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Prospects of Floriculture Development in Purba Medinipur District, West Bengal: A Model Based Planning Strategy using SWOT-QSPM Analysis

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ABSTRACT: *Floriculture is one of the growing agricultural practicesemerged as alternative to traditional paddy culture in Purba Medinipur District of West Bengal for its profitability. The present study explores the problemsand prospects of flower cultivation in the region.The SWOT analysis and Quantitative Strategic Planning Matrix (QSPM) have been employed to comprehendthe farmers' perception on floriculture and to explore its further potentiality in the area under review. Twenty internal factors and seventeen external factors have been acknowledgedfor SWOT analysis to understand the present state of cultivation and marketing of the produced flower.The results of Internal Factor Evaluation Matrix(IFEM) and External Factors Evaluation Matrix(EFEM) recognizethe Strengths(S), Weaknesses(W), Opportunities(O), and Threats(T)to floriculture based on the empiric observation through field visits and information on stakeholders' perception. The SWOT-QSPM analysis reveals that higher economic profit from floriculture (weighted score 3.8) compared to other crops is the most potent internal 'strength' whereas the absence of a frequent and speedy transport system (weighted score 3.6) has been the most effective internal weakness of floriculture in the region. Furthermore, the possibilities of extension of the selling centers, the extension of the flower-based industry, and opportunities for a part-time job for women are the most possible opportunities for floriculture in the study area. On the other, climatic instability (weighted score 3.8), temperature increase, and market uncertainty are identified as the most vulnerable external threats to floriculture in the study area.*

KEYWORDS: *Floriculture,SWOT analysis, QSPM Matrix, IFE and EFE Matrix, Strategy Planning*

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I. INTRODUCTION

Floriculture is one of the modern agricultural activities under horticulture which deals with the growth of flowers and decorative plants, sometimes called floristry (Getu,2009) and it has gained the character of an emerging agro-industry in India (Mohan,2006; Harisha,2017). The different types of primary activities in remote areas have a significant impact on the economy of the country. Workers from different agricultural fields are constantly moving for various economic activities such as livestock, dairy, aquaculture, gardening, and plant breeding, etc. which are some examples of the diversity of economic activity (Pimbert, 2009; Banerjee,2017). The goal of every economic activity is to financial prosperity and gain earnings, which provides for a better standard of living(Stanford, 2015). Significant earnings lead to improvement in living conditions and an increase in consumption of various products which are measured by different indicators (Kahneman,2006; Stiglitz *et al.*,2009). Floriculture has now achieved an industrial character in which a number of countries of the world are involved with a notable contribution to the present global economy (Harisha, 2017;Kassa,2017). Floriculture has a high potential for remunerative return and profit earning practices for farmers (Kumar *et al*., 2006; Kumari *et al*., 2016). In the global context, the spread of urbanism and leading of city life with the rapid pace of urbanization has been effective upon the increase in the value of flowers with increasing taste of decoration and beautification of homes and apartments of urban people (Kalita, 2019;Kachari *et al.*, 2020). Flower has diverse utility in people's lives from birthday ceremony to funerals, including room decoration, marriage ceremonies, hotel, and restaurant beautification, etc. Besides the aesthetic value of flower in social life is high, it is equally used for making fragrances and medicines (Navalur*etal.*, 2015). In terms of world export share, the Netherlands occupies the leading position sharing 47.9 % of the world total, followed by Colombia at 16.3 %, Ecuador at 9.7%, Kenya at 6.4 %, Ethiopia at 2.6 %, and Belgium 1.7 % (UN ITC,2019).

