

BUSINESS PLAN
INCOME GENERATING ACTIVITY –Vermi-composting
by
SHG Vishwakarma Vermicompost- Self Help Group



| | | |
|--------------|----|-------------|
| SHG/CIG Name | :: | Vishwakarma |
| VFDS Name | :: | Rinjat |
| Range | :: | NERWA |
| Division | :: | CHOPAL |

Prepared under:



Project for Improvement of Himachal Pradesh Forest Ecosystems
Management & Livelihoods (JICA Assisted)



Table of Contents

| | | |
|-----------------------------------------------------------------|-------|----|
| Background | ..... | 3 |
| 1. Description of SHG/CIG | ..... | 4 |
| 2. Beneficiaries Detail | ..... | 4 |
| 3. Geographical details of the Village | ..... | 5 |
| 4. Description of Product related to Income Generating Activity | ..... | 5 |
| 5. Description of Production Processes | ..... | 5 |
| 6. Description of Production Planning | ..... | 6 |
| 7. Description of Marketing/ Sale | ..... | 6 |
| 8. SWOT Analysis | ..... | 7 |
| 9. Description of Management among Members | ..... | 8 |
| 10. Cost analysis | ..... | 9 |
| 11. Gist of Economic Analysis | ..... | 11 |
| 12. Fund requirement | ..... | 11 |
| 13. Sources of fund | ..... | 11 |
| 14. Bank loan repayment | ..... | 12 |
| 15. Trainings/ Capacity Building/ Skill Up-gradation | ..... | 12 |
| 16. Monitoring Mechanism | ..... | 12 |
| 17. Group Members Photo | ----- | 13 |
| 18. Business Plan Approval | ----- | 14 |

Background

Vermi-composting has been gaining popularity, mainly due to shift towards organic farming. There are ecological, economic and human health benefits associated with it. The use of vermin-compost in place of chemical fertilizers results into better soil health, balanced ratio of various minerals and good fertility and best quality crop production. Vermi-Composting has direct environmental and economic benefits by contributing to the sustainable agriculture and horticulture production and income of farmers significantly.

Vermicomposting

Vermi -composting, rightly called **Gold from Garbage** is the measure input in organic farming. Vermi-composting is a process in which the earthworms convert the organic waste into manure rich in high nutritional content. Earthworms are commonly found living in soil, feeding on biomass and excreting it in a digested form. Earthworms feed on the organic waste materials and give out excreta in the form of "vermicasts" that are rich in nitrates and minerals such as phosphorus, magnesium, calcium and potassium. These vermicasts are used as fertilizers and they improve the soil quality. There is great demand for vermi-compost due to the high level of nutrient content.

Materials required

1. Water
2. Cow dung
3. Thatched roof
4. Soil or sand
5. Earthworms
6. Gunny bags
7. Organic biomass
8. Plastic or cemented tank
9. Dry straw and leaves collected from the fields
10. Biodegradable wastes collected from fields and kitchen



1. Description of SHG/CIG

| | |
|-----------------------------|------------------------------|
| SHG/CIG name | SHG Vishwakarma Vermicompost |
| VFDS | Rinjat |
| Range | Nerwa |
| Division | Chopal |
| District | Shimla |
| Total no. of members in SHG | 8 |
| Date of formation | 16.09.2021 |
| Bank account no. | 11860110090633 |
| Bank details | UCB Bank Nerwa |
| SGH/CIG monthly saving | 100 /- |
| Total saving | 7000/- |
| Total inter-loaning | - |
| Cash credit limit | - |
| Repayment status | - |
| Interest rate | - |

2. Beneficiaries Detail:

| Sr. no. | Name | Father/ Husband Name | Education | Category | Income source | Contact No. |
|---------|---------------------------------|-------------------------|------------------|----------|---------------|-------------|
| 1. | Anu Delaik (President) | W/o Sandeep | 10+2 | SC | Agriculture | 9805526736 |
| 2. | Prinyaka Devi (Vice President) | W/o Vinod Kumar | 8th | SC | Agriculture | 9816239167 |
| 3. | Binta (Secretary) | W/O Dalbir | 10 th | SC | Agriculture | 9459354443 |
| 4. | Roshani (treasurer) | W/o Balbir | 5 th | SC | Agriculture | 9418097442 |
| 5. | Monika Devi | W/o Rittu | 8 th | SC | Agriculture | 9816287783 |
| 6. | Krishna Devi | W/o Kewal Ram | Literate | SC | Agriculture | 8629079785 |
| 7. | Bimla Devi | W/o Mukesh | Literate | SC | Agriculture | 6230040084 |
| 8. | Lachi Devi | w/o Bhim Singh | Literate | SC | Agriculture | 7559715557 |



