

## CHALLENGES FOR ADOPTION OF POLYHOUSE TECHNOLOGY AMONG FARMERS OF AHMEDNAGAR AND NASHIK DISTRICT

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### ABSTRACT

*Polyhouse is one of the emerging modern pharming technique which is very much popular in India in recent years. The modern farming technique is one of the ways through which the situation of the farmers can be improved. Through the present study, the research wants to focus mainly on polyhouse as one of the recent farming techniques and its contribution to the improvement of the condition of the farmers. polyhouse is one of the modern techniques still maximum farmers are not taking initiative for the implementation of the same in their farming methods. Therefore, the researcher has undertaken this study. The study was directed at 120 farmers from two districts, viz. Ahmednagar and Nashik to outline the imperatives in the adoption of polyhouse. The farmers confronted environmental, technical, labor, financial, and advertising requirements in outfitting productivity and maintainability of this technology. The significant requirements in quick selection were high introductory capital, helpless accessibility of value planting material and data sources, poor post-harvest infrastructure, and absence of price policy measures. Farmers of Ahmednagar were discovered to be better positioned for market access and accessibility of value planting material. Farmers' capacity to effectively coordinate this technology to suit their socio-economic and agro-ecological conditions would additionally influence its productivity, supportability, profitability, and sustainability.*

**Keywords:** Adoption, Market access, Polyhouse technology, Post-harvest infrastructure, Price strategy

### I. Introduction

“Everything else can wait, but not agriculture”- Jawaharlal Nehru, 1947, India is a country where Agriculture is the backbone of more than 70% of livelihood but now a day's Indian farming is having a major impact on the environment. The green revolution was one of the revolutions through which the productivity of the crop has increased. The white revolution has also supported the agriculture sector to increase the livelihood of farmers, every side of the coin has two sides hence green revolution also has a positive and negative impact. Because of the adverse impacts of the green revolution on soil fruitfulness, the rise of new insect pests and diseases declining of water table level enticed the farmers to consider substitute strategies for development which could control the unfavorable impacts of the green revolution and give a chance to develop crops consistently. Ensured Cultivation Technology was one such elective which was promising to the farmers. Environmental change and helpless water accessibility will require developing more food with less and less water. The extent of zone development under the development of vegetables and blossoms is practically nothing. The main alternative is a vertical extension through

expanded profitability and editing power utilizing secured cultivating with climate control measures, quality seeds, composts and plant assurance estimates Plastic mulching, ensured nursery creation, utilization of green/polyhouses/ shade net houses for the slow time of year creation of vegetables and flowers have reliably given great outcomes both at research farms and farmers' fields In the ongoing years expanding consideration has been centered around a few earth safe strategies for pest management, including polyhouse development to lessen pesticide use primarily because of growing concern over food safety issues and environmental concerns. India has gone into a period of nursery vegetable development all the more as of late and the total area under protected vegetable production is not more than 100000 ha. India being a tremendous nation with differing and outrageous agro-climatic conditions, the protected cultivation technology can be utilized for year-round off-season production of, high worth, low volume vegetables, creation of infection-free quality seedlings, creation of value crossbreed seeds, and as well as for disease resistance breeding programs. Be that as it may, adoption of polyhouse technology shifts generally over the states in India. The

ensured developed advances particularly polyhousetechnology required a high starting venture and that significant adopters of these advances were huge farmers. In this unique circumstance, it is significant and effective to depict the challenges that farmers face in the adoption of polyhousetechnology. This would help in discovering the determinants of adoption which play a significant role in devising strategies to overcome the challenges.

## II. Literature Review

There several studies on Polyhouse technology for farming. A select few recent examples are given below.

According to Potghan et al. (2020), a Polyhouse is where plants are developed. Polyhouses are regularly utilized for developing blossoms, vegetables, foods grown from the ground plant. Basic factors affecting plant development are sunlight, the water content in the soil, the PH level of water, etc. These physical elements are to control physically inside a Polyhouse and a requirement for robotized configuration emerges. Consequently, controlling all the elements that influence plant development is likewise a troublesome undertaking as it is costly and some physical variables are inter-related. The system also allows transmission of process parameters, including emergency alarm signals via e mail client server or alternatively sending a SMS on a mobile phone using GSM Module. This bidirectional pump is used for inlet and outlet water. Water siphoning has a long history; such a large number of techniques have been created to siphon water. Individuals have utilized an assortment of intensity sources, to be specific human vitality, creature power, hydropower, wind, solar, and power such diesel for little generators. The most common pump is used in remote communities are Solar submersible pumps, Hand pumps Direct drive diesel driven borehole pumps, Electric submersible pumps with a diesel generator.