India has a legacy of horticultural and floricultural crops (Banerjee, 2017). Floriculture has long been practiced in India, but now it has become a profitable agricultural practice (Harisha, 2017). Marginal farmers and working-class people are associated with growing flowers and its business with remarkable financial benefits (Raina *et al.*,2017). The existence of a variety of agro-climatic circumstances in the West Bengal State

is supportive of the growth of varieties of flowering plants in some parts of the State, almost in all seasons of the year (De and Singh, 2016). The focus of production has now shifted from indigenous flowers to new varieties of flowers for export. Loose flower commercialization is currently at the beginning stage (Harisha, 2017; Anumala and Kumar,2021). Flowers are very exquisite objects, for which farmers often face various problems during cultivation and export (Pachpande, 2013). The leading states engaged in flower production in India are Tamilnadu, Karnataka, West Bengal, Andhra Pradesh, Maharashtra, Madhya Pradesh, Gujarat, and Haryana.About 249000 hectares of agricultural land in India has been used for flower cultivation in 2015-2016 for the production of 1659000 tonnes of loose flowers and 484000 tonnes of cut flowers. India has exported 19726.57 Metric Tonnes (MT) of floricultural products to various countries of the World for $ 81.94 million in 2018-2019. In terms of export, India's share in the international market is very low. India's share in the world's total fresh flower production is about 0.40 to 0.50 %, compared to the Netherlands 65 %, Colombia 12 %, Italy 6 %, and the rest of the countries of the world together share 25 % (APEDA,2018). Floriculture is a growing agrarian industry in West Bengal. The leading flower production Districts are Purba Medinipur, Nadia, South 24 Pargana, Howrah, and Darjeeling (Mondal and Majumder,2019). The total area of West Bengal under flower production is 24850 ha. In 2013-14, total loose flower production of the State was 66500 MT and total cut flower production was 2613.5 million sticks. Purba Medinipur and Nadia are the two-leading flower-growing Districts of West Bengal (Department of Food Processing Industries and Horticulture, Govt. of West Bengal, 2021).

Purba Medinipur District is an important flower producing District in West Bengal due to its extensive fertile soil and abundant surface and subsurface water availability(O'Malley,1995; Duari, 2019). Flower cultivation for commercial purposes was first started, along with other crops, in Dokanda village of Panskura Block in 1990-1991 (Acharya, 2014). Panskura (erstwhile Panskura I Block) and Kolaghat (erstwhile Panskura II Block) C.D. Blocks of the District claim to be the first in starting floriculture on a commercial basis as an alternative to paddy culture (Sahu*et al.*, 2011). The adjoining Blocks of the same district quickly followed them for good returns. The main species of flower produced in this region are Marigold (*Calendula officinalis)*, Jasmine (*Jasminum officinale*), Rose (*Genus Rosa*), Butterfly pea *(Clitoria ternatea)*, Gladiolus *(Gladiolus dalenii)*, Dahlia *(Dahalia pinnata)*, Chrysanthemum *(Chrysanthemum indicum)*, Daisy *(Bellis perennis)*, Arabian jasmine *(Jasmanium sambac)*, Tuberose *(Polianthes tubrosa)*, Aster *(Kalimeris indica)*, Feverfew *(Tanacetum parthenium)*, Cockscomb (*Celosia cristata*), etc. (Field Survey, 2021).

THE STUDY AREA

The Purba Medinipur District, situated in the southern part of West Bengal State has been selected as the area under study. The District has 25 CD Blocks in total, but 3 C.D. Blocks, viz. Kolaghat, Panskura, and Sahid Matangini of Tamluk Sub-Division are the leading flower-growing Blocks (District Statistical Handbook, Purba Medinipur, 2014). The total geographical area of the district measures 4736 km² (District Survey Report, Purba Medinipur, 2021). The area is surrounded by Howrah District on the north-east, West Medinipur on the north-west, South 24 Pargana on the east, and the State of Odisha on its south-west. The Bay of Bengal lies on the District's southern end. Physiographically, these areas are situated on the Indo-Gangetic plain. The River Hooghly and its tributary Rupnarayan, have enriched the area under review with new alluvial soil. The annual average temperature of the area varies from 21°C to 32°C and its average annual rainfall is 1663.4 mm. Characteristically, the climate of this region falls under the hot and humid tropical regime (Duari, 2019).