3. Geographical Details of The Village

| | | | |
|-----|----------------------------------------------------------|----|--------------------------------------|
| 3.1 | Distance from the District HQ | :: | 142 Km |
| 3.2 | Distance from main Road | :: | On the road |
| 3.3 | Name of local market & distance | :: | Nerwa 18 km. |
| 3.4 | Name of main market & distance | :: | Nerwa , Chopal ,-18 km. 42 Km. |
| 3.5 | Name of main cities & distance | :: | Shimla 142 km |
| 3.6 | Name of main places where product will be sold/ marketed | :: | Nerwa, Chopal and adjoining villages |

4. Description of Product related to Income Generating Activity

| | | | |
|-----|------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------|
| 4.1 | Name of the Product | :: | Vermi-compost |
| 4.2 | Method of product identification | :: | The activity was shortlisted and finalized, keeping in view the great demand of Vermi compost , the area being an apple belt. |
| 4.3 | Consent of SHG/CIG/cluster members | :: | Yes, the activity was collectively decided by the group. |

5. Description of Production Process

| | |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step 1 | To prepare compost, either a plastic or a concrete tank/pit can be used. The size of the tank/pit depends upon the availability of raw materials, however as a standard, the sizing is being kept 10ftX4ftX2ft. |
| Step-2 | Collect the biomass and place it under the sun for about 8-12 days. Now chop it to the required size using the cutter. |
| Step-3 | Prepare a cow dung slurry and sprinkle it on the heap for quick decomposition. |
| Step-4 | Add a layer (2 - 3 inch) of cement concrete at the bottom of the tank/pit. |
| Step-5 | Now prepare line bedding by adding partially decomposed cow dung, dried leaves and other biodegradable wastes collected from fields and kitchen. Distribute them evenly on the concrete layer. |
| Step-6 | Continue adding both the chopped bio-waste and partially decomposed cow dung layer-wise into the tank/pit up to a depth of 0.5-1.0 ft. |
| Step-7 | After adding all the bio-wastes, release the earthworm species over the mixture |



| | |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | and cover the compost mixture with dry straw or gunny bags. |
| Step-8 | Sprinkle water on a regular basis to maintain the moisture content of the compost. |
| Step-9 | Cover the tank/pit with a thatch roof to prevent the entry of ants, lizards, mouse, snakes, etc. and protect the compost from rainwater and direct sunshine |
| Step-10 | Have a frequent check to avoid the compost from overheating. Maintain proper moisture and temperature. |
| Step-11 | Collection of earthworms after Verm compost collection. Sieving of the composted material to separate fully composted ready material. The partially material will be again put into Vermi-compost bed. |
| Step-12 | Storage of vermi compost in proper place to maintain moisture and allow the beneficial microorganism to grow. |

6. Description of Production Planning

| | | | |
|-----|------------------------------------------------------------|----|----------------------------------|
| 6.1 | Production Cycle (in days) | :: | 90 days (three cycles in a year) |
| 6.2 | Manpower required per cycle (No.) | :: | 1 |
| 6.3 | Source of raw materials | :: | From household and own farms |
| 6.4 | Source of other material | :: | Open market |
| 6.5 | Raw material - quantity required per cycle (Kg) per member | :: | 1800 Kg per cycle |
| 6.6 | Expected production per cycle (Kg) per member | :: | 900Kg per cycle |

7. Description of Marketing/ Sale

| | | | |
|-----|-----------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------|
| 7.1 | Potential market places | :: | HP Forest Deptt. Local market Use on own farm |
| 7.2 | Distance from the unit | :: | To be supplied to different locations |
| 7.3 | Demand of the product in market place/s | :: | HP Forest Deptt. is procuring huge vermi-compost for their nursery. Huge demand in locality for orchard use, area being an apple belt. |
| 7.4 | Process of identification of market | :: | PMU will facilitate the tie up of procurement of vermi-compost produced by SHG with HP Forest Deptt. |
| 7.5 | Marketing Strategy of the | :: | SHG members will also explore the additional marketing options around their |



| | | | |
|-----|------------------|----|-----------------------------------------------------------------------------------------------------------------------------------|
| | product | | villages for better sale price in future. |
| 7.6 | Product branding | :: | At CIG/SHG level product will be marketed by branding of respective CIG/SHG. Later this IGA may require branding at cluster level |
| 7.7 | Product "Slogan" | :: | "Let's go organic" |