Tripathy and Dash (2020), have argued that agriculture department have a major role in India to develop towards farming which is about 70% of population. India's development relies on farming, the capital income in farming department is 33% of total nation's

capital income. Presently the agricultural field plays an important role due to the demand in increasing population globally. Poly house is a way of protecting cultivation on agriculture, the plastic is used to cover the structure and it enables to cultivate high value crops in the farming structure. Soil condition is genuinely necessary asset for an efficient agriculture production. To improve the soil condition, we have introduced a line follower Robotic car which will move and sense the soil condition and supply water based on soil condition on the field. This project provides a solution in terms of reducing human labor on farming sector. One of the most beneficial idea is that decreasing the human physical efforts.

Mishra et al. (2020), have posited that higher farming is considered lucrative and highly profitable agro-industry. This case was registered in MAHOG village of SOLAN, Himachal Pradesh, India for a flower farming family. The findings showed that flower growing is a lucrative business however in many respects it presents challenges. The flower growing family insists that the floral company should be diversified into eco flower farming in order to ensure a stable and sustainable future. Two buildings have been fabricated, and the two high-value cultivations have been cultivated with Naturally Ventilated Poly House (NVS). The work was carried out in "Quality in natural playhouses for both Capsicum and Gerbera." In order to promote technology, departmental authorities provided technical support and all other information regarding farming practices and other logistics support from time to time. The conclusions were drawn in accordance with the yield and value of crops with open production, the increases in income or in particular farmers ' use of this innovation. They included several aspects.

As per Kishore et al. (2020), the current examination on Performance assessment of drip irrigation system and profitability analysis of verdant vegetables under polyhouse was directed to consider the presentation boundaries of the drip irrigation systems identifying with crop execution. This was finished by taking existing drip tapeline, new drip tape line and new inline drip irrigation system under the Polyhouse at the school of

Agricultural Engineering, Kandi, Sangareddy, Telangana during the year 2018. Profitability of five green verdant vegetables viz. Palak, Sorrel, Methi, Amaranths and Coriander was likewise assessed. The outcomes uncover that the three drip line systems in line got more uniform coefficient of 98% followed by new drip tape with 96% and preinstalled drip tape with 95%. Among the five green verdant vegetables methi has recorded most noteworthy gross (306000Rs section of land 1) and net returns (285833) and benefit cost ratio (14.2) trailed by Palak, Sorrel while Amaranthus has recorded least benefit cost ratio (7.6). As far as execution qualities, drip tape and in line system performed better in keeping up consistency release and the planned drip irrigation worked fantastically. Methi, Palak and tawny found appropriate and beneficial in polyhouse where all year development of vegetables is plausible contrasted with open field in which crop foundation was exceptionally poor and couldn't be raised effectively due the weighty downpours and improvement characters of the verdant crops.

Despite wide research on this topic, a contextual gap exists. Our research focused on Nashik and Ahmednagar districts attempts to fill that gap.

### III. Research Methodology

#### a. Objectives of study

- i. To study the role of polyhouse as a modern pharming technique.
- ii. Study challenges faced by farmers in poly house technique.
- iii. To suggest measures for increasing usage of polyhouse as a modern farming technique.

#### b. Research Design

Research design is the method and strategy of the data collection, analysis, and interpretation of inferences so that valuable findings of the study can be generated. For this study, the researcher has used exploratory and descriptive research design.

#### c. Sources of Data Collection

The researcher has used the following sources of data collection:

- i) Primary data

For this research work researcher has used the following sources of primary data:

1. Interview
2. Observation
3. Discussion with the respondents

- ii) Secondary data

For this research work researcher has collected data by using the following sources:

1. Books
2. Journals
3. Websites
4. Magazines
5. Other published sources

#### d. Sampling Design

- i. Sample unit: The existing study researcher has undertaken with the help of farmers of polyhouse.
- ii. Sample area :
  1. The researcher has undertaken the study for Ahmednagar and Nashik region for the study
- iii. Sample size: 120 Farmers
- iv. Sampling technique: for this study researcher has used
  1. Stratified sampling
  2. Simple random sampling

#### e. Scope of the study

The study was conducted in two Districts in particular. Ahmednagar and Nashik during 2020. These Districts were purposively picked since these are the main Districts in the region under secured development. Two talukas from each district, viz. Sangamner and Rahata from Ahmednagar and Sinner and Niphadtalukas from Nashik were picked purposively as a result of the most elevated territory under secured development in these talukas. In all out 120 farmers (30 farmers from each taluka) who had received polyhouse technology were selected by using a stratified random sampling technique.

Therefore, this study is one of the attempts through researcher want to focus on challenges in the usage of the polyhouse as an important tool for modern farming technique. Nowadays most of the products of polyhouses are having maximum demand due to their quality and

standard. Farmers can get an optimum return through this technique. Therefore this study is important.