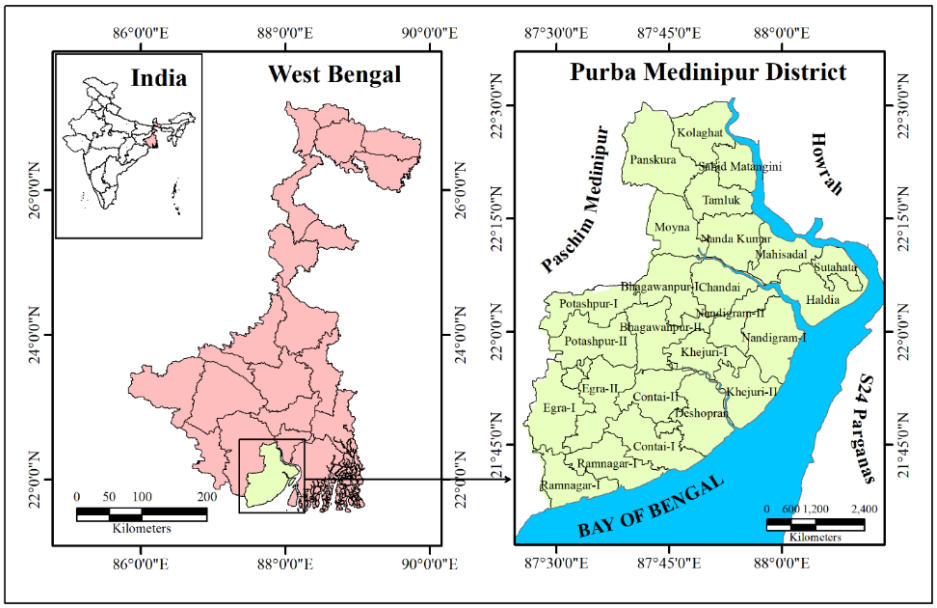


Figure 1: Geographical Location of the Study Area

II. MATERIALS AND METHODS

This study is based on both primary and secondary data to examine, and analyze the present status and to predict the future prospect of the floricultural economy of Purba Medinipur District. Primary data have been collected through field surveys, focused group discussions (FGD), perception surveys, formal and informal interviews, etc. A total number of 240 respondents who are involved in flower cultivation and its allied activities have been randomly selected from the three C. D. Blocks of Purba Medinipur District to respond to the prescribed questionnaire on various topics of flower cultivation. Secondary data for the analysis of Spatio-temporal production of flower cultivation in Purba Medinipur District have been collected from various sources like the National Board of Horticulture, Economics and Statistics Departments of West Bengal, Directorate of Horticulture, Govt. of West Bengal, and the Departments of Agricultural Cooperation, Govt. of India. The theoretical and methodological background knowledge of the concerned research has been acquired through several literature reviews like articles published in various reputed journals, research publications, and project works, etc. Various software like Arc GIS (Version 10.4), QGIS 3.0, and M.S Excel has been used to shape the maps and figures.

SWOT-QSPM Analysis

The SWOT analysis has been applied in the study to evaluate the current status and future possibilities of flower cultivation of the selected District. This analysis is introduced by Albert Humphrey at Stanford University in the 1960s (Nyarkuand Agyapong, 2011). The SWOT analysis is a strategic management tool that consists of four components: Strengths (S), Weaknesses (W), Opportunities (O), and Threats (T). Among them, strength and weakness are internal factors and the remaining two are external factors (Gurel and Merba, 2017). A total of 9 strengths, 11 weaknesses, 7 opportunities, and 10 threats have been identified through a questionnaire survey to prepare the strategic development of floriculture in the District. The factors of SWOT analysis are linked with different strategies of the Quantitative Strategic Planning Matrix (QSPM) to find the best strategies for organizational development.

