

Original Research Article

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SWOC Analysis and strategies for Promotion of Organic Paddy Farming in Cauvery Delta Zone of Tamil Nadu, India

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ABSTRACT

Keywords

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SWOC analysis is a strategic planning method used to research external and internal factors which affect company success and growth. Firms use SWOC analysis to determine the Strengths, Weaknesses, Opportunities and Challenges of the firm, products and competition. A study was conducted to investigate the prospects of organic paddy farming in Cauvery Delta Zone of Tamil Nadu for SWOC analysis on organic paddy farming. 180 organic paddy farmers were selected by proportionate random sampling technique. Majority of the organic paddy framers perceived and ranked low cost of production (I rank), sustainability (II rank) and use of indigenous technologies (III rank) were strengths. Weaknesses include inadequate technology, lower yield and less awareness were first, second and third rank respectively. Opportunities perceived by majority of organic paddy farmers were growing environmental concern (I rank), growing health awareness (II rank) and increasing market demand (III rank). Costly and complex organic certification process (I rank), weed problems (II rank) and most of the fields are contiguous and problem of contamination (III rank) were the challenges as perceived by organic paddy farmers. Based on the result of SWOC, strategies were suggested for the development of organic paddy farming in research extension, production, processing and marketing sectors.

Introduction

SWOC (Strength, Weakness, Opportunities and Challenges) analysis is a process that identifies an organization's strengths, weaknesses, opportunities and Challenges. It is a basic analytical framework that assesses what an entity (usually a business, farm, industry or product) can and cannot do, for factors both internal (Strengths and Weaknesses) as well as external

(Opportunities, and Challenges) Rao (2016). A SWOC analysis was employed for identifying the strengths, weaknesses, opportunities, and Challenges as perceived by the organic paddy farmers involved in Organic Paddy Farming in Cauvery Delta Zone of Tamil Nadu. This analysis is expected to highlight the points for an in depth understanding of the situation in its totality, which in turn helps the top administrators, planners of state government,

scientists to take strategic decision to overcome the weaknesses and challenges in organic paddy farming. Strengths were categorized as internal helpful factors and weaknesses as internal hindering factors of organic paddy farming. Opportunities were external helpful factors and Challenges the external harmful factors.

	Helpful	Harmful
Internal	STRENGTHS	WEAKNESSES
External	OPPORTUNITIES	CHALLENGES

Materials and Methods

This study was conducted in Cauvery Delta Zone (CDZ) of Tamil Nadu for considering the maximum area under Paddy cultivation. Thanjavur, Thiruvarur and Tiruchirappalli Districts were selected purposively, due to the maximum number of certified organic paddy farmers. For studying the strengths, weaknesses, opportunities and challenges, 180 organic paddy farmers were selected by proportionate random sampling technique. A schedule was prepared to unearth the SWOC of organic paddy farming. the perceived responses of the farmers under each parameter were listed.

Nine important strengths, weaknesses, opportunities and challenges (Fig. 1) were identified by applying Rank Based Quotient (RBQ) developed by Sabaratnam (1998). The data obtained from the organic paddy farmers regarding strengths, weaknesses, opportunities and challenges parameters in organic paddy farming was quantified i.e. the number of organic paddy farmers who gave the particular rank were used for calculation of RBQ.

The formula for RBQ calculation is as follows

$$RBQ = \frac{(fi)(n+1-i) \times 100}{Nn}$$

Where,

fi - Frequency of organic paddy farmers for ith rank of SWOC parameters

N – Number of organic paddy farmers

n – Number of ranks

Results and Discussion

SWOC analysis on organic paddy farming

In order to understand the nature of the Strengths, weaknesses, Opportunities and Challenges of organic paddy farming as perceived by the organic paddy farmers, rank based quotients were computed and the values had been presented in Table 1 to 4.

The strategy was designed with the following interventions based on SWOC analysis for efficient production of organic paddy farming in Cauvery Delta Zone of Tamil Nadu.

Strategies for promotion of organic paddy farming

Research intervention

The following intervention on research to be needed for promotion of organic paddy farming.

- Documentation and validation of indigenous technologies
- Conserve traditional paddy varieties
- Take up research on organic paddy farming for its promotion
- Quality control of organic inputs
- Tested the organic inputs in trial basis for large scale adoption.

