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## A case study of organic farming in a tribal pocket of Thuamul Rampur, district Kalahandi, Odisha

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### Abstract

Organic Farming is a traditional form of farming that has started since the evolution of agriculture. Crop rotation and Shifting Cultivation are the Common methods where farming can be practised. Organic Farming helps people to have a healthy life and also makes poison-free foods and maintains the fertility of the soil. The present case study is based on the process of practising organic farming in the tribal region of Thuamul Rampur Block, Kalahandi, and Odisha. A sample size of 450 farmers was selected from 9 different Gram Panchayats of Thuamul Rampur Block. The data were collected through the personnel interview method. Meaningful suggestions were encountered from these farmers for enhancing the adoption of organic farming in the study area.

**Keywords:** Organic farming, Thuamul Rampur, Kalahandi

### Introduction

Organic farming is the way of farming where the farmers use all the natural elements which include the use of natural manures, compost, and organic water and avoid synthetic substances like pesticides and chemical fertilizers etc to develop soil fertility as well as to improve the ecological balance.

According to the United State Department of Agriculture (USDA), "Organic farming is a system which avoids or largely excludes the use of synthetic inputs (Such as fertilizer, pesticides, hormones, feed additives etc) and to the maximum extent feasible upon crop rotation, crop residues, animal manures, off-farm organic wastes, mineral grade rock additives and biological system of nutrients mobilization and plant rotation".

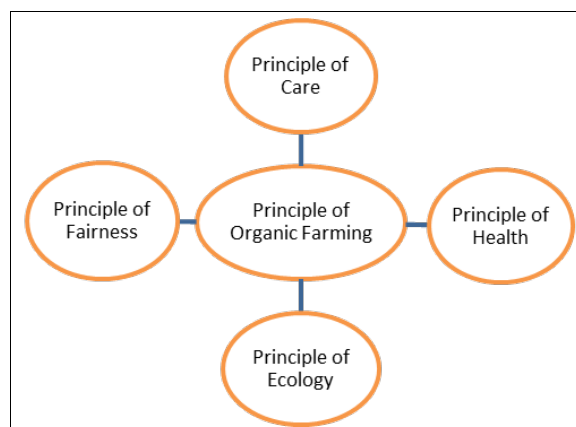
According to FAO, "Organic farming is a unique production management System which promotes and enhances agro-ecosystem health, including biodiversity, biological cycle, and soil biological activity and this is accomplished by using on-farm agro economic, biological and mechanical methods in exclusion of all synthetic off-farm inputs".

Organic farming was practised in India since the ancient period. The great Indian civilization thrived on organic farming and was one of the most prosperous countries in the world. In traditional India, the entire agriculture was practised using the organic technique, where fertilizer, pesticides etc were obtained from plants and animal products. The traditional farming system was characterized mainly by small and marginal farmers producing food and basic animal products for their families and local village communities. After this, qualification was drastically changed during the green revolution period but organic farming is seen today as the best option to attain sustainability in the crop production, therefore, organic farming appears to be one of the option for sustainability (Deshmukh and Babar, 2015) [6]. The international federation of organic Agriculture movement (IFOAM) has suggested the four basic principles of organic farming I.e, Principle of health, principle of ecology, principle of fairness and principle of care. In Odisha, some of the hilly tract regions are covered under organic farming. 95740 hectere of land covered under organic farming. Some districts known for organic farming in Odisha are Bolangir, Rayagada, Gajapati, Boudh, Koraput, Mayurbhanj, Keonjhar, Kandhamal. In Thuamul Rampur Block farmers face various problems in practicing organic farming like cost effectiveness and risk involved in making organic manure (jeevamrut and Bhu-compost etc), transportation of manure, lack of ready packages for growing organically and lack of proper knowledge on crop rotation, water management etc. Based on this background the study was conducted among 450 farmers from 9 different Gram Panchayats of Thuamul Rampur Block.

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**Fig 1:** Principle of Organic Farming (IFOAM, 1998)

### Objective

1. To identify the problems and challenges faced by the farmer.
2. To address the farming pattern in the tribal field of Thuamul Rampur.
3. To suggest measures to overcome from the issues regarding Organic farming.
4. To access the transition pattern of farming in Thuamul Rampur block.
5. To identify the problems and challenges faced by the farmers
6. To address the farming pattern in the tribal field of the study area.
7. To suggest requisite measures to overcome the issues regarding Organic farming.

### Study site

The present study is based on the farming system of tribal villages of Thuamul Rampur block. Thuamul Rampur is located in the southern part of Kalahandi district in western Odisha. It is one of the tribal blocks where about 298 villages and 24 Gram panchayats are there. As per the 2011 census, the total population of the block is 77840, where about 4744 number of people are cultivators and 5318 people are engaged as agricultural labourers.

The area has a high concentration of SCs and STs of about 19742 and 45287 respectively. Agriculture is one of the main occupations of the people of this area. Most of the tribals practice organic farming. The standard of living of these people is very low and most of the people here are illiterate and lead a traditional lifestyle, their staple food include rice, millet, ragi and maize. They cultivate ragi, Jawar, barley maize, millets, green beans (Moong), Urad, Mustard, etc they also grow vegetables like tomato, cucumber, cauliflower, brinjal etc

### Methodology

The study is based on the organic farming pattern of the major tribal Gram panchayat of Thuamul Rampur Block. The study was mainly based on primary and secondary data. The main objective of the study was to find out the knowledge about the system of farming by the people. The survey was conducted during 2021 (in the month of November and December) in most tribal villages of Thuamul Rampur. The data was collected from district agricultural offices and other indirect sources. Nine-gram panchayats were selected. A questionnaire was prepared and distributed to 50 respondents of nine-gram panchayats of Thuamul Rampur Block. Random sampling technique was followed to gather information.