IFE Matrix and EFE Matrix

The internal and external factors of SWOT analysis are used to generate Internal Factor Evaluation Matrix (IFEM) and External Factor Evaluation Matrix (EFEM). These two matrices initiate the fundamental framework of the Quantitative Strategic Planning Matrix (Gupta, 2015). The Weighted Value and Rating Value of each IFE and EFE Matrix have been carried out through focus group discussion among the respondents. The multiplication between Weighted Value and Rating Value formulates the Score of IFE and EFE Matrix.

- Weighted Value: The weighted value of each internal-external factor ranges from 0.01 (Not Important) to 1.00 (Very Important).
- Rating Value: The rating value of each internal-external factor ranges from 1 (minor) to 3 (Major).

Score =Weighted Value × Rating Value

Strategy I

Strategy 1 has been developed by using the combination of different strength-opportunity (SO) factors. A total of four SO strategies have been identified for portraying the possibilities of potential resource utilization. The opinions of the respondents have been collected through a rating scale of perception survey. The parameters of the rating scale have been classified into three categories i.e., agree, disagree, and neutral. The strategy having the highest recognition from respondents has been chosen as the best potential strategy for flower cultivation (Chakraborty and Chakma, 2020; Sahoo *et al.*, 2022).

Rating Scale: Agree, disagree, and neutral

Strategy II

Strategy II deals with the formulation of the Quantitative Strategic Planning Matrix (QSPM) where the alternative action planning measures have been identified to mitigate the vulnerabilities of Weakness-Threat (WT). A total of four WT strategies have been prepared to combat the internal weaknesses and external threats. This matrix has two parts: one is the Attractive Score (AS) and another is the Total Attractive Score (TAS). AS score ranges from 1 (not attractive) to 4 (highly attractive) which have been rated through a focus group discussion against each WT strategy. AS score is not arbitrary, it is lucid, reliable, and reasonable. The individual score of each factor in the IFE matrix and EFE matrix have been multiplied with the Attractiveness Score (AS) to get the TAS of each WT strategy. By summing all TAS of each WT strategy gives the Sum Total Attractive Scores (STAS). Finally, the WT strategy having the highest STAS score is considered as the most appropriate measure to reduce the weaknesses and threats (David *et al*., 2009).

AS × Score (EFE or IFE Matrix) = TAS
Σ TAS = STAS

III. RESULTS

SWOT-QSPM analyses have been done for suitable strategy planning of flower cultivation. A total of twenty internal factors are taken to show the strengths and weaknesses of flower cultivation. Strengths' weighted value ranges between 0.65 to 0.95 and the weighted score is between 1.4 to 3.8. The highest weighted score strength factors are ‘economically profitable compared to other crops’ and ‘long experiences of farmers. Weakness weighted value ranges between 0.65 to 0.9 and the weighted score is between 1.2 to 3.6. The highest weighted score weakness factors are ‘absence of frequent and speedy transport system’, ‘absence of suitable storage and preservation, and ‘high cost of pest control’ (Table No. 1).

Table 1: Internal Factors Evaluation Matrix (IFEM) of Strength-Weakness Factors

Internal Factors			Weighted Value	Rating Value	Weighted Score
Strengths	**S1**	Favorable agro-climatic conditions	0.7	2	1.4
	S2	**Availability of adequate irrigation water from the Kangsabati River**	**0.9**	**3**	**2.7**
	S3	**Economically profitable compared to the other crops**	**0.95**	**4**	**3.8**
	S4	**Long experience of the farmers**	**0.85**	**4**	**3.4**
	S5	Opportunity for economic profit for marginal farmers	0.8	3	2.4
	S6	Availability of cheap labour force	0.7	3	2.1
	S7	Incessant demands for the whole year	0.7	2	1.4
	S8	Availability of purchasing agency	0.65	2	1.3
	S9	Availability of women labour for plucking flowers	0.8	3	2.4
Weaknesses	**W1**	Unpredictable weather condition	0.95	2	1.9
	W2	Unorganized farming with small land holdings	**0.85**	**3**	**2.55**

