



## An Analysis of the Economic Effectiveness of Organic and Inorganic Farming in Tamil Nadu's Pudukkottai District

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### Abstract

India is now dealing with a number of issues, with agricultural practices being one of the main ones. This article focuses on the prevalence of both organic and inorganic agricultural systems in India, particularly in the Tamil Nadu state's Pudukkottai area. The study included 300 farmers who were chosen at random from the Pudukkottai district in Tamil Nadu. The land in the research area would be chosen for organic farming cultivation. As a result, the study came to the conclusion that organic farming was recommended in the districts of Pudukkottai and Tamil Nadu.

### Introduction

The agricultural sector of the Indian economy has been in turmoil, with farmer suicides occurring practically everywhere in the country being the worst aspect of it. India has experienced an agricultural crisis both during British colonial rule and after independence; nevertheless, the high rate of farmer suicide in several regions of the country is a relatively recent development. Our farming sector had gone through a serious agrarian crisis prior to independence as a result of the British government's unfriendly and colonial policies. However, the USSR model of economic planning primarily captivated the Indian government when it began economic planning after independence. The Indian economy was severely disrupted by the effects of partition, which led to the introduction of Five Year Planning as an economic development strategy. When the first Five Year Plan began in 1951, the agriculture sector received a far higher amount of government funding.

However, starting with the Second Five-Year Plan, the focus of India's economic development efforts moved to the growth of large-scale modern businesses, many of which were aided in their early stages by foreign financial and technological support. Midway through the second five-year plan, the agricultural sector was given reduced importance and funding, which was seen immediately in the mid-1960s. Of course, the nation faced other challenges both before and during the third five-year plan, including drought, floods, wars with China and Pakistan, and political instability.

However, India's agricultural experience raised some important questions, and the country's government came to the conclusion that nations with excess food utilised that surplus to compel nations with a shortage of food to comply with their demands. India experienced an extremely bad drought during the third five-year plan era, and the P.L. 480 Programme issues forced India to launch the New Agricultural Policy, or Green Revolution, as it is now well called.

According to Lingamurthy S. and Priyesh C.A. (2013), neo-liberal policy concerns are the root cause of the agrarian crises in south India. For the past two to three years, the Indian economy has been suffering from significant inflation, which is mostly caused by the country's stagnant foodgrain production. India's economic liberalisation policies over the past eighteen years have had a negative impact on the country's agriculture. The sharp drop in the rate of foodgrain growth is the most obvious example of this. Both the rate of agricultural capital formation and the rate of agricultural growth decreased throughout the liberalisation era.

The production of foodgrains declined dramatically in the 1990s in every state in South India, but not at the same rate as in the 1980s. This could be because throughout the 1990s economic reform era, agriculture and food production were not given much emphasis.

In Punjab, Haryana, and Western Uttar Pradesh as well as in Andhra Pradesh and certain other regions of the nation, the new policy assisted India in increasing wheat and rice production, respectively. The nation's efforts to become self-sufficient in foodgrain production were greatly aided by the new agrarian policy, and the notoriously harsh foodgrain exporting regulation was repealed. But the plan was not without flaws, and it had negative repercussions of its own in the agriculture industry. India has recognised the need to achieve food grain self-sufficiency as a key planning objective since the start of the Five Years Plan.

First off, the Green Revolution was not applied consistently throughout India; rather, it was centred in a few wheat-producing areas. Second, the cultivation of coarse grains was not given as much significance as the production of fine cereals. Even though the Indian government worked to enhance the farm sector's performance through a number of five-

year plans, the majority of people who live in rural areas and depend on agriculture and related industries for their livelihoods did not profit from these efforts.

However, the 1991 U-turn in our economic policies was a paradoxical and ironic development in India's recent economic history, leading thousands of farmers in Andhra Pradesh, Maharashtra, Karnataka, and some parts of Punjab to resort to suicide as a means of escaping difficult farming conditions. Two-thirds of farmer suicides in India are reported to have occurred in undivided Andhra Pradesh, primarily in the districts of Mahaboobnagar, Khammam, Warangal, Adilabad, Karimnagar, and Medak of the recently created state of Telangana.\

### Statement of the Problems

The irrigation of borewells, open wells, and surface water in canals, tanks, and rivers—all of which support various modes of production and productivity—presents significant challenges in the studied regions. Different FM models use different levels of social and natural embeddedness and different institutional interactions to explain the buying and selling of a certain food category, namely organic fresh fruit and vegetables. In addition to and within this, the role of personalised contacts in relation to organic certification, the influence of the organic movement's knowledge interests, and the actions of reflective consumers are emphasised.

Because the cotton bollworm is migratory, the farmer who manages the insect in his own field benefits other farmers. However, he also produces a negative externality because the use of pesticides causes the emergence of strains that are resistant to them. In addition to cotton, a variety of food crops are impacted by these externalities.

In polluted soils, pesticides and organic chemicals have the following fates, causes, distributions, and impacts. The variety of contamination, particularly of organic compounds, in agricultural and industrial lands is taken into consideration, along with the analysis of processes that determine the build-up of pollutants in the soil, such as sorption, leaching, immobilisation, and degradation. A more equitable distribution of income is brought about by the current study's reduction of these illnesses through the Safe Use of Pesticides programme or the Integrated Pest Management programme.

As a result, several measurements of cost, production, and productivity must be made by the researchers and recorded in monetary terms.

### Objectives

- To compare the costs of growing different crops under organic and inorganic farming in the area under investigation.
- To comprehend the yield and efficiency of various crops grown in Pudukkottai district, both through organic and inorganic farming.