### Data collection and analysis

A well-structured and pre-tested interview schedule was used for data collection. Keeping in view, the objectives and the variables under study, a comprehensive semi structured interview schedule covering all aspects of organic farming practices were prepared. The items included in the interview schedule were structured questionnaire which were suitable to all categories of organic farmers. Each of the selected farmers were contacted personally and interviewed. The data collected were subjected to statistical analysis to get inferences. Percentage analysis was used in descriptive analysis for making simple comparisons. For calculating percentage, the frequency of the particular cell was multiplied by 100 and divided by the total number of respondents pertaining to particular cell. Percentage was corrected to two decimal places.

### Results and Discussion

**Table 1:** The area under organic farming is

S. No	Name of the G.P	Cultivable Area (in Hectare)	Organically farming area (in Hectare)	% of Organically farmed land
1	Dumerpadar, Taljahpi, Bagdiani	1980	1430	72.22
2	Gopinathpur, Adri, Maligaon	3172	2170	68.34
3	Badchhatrang, Birikot, Thuamul	1478	1280	86.00

**Source:** Block Agriculture Office, Thuamul Rampur, Kalahandi, Odisha

**Table2:** The farmers were asked about their methods of organic farming practices in the farm-

S. No	Methods used for Organic Farming	No. of respondents	% of respondents practicing Organic farming methods
1	Neem leaves & neem oil spray and bay leaves as pesticides	289	64.22
2	Karanja oil as pesticide	302	67.11
3	Cow dung and other green manure as fertilizer	378	84.00
4	Jeevamrut	133	29.55
5	Bhu-compost	172	38.22

From table 2, it is observed that the farmers use various methods in the agricultural practices. To prevent from pests and diseases in the plants, the farmers (64.22%) use neem leaves on neem oil spray and Bel leaves in agricultural fields. The farmers also use karanja oil as pesticides (67.11%). A greater percentage of respondents use cow dung and green manure as fertilizer (84.00%). The farmers use Jeevamruta which is made up of cow urine, Jagery, cow dung, flour and soil (29.55%). Bhu-compost

is also prepared with the help of cow dung, plant leaves, garbage by recycling the compost for 30 days (38.22%). The farming is totally depends upon monsoon.

When the farmers were asked about whether they got any financial help from government or any other organizations, the result is 39.84% of farmers are the beneficiaries of the government and NGOs working in the area.

**Table 3:** Shows in name of the organization and no. of respondents

S. No	Name of the Organization	No. of Respondents	% Of Beneficiaries
1	PKVY	128	28.44
2	Odisha Millet Mission	328	72.88
3	NGOs & others	82	18.22

**Source:** Block Development Office, Thuamul Rampur, Kalahandi, Odisha

### Problems faced by the farmers

1. The Farmers of the study area face problems to sell their produce in the market because of the unavailability of any organised market.
2. The farmers are not aware of the high yield organic seeds and other techniques which may increase the productivity of their crop.
3. The block Thuamul Rampur is located in an inaccessible region and most of them are illiterate, they are not aware of various schemes of the NGOs and Government.
4. The majority of the farmer depends upon the nature for agriculture but due to lack of rainfall and other factors there is a risk of productivity which caused huge financial losses to the farmers.
5. Even when the crops were grown organically, their products were sold in the common market and it does not fetch any higher income because no standards or labelling for organic produce was identified in the market.
6. Lack of awareness programmes on organic farming.
7. High risk and uncertainty of return.
8. Inadequate storage facilities of the organic produce, as a result of which the produce is prone to damage or decay.

### Suggestions

1. There is a great problem with marketing facilities so, the government should take care of it and set the market to sell the surplus in the market.
2. The government should take the initiative so that the norms and schemes should cover all the tribal areas to improve production.
3. The government should take the initiative to aware the farmers regarding the Organic farming patterns and its benefits.
4. The Govt. should provide a minimum support price for the organic products.
5. The Govt. agencies should provide organic inputs at subsidized rates.
6. There should be an establishment of organic related processing industries for the value addition of the products.
7. The Govt. should take care regarding the restoration of water bodies and constructing check dams to overcome the scarcity of water.

**Fig 2:** A healthy yield from organic farming**Fig 3:** A cultivation with organic farming**Fig 4:** Hands on training on organic farming by an NGO**Fig 5:** Processing of an organic compost**Fig 6:** Preparation of Jeevamruta**Fig 7:** Storage of compost**Fig 8:** Farmers preparing for Jeevamruta



## Conclusion

Organic farming is the best way of farming practiced by the farmer. This farming helps people to have a healthy life with nutritious food and a chemical free life. The Study of organic farming of the nine gram panchayats stressed the use of natural measures and the traditional way of cultivation helps to know about the process which improves the soil quality thereby improving the ecological balance.

It is believed that the problems can be overcome by introducing appropriate Govt. initiatives and sensitizing the policymakers and officials of the state Department of Agriculture about the adoption of organic farming practices in the study area.

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