	W3	**High cost of pest control**	**0.9**	**3**	**2.7**
	W4	**Absence of suitable storage and preservation**	**0.85**	**4**	**3.4**
	W5	Absence of modern machineries	0.8	3	2.4
	W6	**Absence of frequent and speedy transport system**	**0.9**	**4**	**3.6**
	W7	Absence of Good quality seeds and propagules	0.6	2	1.2
	W8	Shortage of capital and lack of investment	0.65	3	1.95
	W9	Higher dependency on marketing	0.8	3	2.4
	W10	Wastage of water	0.6	2	1.2
	W11	Absence of Government protection	0.8	3	2.4

Source: Author's own calculation

Total 17 external factors show the opportunities and threats to floriculture in the study area. Opportunities' weighted value ranges between 0.75 to 0.9 and the weighted score is between 1.7 to 3.6. The main opportunities are 'possibilities of extension of selling center', 'extension of flower-based extraction industry', and 'opportunity of a part-time job for women'. The main threat factors are 'climatic instability', 'increase of temperature', and 'market uncertainty (Table No. 2).

Table 2: External Factors Evaluation Matrix (EFEM) of Opportunity-Threat Factors

External Factors			**Weighted Value**	**Rating Value**	**Weighted Score**
Opportunities	**O1**	Extension of area under floriculture	0.75	3	2.25
	O2	**Extension of flower-based extraction industry**	**0.85**	**4**	**3.4**
	O3	Local uncommon flower cultivation	0.8	3	2.4
	O4	**Possibilities of extension of selling center**	**0.9**	**4**	**3.6**
	O5	Additional employment generation	0.8	3	2.4
	O6	Extra income opportunity	0.85	2	1.7
	O7	**Opportunity of part time job for women**	**0.85**	**3**	**2.55**
Threats	**T1**	Unscientific cultivation that causes degradation of soil	0.65	3	1.95
	T2	Occupational Shift and Uncertainty of labour	0.7	3	2.1
	T3	**Climatic instability**	**0.95**	**4**	**3.8**
	T4	Instability in the price of flower	0.5	1	0.5
	T5	**Market uncertainty**	**0.85**	**3**	**2.55**
	T6	Infestation of pests for a quick change in temperature	0.75	3	2.25
	T7	**Temperature increase**	**0.85**	**4**	**3.4**
	T8	Increase in cost of fertilizer	0.8	3	2.4
	T9	Ecological damage due to chemical control	0.75	3	2.25
	T10	Inter-culture of flowers with other traditional crops	0.65	3	1.95