Table.1 Strengths of Organic paddy farming perceived by organic paddy farmers

S. No.	Strength	Ranks										Rank
		I	II	III	IV	V	VI	VII	VIII	IX	RBQ	
1	Sustainability	33	38	38	36	35					77.655	II
2	Quality Product	23	27	30	33	36	31				70.062	V
3	High social value					46	38	23	45	28	32.407	VII
4	Low cost of production	40	42	59	12		10	17			80.618	I
5	Improve soil health	41	41	33	19	20			26		70.494	IV
6	Preserves traditional paddy varieties with high medicinal values					13	37	43	35	52	29.629	IX
7	Use of indigenous technologies	43	32	20	40			45			77.037	III
8	Production inputs are chiefly available				12	12	35	34	38	49	35.494	VI
9	Huge demand by customers				28	18	29	18	36	51	31.790	VIII

Majority of the organic paddy framers perceived low cost of production (I rank) sustainability (II rank) and use of indigenous technologies (III rank) were strengths

Table.2 Weaknesses of organic paddy farming perceived by organic paddy farmers

S. No.	Weakness	Ranks										Rank
		I	II	III	IV	V	VI	V II	VIII	IX	RBQ	
1	Inadequate technology	43	43	53	26	15					82.284	I
2	Less awareness	42	40	43	28	17	10				79.753	II
3	Low yield	30	42	15	34	35	24				73.210	III
4	Expensive product					28	34	28	36	54	29.012	VII
5	Lack of established markets	20	15	25	42	34	18	26			67.839	V
6	Labour shortage	25	35	44	15		29	32			72.778	IV
7	Lack of clarity in organic policy				16	44	43	11	31	35	35.679	VI
8	High cost of inputs				19	7	22	50	56	26	25.494	VIII
9	Lack of storage facilities	20	5					33	57	65	23.704	IX

Majority of the organic paddy farmers perceived inadequate technology (I rank), lower yield (II rank)and less awareness (III rank)were weaknesses.

Table.3 Opportunities of organic paddy farming perceived by organic paddy farmers

S. No.	Opportunities	Ranks										
		I	II	III	IV	V	VI	VII	VIII	IX	RBQ	Rank
1	Increasing market demand	37	28	24	31	42	18				73.642	III
2	Growing purchase power of consumers		25	32	35	30	20	38			65.062	IV
3	Growing health awareness	33	28	31	41	26	21				73.951	II
4	Growing environmental concern	32	24	36	45	28	5	10			74.815	I
5	Premium Price					22	37	35	40	46	29.568	VIII
6	Sustainable use of resources	35	30					25	38	52	45.185	VI
7	Development of organic paddy processing centres						52	46	39	43	24.012	IX
8	Group certification Under PGS	28	26	12				26	49	39	40.803	VII
9	Periodical training on organic farming at TNAU	15	19	45	28	32	27		14		64.074	V

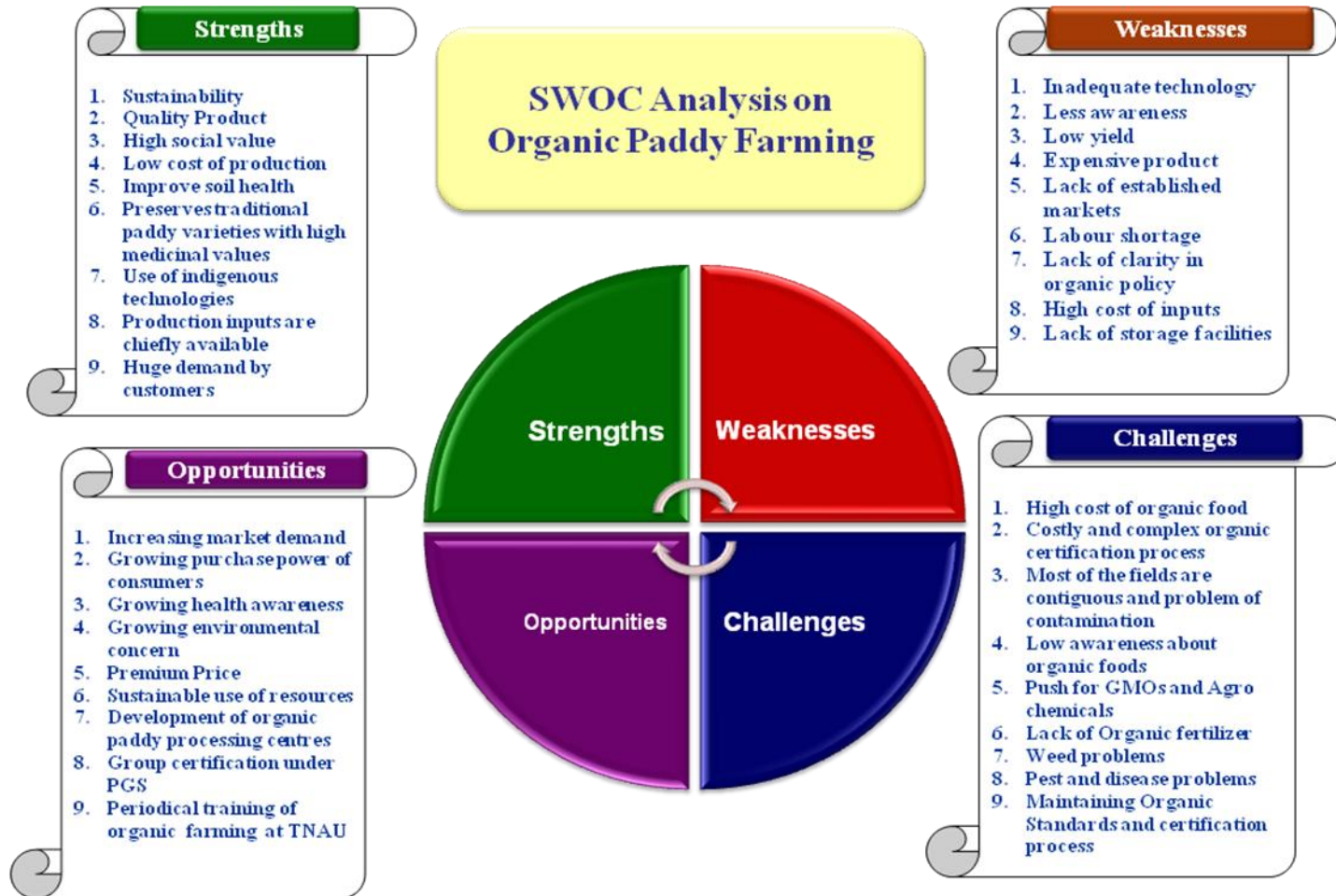
Opportunities perceived by majority of organic paddy farmers were growing environmental concern (I rank), growing health awareness (II rank) and increasing market demand (III rank).