8. SWOT Analysis

❖ Strength

- ⊖ Each of the SHG members are having cattle varying from 2 to 4 in each household
- ⊖ Families of SHG members are cultivating high value crops & vegetables which offers adequate availability of raw materials i.e. farm organic wastes throughout the year.
- ⊖ Raw material easily available at their farms
- ⊖ Manufacturing process is simple
- ⊖ Proper packing and easy to transport
- ⊖ Other family members will also cooperate with beneficiaries
- ⊖ Product shelf-life is long

❖ Weakness

- ⊖ Effect of temperature, humidity, moisture on manufacturing process/product.
- ⊖ Lack of technical know-how

❖ Opportunity

- ⊖ Increasing demand of vermi-compost on account of awareness among farmers about organic and natural farming
- ⊖ Application of vermi-compost on their own field will go a long way in improving and enhancing the soil health and production of quality farm produce which will offer better price.
- ⊖ Best utilization of organic waste including household left outs of kitchens
- ⊖ Potential for marketing tie up with HP Forest

❖ Threats/Risks

- ⊖ Possibility of break of production cycle due to extreme weather
- ⊖ Competitive market
- ⊖ Level of commitment among beneficiaries towards participation in training/ capacity building & skill up-gradation



9. Description of Management among Members

- **Production** – It will be taken care of by individual members including procurement of raw materials
- **Quality assurance** – Collectively
- **Cleaning & packaging** – Collectively
- **Marketing** – Collectively
- **Monitoring of the unit** - Collectively

10 Cost analysis(Amount in actual Rs.)

| S. No | Particulars | Units | Quantity / Nos. | Cost (Rs.) | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|--------------------------------------|---------------------------------------------------------------------|------------|-----------------|------------|--------------|----------|----------|----------|----------|
| A. Capital Cost | | | | | | | | | |
| A.1 Construction of work-shed | | | | | | | | | |
| 1 | Hardware items, construction of pit (Size will be of 10ftX4ftX2ft) | Per member | 8 | 6000 | 48000 | 0 | 0 | 0 | 0 |
| 2 | Construction of cover shed | Per member | 8 | 4000 | 32000 | | | | |
| Sub-total (A.1) | | | | | 80000 | 0 | 0 | 0 | 0 |
| A.2 Machinery and equipment | | | | | | | | | |
| 2 | Tools, equipment etc. | Per member | 8 | 2000 | 16000 | 0 | 0 | 0 | 0 |
| Sub-total (A.2) | | | | | 16000 | 0 | 0 | 0 | 0 |
| Total Capital Costs (A.1+A.2) | | | | | 96000 | 0 | 0 | 0 | 0 |
| B Recurring Costs | | | | | | | | | |
| 3 | Seed earthworm | Per Kg | 8 | 500 | 4000 | 0 | 0 | 0 | 0 |
| 4 | Cost of procurement of Slurry/dung/waste | Tonnes | 48 | 800 | 38400 | 40320 | 42336 | 44453 | 46676 |
| 5* | Labour Cost | Per tonne | 24 | 700 | 16800 | 17640 | 18522 | 19448 | 20420 |
| 6 | Packing materials | No. | 208 | 35 | 7280 | 7644 | 8026 | 8427 | 8849 |
| 7 | Other handling charges | Per tonne | 24 | 150 | 3600 | 3780 | 3969 | 4168 | 4376 |



| | | | | | | | | | |
|----|-----------------------------------------|-----------|----|------|--------|--------|--------|--------|--------|
| C | Other charges | | | | | | | | |
| 8 | Insurance | L/S | | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | Interest on loan | Per annum | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total recurring costs | | | | 70080 | 69384 | 72853 | 76496 | 72356 |
| | Total cost = Capital + recurring | | | | 166080 | 69384 | 72853 | 76496 | 72356 |
| D | Income from vermicomposting | | | | | | | | |
| 12 | Sale of vermicompost | Tonnes | 24 | 6200 | 148800 | 163680 | 180048 | 198052 | 217857 |
| 13 | Sale of earthworm | | | | | 4000 | 8000 | 8000 | 8000 |
| 14 | Total revenue | | | | 148800 | 167680 | 188048 | 206052 | 225857 |
| 15 | Net returns (D-C) | | | | 78720 | 98296 | 115195 | 129556 | 153501 |

Note –

Activity on own land

All operation will be done by the members themselves

No extra labour cost, since all member will do the work themself

Abstract of Cost/ Benefit

| Particulars | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|----------------|--------|--------|--------|--------|--------|
| Capital cost | 96000 | 0 | 0 | 0 | 0 |
| Recurring cost | 70080 | 69384 | 72853 | 76496 | 72356 |
| Total cost | 166080 | 69384 | 72853 | 76496 | 72356 |
| Total revenue | 148800 | 167680 | 188048 | 206052 | 225857 |
| Net profit | -17280 | 98296 | 115195 | 129556 | 153501 |