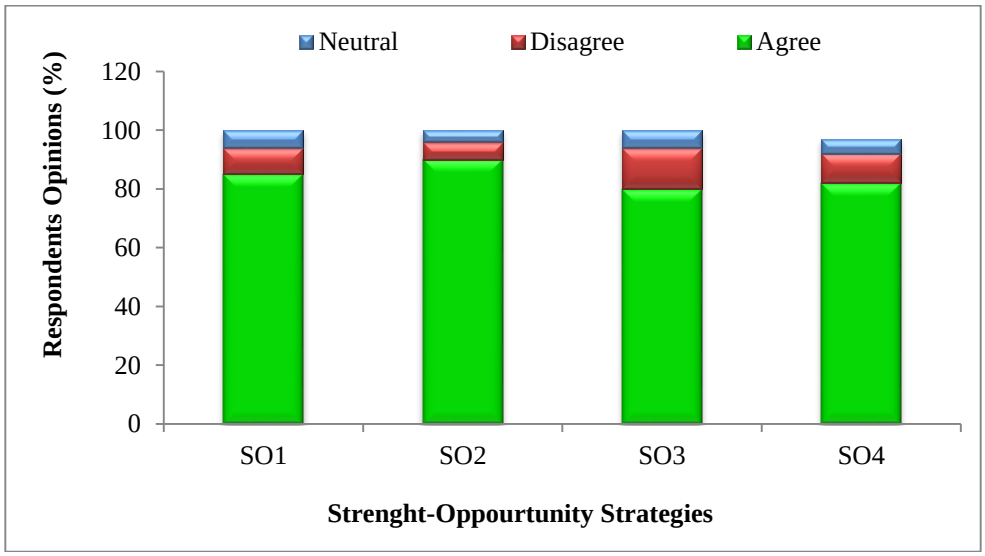
Source: Author's own Calculation

The quantification through IFE and EFE matrix have revealed the most remarking internal Strengths and Weaknesses as well as external Opportunities and Threats to the floriculture economy of the study area (Table No.1 and 2). Among them, higher economic profit from floriculture than from other crops (S3, 3.8) is remarked as the 'highest internal strength' followed by long 'experience of the farmer' **(S4, 3.4)** and 'availability of adequate irrigation water from the Kangsabati river' **(S2, 2.7)** respectively. On the other hand, the 'absence of a frequent and speedy transport system'**(W6, 3.6)**, 'high cost of pest control' **(W3, 2.7)**, and 'unorganized farming with small land holdings'**(W2, 2.55)** are considered as the most concerning internal weakness of floriculture in the study area. Similarly, the EFE Matrix has outlined the predictable external opportunities and threats of floriculture beyond the systems. The analysis has revealed that possibilities of 'extension of selling centers' **(O4, 3.6)**, the 'extension of flower-based extraction industry'**(O2, 3.4)**, and 'opportunities for part-time jobs for women' **(O7, 2.55)** are the most possible opportunities for floriculture in the study area. While, 'climatic instability' **(T3, 3.8)**, 'temperature increase' **(T7, 3.4)**, and 'market uncertainty' **(T5, 2.55)** are predicted as the most vulnerable external threats to the floriculture in the area under review.

Strategic Planning II Strength- Opportunity (SO) Strategies;

The combination of the internal strengths and external opportunities has formulated the following SO Strategies for further development in floriculture in the study area by using the positive outcomes of both internal and external factors;

i. **SO, Strategy I:** Continuous demand of flower throughout the years will extend the market periphery as well as would encourage the flower-based industry
ii. **SO, Strategy II:** Profitability of floriculture will enhance the employment opportunities of women as well as marginal workers
iii. **SO, Strategy III:** Floriculture boosts up the local economy for the whole year
iv. **SO, Strategy IV:** Favorable agro-climatic conditions will help extension of more area under floriculture.



Source: Field Survey, 2021

Figure 2: Perception Survey of the respondents for SO Strategies

The respondents' opinions have revealed that **SO2 (90%)** is highly appreciated by them followed by **SO1 (85%)**, **SO4 (82%)**, and **SO3 (80%)**.

Strategic Planning II: Alternative Weakness Threat (WT) Strategies;

i. **WT Strategy I:** Introduction of a **cooperative farming system** in floriculture will: a) minimize the problems of small landholdings, b) mitigate the crop failure risks, c) ensure investments, and d) organize the existing farming system toward the more profitable way
ii. **WT Strategy II:** Improvement in **infrastructure facilities** (transport and storage) will ensure the optimum supply of flowers throughout the year and reduce the risk of marketing (instability)
iii. **WT Strategy III:** Implementation of proper **government policies** will guarantee the income of the farmers by controlling the market price and reducing the market risk

iv. WT Strategy IV: Uses of **modern machineries** and the **scientific farming system** will reduce the upcoming ecological issues by reducing the wastage of groundwater; and by controlling the excess use of pesticides and fertilizers

The Quantitative Strategic Planning Matrix (QSPM) is a decision-making analytical method that connects the degree of the relative attractiveness of one strategy over another. The STAS score helps to select the most prioritized strategies for sustainable planning. The alternative WT Strategy having the highest STAS score is considered as the most effective strategy. The following analysis of the QSPM Matrix has revealed that among the four WT strategies, WT 1 is the most prioritized strategy followed by WT 2, WT 4, and WT 3 respectively to combat the internal weakness and external threats of floriculture in the study area (Table No. 3).