#### f. Limitations of the study

During this study, the researcher has faced the following limitations:

1. Secrecy of information: most of the respondents were reluctant to share their genuine opinion. Some of the respondents have not shared real opinions due to business strategy.
2. Less time for the discussion with respondents: During the personal discussion with the respondents, they were busy in their work so that they couldn't give enough time for the discussion. Hence this

is also one of the important limitations during the study.

3. Lack of involvement of the respondents: Some respondents were does not have any interest in the research study so that they have not shown proper involvement in the research discussion.

#### IV. Data Analysis and Interpretation

An exhaustive list of constraints was prepared and the respondents' opinion in the study area on constraints was measured on a five-point continuum scale of least severe, not so severe, severe, quite severe, very severe and with a score of 1, 2, 3, 4 and 5. Relevancy Ranking Technique was used with the following formula:

$$RC_i = \frac{\text{Total score of all the respondents for } i^{\text{th}} \text{ constraint}}{\text{Maximum on the continuum} \times \text{Total number of respondents}}$$

$RC_i$  refers to Relevancy Coefficient for the  $i^{\text{th}}$  requirement. The ranking of every limitation was made by its relevancy coefficient with the end goal that the imperative having the most elevated relevancy coefficient is positioned first and ensuing position is offered by the scores got in a specific order. The methodologies to defeat the difficulties looked by farmers in the selection of polyhouse innovation were pooled dependent on conversations with all the respondents of the examination. Procedures were organized and examined utilizing Garrett's ranking strategy.

#### V. Results and discussion

Difficulties in the selection of polyhouse technology

##### Environmental constraints

The ecological constraints looked at by farmers in the selection of polyhouse in Ahmednagar and Nashik have been introduced in Table 1. Over-misuse of supplements from soil has prompted their decrease in fertility status, particularly in Ahmednagar. Shortage of water for the water system was another serious

issue for farmers of Ahmednagar and Nashik. Exceptionally erratic climate conditions outside the polyhouse lead to higher consideration and better administration of yields inside the polyhouse and inturn greater expense of development. The event of pest and diseases inside the polyhouse once in a while surpass when contrasted with open development as a result of ideal climatic conditions (high dampness and stickiness) inside the polyhouse. Continuous irrigation system to the soil through drip or mist irrigation system or water shower inside the polyhouse has likewise prompted helpless waste conditions. Farmers of Ahmednagar and Nashik moreover uncovered major in progress considering physiological issues. the significant imperatives in the creation of green crops in India are temperature (hot or cold), daylight duration and quality, water inadequacies or abundances, barometrical dampness (relative mugginess), weeds, insufficiency of supplements, substantial breezes, carbon dioxide, and host of diseases and bug pests.

**Table 1 Environmental constraints as perceived by farmers in the adoption of polyhouse technology (n=120)**

Constraint	Ahmednagar		Nashik	
	Relevancy coefficient	Rank	Relevancy coefficient	Rank
For the most part higher perishable capacity of	0.91	I	0.93	I
Deficiency of water for irrigation under	0.64	IV	0.79	II
Profoundly fluctuating climate conditions	0.62	V	0.76	III
Helpless seepage of the dirt	0.59	VI	0.69	IV
Low soil ripeness status	0.75	II	0.64	V
Event of nuisance and diseases	0.72	III	0.59	VI
Event of physiological issues	0.46	VII	0.49	VII

**Technical constraints**

The creation of crops under polyhouse conditions is exceptionally information and skill intensive. Be that as it may, farmersthink that it's hard to get the most recent data and strategies of yield creation under polyhouses, especially in their regional languages. Accessibility of value planting material at reasonable costs is a challenge. The way that planting material is provided distinctly by hardly a few private players has come about into farmers being totally dependent on them. The technical constraints looked at by farmers have been introduced in Table 2. Farmers of Nashik regions communicated that accessibility of bundle of practices for the development of yields under polyhouse is either restricted or requires parcel of alteration to suit their agro-natural and socio-economic conditions.

Accessibility of value seed and planting material of required cultivar is an extreme

limitation looked by farmers by virtue of expanded reliance on formal area particularly private seed organizations likewise detailed that no particular breeding work had commenced for improvement of suitable varieties/ hybrids for greenhouse or protected cultivation, even in significant vegetables, viz. cherry tomato, sweet pepper, tomato and cucumber.

However, it was interesting to note that the limited power supply was the major constraint for the farmers of Ahmednagar. Farmers of Ahmednagar have gone into the high level phase of polyhouse development and are currently expanding the region under polyhouse development. Subsequently, the force supply goes about as a basic information. Farmers of Nashik are as yet in the underlying period of polyhouse innovation selection wherein the accessibility of quality planting material and information sources are significant issues.