### Hypothesis

- ✓ There is no difference cost of various crops under the organic and inorganic farming techniques,
- ✓ The organic farming is better as compared to inorganic farming production and productivity in the study region

### Review of Literature

Surabhi Singh<sup>1</sup> et.al, study reveals that to encourage organic farming its awareness should be increased among farmers. The study has recommended that training modules should be formulated to give training to the farmers related to organic farming. Further the study indicates that the information centres should be planned in every block, whose representative should be spread in every village under organic farming. It could be a facilitate farmers to know instant knowledge of organic farming techniques.

Gosal<sup>2</sup> et.al, studied long term prosperity (grain and straw) in rice, which has shows that an improvement in soil nutrient status through combined use of organic and inorganic fertilizers produced significant increase in grain and straw yield as compared to inorganic fertilizers alone. Further it has indicates that maximum grain 6.96 t/ha and straw yield 8.56 t/ha were found in treatment having substitution of 50 per cent N through compost at 10 t/ha. Finally the study has concludes that the substitution of 50 per cent inorganic nitrogen through compost could be good alternative for improving soil fertility.

### Analysis of the Study

#### Cost – Benefit Analysis of Different Crops under Organic Farming and Inorganic Farming

The cost-benefit ratios of different crops under organic farming and inorganic farming are presented in Tables 1 Regarding the cost-benefit ratios of different crops under organic farming in Pudukkottai districts depicts that the cost-benefit ratios of black gram, green gram, and gingelly it may be brought out that these crops are cultivated extensively in dry land as compared to wet land. It may be brought out that when organic manures viz., amirthakaraisal, panchagavya, and vermicompost are applied in these crops, and they bring relatively a higher return. Further, by nature

<sup>1</sup> Singh, S., George, R., & Prafull, B. (2012). Organic farming practices of plains and hills farmers and their extent of compliance with National Program for Organic Production (NPOP) guidelines. *Journal of Agricultural Sciences*, 3(1), 55-62.

<sup>2</sup> Gosal, S. K., Gill, G. K., Sharma, S., & Walia, S. S. (2018). Soil nutrient status and yield of rice as affected by long-term integrated use of organic and inorganic fertilizers. *Journal of plant nutrition*, 41(4), 539-544.

of these crops, they do not require irrigation for survival. By and large, bring more return under dry land as compared to wet land.

**Table 1: Cost – Benefit of Organic and Inorganic Farming in Pudukkottai District**

| Sl. No.  | Resources                    | Organic | Inorganic | Both |
|----------|------------------------------|---------|-----------|------|
| <b>1</b> | <b>Paddy (in Rs)</b>         |         |           |      |
|          | Kuruvai                      | 1.90    | 1.87      | 1.88 |
|          | Samba                        | 0       | 0         | 0    |
| <b>2</b> | <b>Pulses (in Rs)</b>        |         |           |      |
|          | Blackgram                    | 1.73    | 1.94      | 1.82 |
|          | Greengram                    | 1.83    | 0         | 1.83 |
| <b>3</b> | <b>Oil Seeds (in Rs)</b>     |         |           |      |
|          | Gingelly                     | 2.31    | 1.86      | 2.09 |
|          | Groundnut                    | 2.10    | 1.96      | 2.03 |
| <b>4</b> | <b>Cash Crop (in Rs)</b>     |         |           |      |
|          | Sugarcane                    | 2.23    | 2.34      | 2.28 |
|          | Plantain                     | 2.30    | 2.30      | 2.30 |
| <b>5</b> | <b>Non-Food Crop (in Rs)</b> |         |           |      |
|          | Cotton                       | 2.16    | 2.17      | 2.17 |
|          | Turmeric                     | 1.87    | 1.76      | 1.82 |
| <b>6</b> | <b>Millets (in Rs)</b>       |         |           |      |
|          | Foxtail Millet               | 1.91    | 2.00      | 1.96 |
|          | Maize                        | 1.49    | 1.62      | 1.55 |
|          | Finger Millet                | 2.09    | 1.94      | 2.01 |
|          | Little Millet                | 0       | 2.05      | 2.05 |

**Source: Field Data**

Table 1 shows that ginselly yields a higher yield of cost benefits in organic farming as compared to other crops. While organic farming methods yield higher yields for all crops in Pudukkottai district, inorganic farming practices have lower yields. As a result, the researchers consistently advised using an organic crop-growing approach.

### Conclusion

In accordance with the study, all crop yields were higher than those of inorganic and organic ones. In light of this, the researcher suggests that the Pudukkottai area has more agricultural land appropriate for organic farming than for inorganic farming methods. Notified moreover that the production of ginselly crops is significantly higher than that of other organic farming crops that are prevalent in the study regions.

### References

- Lingamurthy, S and Priyesh C.A. (2013), "An Analysis of Agrarian Crisis in South Indian States", International Journal of Scientific Research, Vol. 2, issue. 6, 2013, pp-137-142.
- Singh, S., George, R., & Prafull, B. (2012). Organic farming practices of plains and hills farmers and their extent of compliance with National Program for Organic Production (NPOP) guidelines. Journal of Agricultural Sciences, 3(1), 55-62.
- Gosal, S. K., Gill, G. K., Sharma, S., & Walia, S. S. (2018). Soil nutrient status and yield of rice as affected by long-term integrated use of organic and inorganic fertilizers. Journal of plant nutrition, 41(4), 539-544.