Table 3: Quantified Strategy Planning Matrix (QSPM) of Floriculture

Factors	Weighted Score	WT1		WT2		WT3		WT4	
		AS	TAS	AS	TAS	AS	TAS	AS	TAS
S1	1.4	3	4.2	2	2.8	2	2.8	3	4.2
S2	2.7	3	8.1	2	5.4	1	2.7	2	5.4
S3	3.8	4	15.2	3	11.4	1	3.8	2	7.6
S4	3.4	4	13.6	3	10.2	2	6.8	2	6.8
S5	2.4	3	7.2	2	4.8	2	4.8	2	4.8
S6	2.1	3	6.3	4	8.4	2	4.2	1	2.1
S7	1.4	2	2.8	3	4.2	3	4.2	2	2.8
S8	1.3	3	3.9	2	2.6	1	1.3	2	2.6
S9	2.4	3	7.2	3	7.2	3	7.2	3	7.2
W1	1.9	3	5.7	2	3.8	2	3.8	2	3.8
W2	2.55	4	10.2	1	2.55	3	7.65	1	2.55
W3	2.7	4	10.8	4	10.8	2	5.4	1	2.7
W4	3.4	3	10.2	2	6.8	3	10.2	2	6.8
W5	2.4	3	7.2	3	7.2	3	7.2	2	4.8
W6	3.6	3	10.8	2	7.2	2	7.2	3	10.8
W7	1.2	2	2.4	1	1.2	3	3.6	3	3.6
W8	1.95	2	3.9	3	5.85	2	3.9	4	7.8
W9	2.4	3	7.2	2	4.8	3	7.2	2	4.8
W10	1.2	4	4.8	3	3.6	1	1.2	2	2.4
W11	2.4	3	7.2	4	9.6	1	2.4	1	2.4
O1	2.25	2	4.5	2	4.5	1	2.25	1	2.25
O2	3.4	3	10.2	3	10.2	2	6.8	2	6.8
O3	2.4	2	4.8	2	4.8	2	4.8	2	4.8
O4	3.6	3	10.8	3	10.8	2	7.2	1	3.6
O5	2.4	3	7.2	4	9.6	3	7.2	3	7.2
O6	1.7	3	5.1	2	3.4	1	1.7	2	3.4
O7	2.55	4	10.2	3	7.65	1	2.55	4	10.2
T1	1.95	3	5.85	3	5.85	2	3.9	2	3.9
T2	2.1	4	8.4	2	4.2	3	6.3	2	4.2
T3	3.8	3	11.4	2	7.6	2	7.6	2	7.6
T4	0.5	2	1	3	1.5	1	0.5	2	1
T5	2.55	3	7.65	4	10.2	2	5.1	2	5.1

T6	2.25	4	9	1	2.25	2	4.5	2	4.5
T7	3.4	3	10.2	1	3.4	2	6.8	3	10.2
T8	2.4	2	4.8	1	2.4	2	4.8	3	7.2
T9	2.25	3	6.75	1	2.25	3	6.75	1	2.25
T10	1.95	4	7.8	1	1.95	1	1.95	1	1.95
STAS			**274.55**		**212.95**		**178.25**		**182.1**
Priority			**1st**		**2nd**		**4th**		**3rd**

