithanni, Pallivasal, Kannandevan Hills, Marayoor, Keezhanthoor, Kanthalloor, Kottakkamboor, Vattavada
3.	Udumbanchola	23	Bisonvalley, Chinnakkanal, Konnathadi, Rajakumari, Rajakkad, Ayyappankovil, Udumbanchola, Kanthippara, Santhanpara, Chathurangappara, Parathode, Kalkoonthal, Vathikudi, Upputhode, Thankamani, Kattappana, Pampadumpara, Karunapuram, Vandanmedu, Pooppara, Anakkara, Chakkupallam, Anavilasam
4.	Peerumedu	10	Vagamon, Upputhara, Elappara, Kokkayar, Periyar, Kumily, Mlappara, Manjumla, Peerumedu, Peruvanthanam
	TOTAL	**64**	

BLOCKS AND PANCHAYATS IN IDUKKI DISTRICT

Sl. No.	Block	No.of Grama Panchayats	Name of Grama Panchayat
1.	Thodupuzha	6	Idavetti, Muttam, Karimkunnam, Purappuzha, Manakkad, Kumaramangalam
2.	Ilamdesam	7	Udumbannoor, Karimannoor, Vannappuram, Kodikkulam, Alakode, Velliyamattam, Kudayathoor
3.	Adimaly	6	Adimaly, Konnathadi, Bison Valley, Vellathooval, Pallivasal, Kuttambuzha
4.	Devikulam	6	Marayoor, Munnar, Kanthalloor, Vattavada, Chinnakkanal, Santhanpara
5.	Nedumkandam	7	Pampadumpara, Senapthi, Karunapuram, Rajakkad, Nedumkandam, Udumbanchola, Rajakumari
6.	Kattappana	7	Kattappana, Kanchiyar, Ayyappankovil, Upputhara, Irattayar, Vandanmedu, Chakkupallam
7.	Idukki	6	Kanjikuzhi, Vathikudi, Vazhathoppu, Kamakshi, Mariyapuram, Arakkulam
8.	Azhutha	6	Kumily, Vandiperiyar, Peedumedu, Peruvanthanam, Elappara, Kokkayar
	TOTAL	**51**	