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## A study on livelihood development of woman micro entrepreneur from Udalguri district of Assam, India- vermicompost producer

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### Abstract

Vermicompost is basically a brown colored organic product excreted by earthworms as waste. It has adequate amount of both micronutrient and macronutrients depending on sources of composting materials. It has much more plant nutrients compared to conventional compost. Vermicomposting has recently emerged as a good source of creating self-employment. A women farmer, Mrs. Debojani Rabha, adopted vermicomposting as a source of her livelihood and became an efficacious producer of vermicompost and earthworm culture. The study demonstrates Mrs. Rabha's self-assurance, dedication and willpower in establishing herself as a prosperous rural woman entrepreneur. Mrs. Rabha has been able to successfully run her small business through group support and cooperation from her fellow team members. She is looking forward to help and support the women section of her society by empowering them to be financially independent by vermicomposting.

**Keywords:** Widow, women farmer, vermicomposting, *Eisenia foetida*

### 1. Introduction

Vermicomposting is the process of producing organic fertilizer (vermicompost) from biodegradable materials through the action of earthworms. It is a safe method of recycling organic materials in the farm and household such as plant residues and animal manures. Farmers of Udalguri district are mainly marginal farmers. Rather, they have Bari in their home/ farm, where they can accumulate a lot of raw materials/ feedstock for production of different types of compost. They also rear cows which can provide the necessary cow dung required to produce vermicompost.

This is a research study of a woman entrepreneur, Mrs. Debojani Rabha, who is a widow and deriving all alone by herself to make a living. Mrs. Rabha primarily deals with vermicompost products. Mrs. Rabha was born in Udalguri District of Assam. She is a classic example of successful rural woman entrepreneur in spite of being a widow and running her family all by herself. She received quality training, from different Krishi Vigyan Kendra Udalguri in the year 2018. Presently, she owns four units (HDPE materials of ISI 15907:2010) of Vermicompost which she has been maintaining well since intervention. Her net income from vermicomposting alone is approximately 93,600.00 per annum. Besides these, she is also involved in farming sector and poultry rearing. She cultivates rice followed by toria as a means of double cropping. She has been rearing poultry like quails, karaknath etc. She also involves herself in weaving whenever she gets time. Mrs. Rabha has contributed towards the development of the society and empowers youth of her village and also in her community for creating self-employment opportunities especially by adopting the practice of vermicompost production.

### 2. Materials and Methods

A Front-Line Demonstration had been started under Tribal Subplan (TSP) Programme by KVK, Udalguri in Nalkhamara and Darangipara villages of Udalguri district in the year 2017-18. The villagers of these two villages are having a good farming background and now after intervention of KVK, Udalguri with a good number of trainings and demonstrations on "Vermicompost Production technology" they are able to produce vermicompost as a component of organic farming on their own. Krishi Vigyan Kendra, Udalguri initially started with 10 numbers of farmers to produce vermicompost in the very villages.

The farmers are commercially producing quantity vermicompost since adaption of the technology demonstrated by KVK, Udalguri. Debojani Rabha, is one of the beneficiaries who have been trained along with her husband, Lt. Raju Hasda, by KVK, Udalguri in 2018.

The study has followed the Case Study method. An open-ended interview schedule was drawn for the study, keeping in view the objectives. The case was drawn from Nalkhamara village of Udalguri district. Mrs. Debojani Rabha, a successful woman entrepreneur has been taken into account and studied. Her journey towards success is noted down and presented in the study. The study focuses on Mrs. Rabha's dedication in establishing herself as an affluent rural woman entrepreneur.

The primary data and information were collected by KVK Udalguri under Soil Science discipline in lead.

### 2.1 Adopted preparation method

Mrs. Rabha prepares the vermicompost in poly bags (which were supplied by the KVK under demonstration of Soil Science discipline under TSP programme). She collects and heaps the raw material biomass under sun for about 7-10 days. She chops the hard materials if required into smaller pieces. She starts the tank filling procedure by placing a thin layer of surface soil (1-2 inch) at the bottom of the tank. Thereafter, she places the chopped bio-waste and partially decomposed cow dung layer by layer up to a depth of one (1) foot. She uses to release 2-3 kgs of earthworms (*Eisenia foetida*) in a tank of standard size of 12 feet in length. She also sprinkles water time and again to maintain 70% moisture in the compost.

### 2.2 Preventive measures adopted during production of vermicompost

Site selection is one of the most important aspects for production of vermicompost. Mrs. Rabha was trained by scientists of KVK Udalguri, before starting the production. At least 20 day's old cow dung used to avoid excess heat. Fresh dung and waste were avoided by her as earthworms would die in fresh cow dung. Ants are hazardous enemy of earthworms, so the pillars of the vermicompost tank was polished with kerosene to escape from them. All the procedures from production to packaging was done under shade and the products were stored in polybags which were used for marketing.

## 3. Results and Discussion

### 3.1 Beginning of the journey and turning points

Mrs. Debojani Rabha, was born in Udalguri District of Assam. She was working hand in hand with her husband, Lt. Raju Hasda, who passed away suffering from covid. Now, Mrs. Rabha who is a widow had to struggle all alone by herself to make a living. She is a typical example of successful rural woman entrepreneur, in spite of being a single parent to her children and facing the adversities of live all by herself. Mrs. Debojani Rabha was one of the beneficiaries of the Front-Line Demonstration that had been started under Tribal Subplan (TSP) Programme by KVK, Udalguri in Nalkhamara and Darangipara villages of Udalguri district in the year 2017-18.