Source: Author's own calculation

IV. DISCUSSION

Flower cultivation is gradually expanding at present due to its increasing demand all over the world (Navalur *et al.*, 2015;Ninama *et al.*, 2016). The Purba Medinipur District of West Bengal has a historical background in practicing flower cultivation in this region (Acharya,2014). The long experience of the flower cultivators continuously encourages the new generation of farmers. Different types of physical and human factors have favored the expansion of flower cultivation in this region. Fluvial depositional clay soil and abundance of irrigation water are important determinants of the growth of floriculture. Most (85 %) of the respondents are cultivating flowers as well as other conventional crops (paddy, potato, oil seeds, vegetables) and the rest of the farmers are only practicing flowers as a main crop. Local government administration, Department of Horticulture, Self Help Group(SHG), and Purba Medinipur *Krishi Vigyan Kendra* (KVK) organize short-term training facilities for the floriculturists on employment opportunities and other socio-economic benefits.

However, the present study has exposed several problems associated with the cultivation and marketing of flowers. The most harmful natural problem is climatic instability caused by heavy rainfall, frequent flood, and the sudden appearance of western disturbance, locally called *Kalbaisakhi* in summer. It damages flower plants, buds, and flowers with speedy gusty winds, sometimes associated with severe hailstorms. Various doses of pesticides and fertilizers are essential for growing flowers and currently, their price has been enhanced differently. The farmers of the area have no such capacity to afford modern machinery to increase the quantity of production. Flower is highly perishable compared to other crops (Gupta and Dubey, 2018; Naveena and Thamaraiselvi,2020). The main flower market of the District is Kolaghat flower market. Transportation of the product from this market is fully dependent on railway services. But the frequency of trains and the number of vendor compartments are low; similarly, if the vendors fail the train or the train makes late, flowers are damaged, and both the farmers and the traders face a huge loss.

On the other hand, flower cultivation is a challenging and time-consuming job, it has also been observed that some of the farmers have experience in cultivating flowers. Most of the farmers (82%) of this area are small and marginal holders but some large farmers also practice floriculture on a commercial scale. The price of fertilizers and pesticides has constantly increased (Manzoor *et al.*, 2001) as a result production cost of the flower is also high. Proper storage facilities can reduce the spoils of flowers, but the region suffers from the absence of an adequate number of cold storages. Such constraints have been indirectly effective upon the reduction in the quantity of flower production. The small farmers have to lend cash from *Mahajan* (a local loan provider who gives the money in return for an exorbitant rate of interest) and other Small Finance Banks (SFBs). Farmers often face financial crises by taking personal loans with a higher rate of interest from the market. Despite various problems faced by floriculturists, they are still interested to continue flower cultivation due to lucrative profit.

V. CONCLUSION

The most significant factors that influence the cultivation of flowers in the area such as favorable agro-climatic conditions, the long experience of the farmers, and the profitability of floriculture than other traditional crops. These types of suitability have offered a great opportunity for prospects of floriculture in the area under review. Floriculture in this region helps upliftment of the socio-economic status of the farmers, women workers as well as other involved stakeholders of this sector. Hence, farmers' perception of floriculture proves positive. The rural economy of the study area has changed positively in this region and surrounding areas. Flower cultivation in this region has gradually taken place of an alternative cropping.The SWOT analysis and QSPM Matrix have outlined that the economically profitable nature of floriculture will enhance the creation of employment opportunities for women as well as marginal workers is the most appreciated SO strategy. On the other side, among the alternate action planning, the implementation of cooperative farming systems is the most prioritized WT strategy for effective and sustainable growth in floriculture farming. Therefore, it is very essential to be concerned over these internal-external SWOT factors for sustainable development and effective

growth of floriculture in Purba Medinipur District of West Bengal through the implementation of these effective decision-making strategies.Flower cultivation has enhanced the socio-economic status of the farmers involved in floriculture in the area. Their occupational structures have also been changed from traditional agricultural laborers to cultivators of cash crops. Thus, floriculture has bright prospects in this area as an alternative cropping.

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