11. Gist of Economic Analysis

- Pit size for each member has been planned at 10X4X2 ft for one pit.
- Cost of production of vermi-compost has been estimated at Rs. 3.6 per Kg
- Sale of vermi-compost (conservative side) is proposed at Rs. 6 per Kg
- Net profit is estimated to be Rs. $6-3.6 = 2.4$ per Kg
- It is proposed that each member will produce 3.3tonnes of vermi-compost every year resulting in production of 46.2tonnesvermi-compost by all 14 members of SHG in one year.
- Cost of earthworm has been kept at Rs. 500.00 per kg
- During the second years onwards, there will be surplus earthworms for sale (as it will multiply during the process of production of vermi-compost)
- The vermi-compost making is a profitable IGA and therefore has been taken up by the SHG members.

12. Fund requirement:

| Sl. No. | Particulars | Total Amount (Rs) | Project support | SHG contribution |
|---------|-------------------------------------------------|-------------------|-----------------|------------------|
| 1 | Total capital cost | 96000 | 72000 | 24000 |
| 2 | Total Recurring Cost | 70080 | 0 | 70080 |
| 3 | Trainings/ capacity building/skill up-gradation | 36000 | 36000 | |
| | Total = | 202080 | 108000 | 94080 |

Note-

- **Capital Cost** - 50% of capital cost to be covered under the Project
- **Recurring Cost** - To be borne by the SHG/CIG.
- **Trainings/capacity building/ skill up-gradation** - To be borne by the Project

13. Sources of fund:

| | | |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Project support: | <ul style="list-style-type: none"> • 50% of capital cost will be utilized for construction of pit (Size will be of 10ftX4ftX2ft) • Rs 1 lakh as revolving fund will be parked in the SHG bank account (should be utilized for taking bank loan in case of taking loan from bank) or as a revolving | Procurement of materials for pit/construction of pit will be done by respective DMU/FCCU after following all codal formalities. |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|

| | | |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | fund. | |
| | <ul style="list-style-type: none"> • Trainings/capacity building/skill up-gradation cost. | |
| SHG contribution | <ul style="list-style-type: none"> • 50% of capital cost to be borne by SHG, this include cost of shed/construction of shed. • Recurring cost to be borne by SHG | |

14. Bank loan repayment

If the loan is availed from bank it will be in the form of cash credit limit and for CCL there is not repayment schedule; however, the monthly saving and repayment receipt from members should be routed through CCL.

- In CCL, the principal loan outstanding of the SHG must be fully paid to the banks once a year. The interest amount should be paid on a monthly basis.
- In term loans, the repayment must be made as per the repayment schedule in the banks.

15. Trainings/Capacity Building/Skill Up-gradation

Trainings/capacity building/ skill up-gradation cost will be borne by project.

Following are some trainings/capacity building/ skill up-gradation proposed/needed:

- ⊖ Project Orientation Group Formation/ Reorganization
- ⊖ Group Concept and Management
- ⊖ Introduction to IGA (General)
- ⊖ Marketing and Business Plan Development
- ⊖ Bank Credit Linkages & Enterprise Development
- ⊖ Exposure Visit of SHG – Within the State& Outside State

16. Monitoring Mechanism

- ⊖ Social Audit Committee of the VFDS will monitor the progress and performance of the IGA and suggest corrective action if need be to ensure operation of the unit as per projection.
- ⊖ SHG should also review the progress and performance of the IGA of each member and suggest corrective action if need be to ensure operation of the unit as per projection.



Group members Photos -



The business plan of Self Help Group VISHWAKARMA SHG.
for the IGA of Worm Composting was presented before the general house
of VFDS RINJAT for approval. After long discussion and thoughtful deliberation by the
different members, the business plan was approved for adoption in the SHG and further
implementation by the members of the SHG.

Dated: 07/11/2021.

Place: Rinjat.

President of SHG

Amu
प्रधान

विश्वकर्मा सहकारिता
समूह, रिनजात, नैरवा
जिला शिमला हि. प्र.

Treasurer

Amu
Treasurer
Vill. Forest Development Society

President VFDS
Unit Rinjat

Amu de
President
Village Forest Development
Society & CD & LI

FTU Nerwa

Approved

Amu
DMU - Cum - Divisional Forest Officer
Chopal Forest Division, Chopal