Table.4 Challenges of organic paddy farming perceived by organic paddy farmers

S. No.	Challenges	Ranks										
		I	II	III	IV	V	VI	VII	VIII	IX	RBQ	Rank
1	High cost of organic food						16	53	49	62	24.136	VIII
2	Costly and complex organic certification process	40	37	32	46	25					79.074	I
3	Most of the fields are contiguous and problem of contamination	38	29	35	30	38	10				75.864	III
4	Low awareness about organic foods						31	31	50	68	21.420	IX
5	Push for GMOs and Agro chemicals						39	42	59	40	25.062	VII
6	Lack of Organic fertilizer	25	10	15	62	48	20				68.025	V
7	Weed problems	42	34	28	17	59					76.729	II
8	Pest and disease problems	26	42	30	25			35	22		68.210	IV
9	Maintaining organic standards and certification process	9	28	40		10	64	19		10	61.481	VI

Costly and complex organic certification process (I rank), weed problems (II rank) and Most of the fields are contiguous and problem of contamination (III rank) were the challenges as perceived by organic paddy farmers.

Fig.1 SWOC Analysis on organic paddy farming



Extension intervention

More awareness programme has been conducted to empower the people on benefits of organic paddy farming there by increasing the area under organic paddy farming.

- Create the awareness about the importance of organic products.
- Provide training and method demonstration on production of organic inputs for organic paddy farming.
- Provide pre-season training on organic paddy farming technologies
- Develop a model village of organic paddy farming as whole village concept.

Production intervention

- Provide production subsidy for organic paddy seed production and procure the same and sell to other organic paddy farmers with subsidised rate.
- Provide subsidy for purchase for purchase of livestock or give to organic farmers at free of cost
- Provide clear cut and simplified organic farming policy
- Reduce the cost of organic certification

Processing intervention

- Develop organic paddy processing centres at block level
- Provide hands-on training on processing and value addition in organic paddy
- Supply of organic paddy processing machineries at subsidised rate.
- Provide training cum demonstration on maintenance of processing machineries of organic paddy.

Marketing intervention

The following market interventions may be carried out to overcome the weaknesses and challenges faced by the organic paddy farming.

- Establish separate market outlet for organic paddy and its by products.
- Establish separate warehouse for storage of organic paddy
- Marketing system has to be regulated and strengthened much to the benefit of the organic paddy farmers.

In conclusion, low cost of production, sustainability and use of indigenous technologies were strengths. Inadequate technology, lower yield and less awareness were weaknesses. Opportunities were growing environmental concern, growing health awareness and increasing market demand. Costly and complex organic certification process, weed problems and most of the fields are contiguous and problem of contamination were the challenges as perceived by organic paddy farmers. Based on the result of SWOC, to overcome the weaknesses and face the challenges strategies to be followed such as documentation and validation of indigenous technologies, Develop a model village of organic paddy farming as whole village concept. Provide production subsidy for organic paddy seed production and procure the same and sell to other organic paddy farmers with subsidised rate, Provide hands-on training on processing and value addition in organic paddy, Establish separate market outlet for organic paddy and its byproducts etc.

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