### 3.2 Activities and approaches

Debojani Rabha is a successful Vermicompost producer who has motivated her fellow farmers of Udalguri district to adopt

new and improved compost production techniques thereby spreading the scientific technologies horizontally and increasing the farmer's income and encouraging organic farming in the district. Under the guidance of her and her Spouse, the farmers of Nalkhamara have formed a group called "Nalkhamara Anchalik Krishi Goot" and are producing 63 q vermicompost annually.

After the death of her husband, Mrs. Rabha instead of breaking down gave a fresh start to her business and rose as a symbol of women empowerment. Mrs. Rabha sells her products in nearby villages and also to dealers. She has participated in different farmers' fair of the district and are able to showcase and sell her products with supervision of the KVK. Presently, she owns four (4) units (HDPE materials of ISI 15907:2010) of Vermicompost which she has been maintaining well since intervention. She uses the product for her field and horticultural crops, and sells the remaining major part. She usually sells her products in packets of different sizes and also in gunny bags and as pot mixture. Debojani Rabha harvests 3 batches of Vermicompost every year from her present units and has a net annual income of Rs. 93,600.00 from Vermicompost alone. Her total annual income is about Rs. 1,26,600.00 from her overall farm. She also maintains earthworm culture (*Eisenia foetida*) and are able to sell the earthworms to farmers of nearby areas of Udalguri district.

### 3.3 Significant achievements and future plan

She and her husband, Lt. Raju Hasda was awarded the Pragatisil Krishak Award in District Kishan Mela, Udalguri 2019 for her contribution in encouraging organic farming by production of Vermicompost, which had been also published in local news papers. Mrs. Rabha now leading her family for livelihood generation and also a role model for her villagers and the district. She is looking forward to help and support the women section of her society by empowering them to be financially independent especially by adopting vermicomposting. After observing the success of "Nalkhamara Anchalik Krishi Goot" many interested farmers from nearby villages visit their units to learn the practice of vermicompost production. It has also boosted up organic cultivation in the district. The technology has been spread across many other villages of the district.

### 3.4 Challenges faced during her journey

Mrs. Rabha harvest 3 batches of vermicompost annually (total 4 nos. of units at present). But occasionally, she gets no orders at all and at other times there are usually large orders. Poor marketing opportunities and insufficient market linkage might result in missed opportunities and be a trouble from earning larger revenue. Despite all the hard work and dedication, the limited market access and high input cost are found to be the major obstacles in case of adopting entrepreneurship in regards of vermicomposting in the state of Assam.

## 4. Ecological Impact

Organic farming is practiced by majority of the farmers of Udalguri district and these farmers use minimum chemical fertilizers. Farm-waste is left after harvest of crops which is generally not utilized and are heaped here and there or thrown away. So, Mrs. Rabha has well focused on utilization of these waste materials to produce vermicompost thus converting waste into wealth (vermicompost).

## 5. Socio Economic Impact and spread of technologies

After observing the success of Mrs. Rabha, many interested farmers from nearby villages visit her farm to learn the

practice of vermicompost production. It has also boosted up organic cultivation in the district. The technology has been spread across 14 other villages (Table no. 1) of the district.

**Table 1:** Horizontal Spread of Vermicompost Producers of Udalguri District under guidance of KVK and Mrs. Rabha

SL. No.	Villages	Farmers	Total Horizontal Spread (Units)
1	Darangipara	19	26
2	Nalkhamara	06	07
3	Dangdupur	05	06
4	Rowta Pothar	05	07
5	Sarbaherua	05	08
6	Kacharital	05	07
7	Chonbari	07	22
8	Bengbari	03	03
9	Fatahimalu	04	07
10	Deurigaon	05	05
11	Simluguri	05	08
12	Monpur	01	08
13	Lailongpara	01	05
14	Tongla	03	06
Total		74	121

## 6. Photographs



**Fig 1:** Distribution of Vermi bags



**Fig 2:** Her vermicompost unit



**Fig 3:** Visit of Dr. A.K. Tripathi Sir, Former Director, ICAR-ATARI, Zone VI along with KVK, Udalguri staffs



**Fig 4:** Horizontal spread in Bangbari village learning the vermicompost production technology from Debojani Rabha

## 7. Conclusion

The study establishes that rural women entrepreneurs require support to build their own brands especially in the marketing sector. Establishment of strong market linkage is the need of the hour for these upcoming entrepreneurs. They should be given support in obtaining skill development training, opportunity for exposure visits etc. The government servants at village should visit them time and again to access their needs and priorities.

## 8. Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## 9. References

- Ojah I, Borah D, Rabha H, Deka P. Performance of Toria using INM under late sown rainfed condition in rice fallow of Udalguri District of Assam. India. Int. J Curr.

- Microbiol. App. Sci. 2020;9(7):2799-2805.
2. Ojah I, Ojah A, Baruah B, Borah D, Pathak PK. Natural Farming - A Mode of Exploiting Beneficial Microbes for Sustaining Soil-Plant Health. Souvenir, International Conference on Biodiversity, Food security, sustainability and climate change; c2023. p. 59-64.
  3. Ojah I, Borah D, Baruah B. KVK, Udalguri shows the way. Indian Farming. 2020;50(05):26-27.
  4. Yangchan J, Ganie SA, Wani MA, Gupta V, Kumar A, Kumar Y. A Success Story of Farmer's using Vermicomposting for Revenue and Employment Generation International Journal of Current Microbiology and Applied Science. 2019;8(4):1283-1288.
  5. Borah D, Baruah B, Ojah I. Enhancement of farmers income by growing greengram in rice fallows of Udalguri district of Assam. Bhartiya Krishi Anusandhan Patrika. 2022;37(2):195-6.