**Table 2 Technical constraints as seen by farmers in the adoption of polyhouse technology (n=120)**

Constraint	Ahmednagar		Nashik	
	Relevancy coefficient	Rank	Relevancy coefficient	Rank
Absence of consistent data about yield creation under polyhouse	0.72	V	0.89	I
Amount and quality planting material at ideal time	0.66	VI	0.77	II
Restricted and unpredictable force supply	0.93	I	0.69	III
Non-accessibility of quality information sources like pesticides and insect sprays showers at correct time	0.45	VIII	0.64	IV
Non-accessibility of quality polyhouse supplies at close by market	0.55	VII	0.59	V
Absence of specialized direction/course about creation strategies	0.82	III	0.56	VI
Absence of important data in nearby language	0.83	II	0.48	VII
Inconveniences in after the proposed rehearses	0.76	IV	0.30	VIII

### Labour related constraints

Polyhouse development is labor-intensive and talented work consistently. Of course, the availability of skilled labor is a basic issue for farmers in both Ahmednagar and Nashik (Table 3). Migration of rural folk to metropolitan regions looking for better positions, elective business openings at the town level (counting MNREGA conspire) and indifferent attitude of youth towards agribusiness has prompted intense lack of talented work particularly in the pinnacle periods of planting/ sowing and harvesting. This has normally raised the compensation paces of skilled labor required for polyhouse

cultivation. The normal everyday wage rates in the pinnacle period of Sowing/ planting and harvesting in the open field conditions in the study region was ' 200 for ladies and ' 250 for men, while in the polyhouse the everyday wage rates went between ' 250–300 for ladies and ' 300–400 for men. It was assessed that normal yearly consumption on wages and compensations in the initial three years of foundation of polyhouse is ' 77000/unit. A unit is a standard proportion of region under polyhouse development and is identical to 1008 sq meters.

**Table 3 Labor imperatives as seen by farmers in the adoption of polyhouse technology (n=120)**

Constraint	Ahmednagar		Nashik	
	Relevancy coefficient	Rank	Relevancy coefficient	Rank
High price to be paid for skilled labour	0.72	II	0.96	I
Limited availability of labour during peak seasons	0.91	I	0.76	II
Non- availability of skilled labour	0.53	III	0.44	III

### Economic constraints

The economic constraints of the farmers in the selection of polyhouse introduced in Table 4 shows that the underlying cost required setting up a polyhouse is still exceptionally high and is past the compass of small and medium farmers. The fund brought about by farmers in setting up polyhouse, cost of planting material, and its maintenance is given in Table 4.

The expense of the foundation of polyhouse shifts between 1.2 million to 1.4 million. Polyhouse cultivation requires quality planting material, inputs, and so on which adds financial weight to the farmers. The fundamental expense of creation and the operational expense of the atmosphere controlled greenhouses are high, which are not reasonable to the growers in India.

Seeds of business crops and low-volume, high-esteem crops were costly due to consideration of sovereignty/attribute charge in the retail

cost. Assurance, requirement, and upkeep of IPRs over seed and hereditary material by private seed organizations through PPVFRA 2001 will likewise include cost and these expenses are given to purchaser farmers. The dismal accessibility to subsidies and absence of a pricing policy including that of crop insurance has further added to the risks of polyhouse cultivation. The upper roof cutoff of subsidy changes from plan to plan, largely extended between 20 to 50 percent of the expense of erection of polyhouse. Indeed, even the ceiling on the area under polyhouse for availing subsidy benefits is the limit of one unit (1008 sq m).

The farmers of both Ahmednagar and Nashik communicated that it took at least eight months after application, to benefit from loans from financial institutions, commercial banks, and business banks.

**Table 4 Economic constraints as seen by farmers in the adoption of polyhouse technology (n=120)**

Constraint	Ahmednagar		Nashik	
	Relevancy coefficient	Rank	Relevancy coefficient	Rank
High beginning interest being developed of poly house	0.83	I	0.89	I
Especially cost of planting material	0.36	VIII	0.83	II
Significant expense of plant insurance synthetic compounds	0.62	V	0.65	III
Absence of satisfactory and ideal dispensing of advance from monetary establishments and banks	0.81	II	0.59	IV
Significant expense of transportation	0.28	IX	0.53	V
An excess of records needed for advance system	0.72	III	0.46	VI
Less data about credit and sponsorship offices	0.42	VI	0.42	VII
Helpless availability to endowment	0.65	IV	0.35	VIII
Nonattendance of crop protection conspire for security of blossoms and vegetables	0.41	VII	0.30	IX

### Marketing constraints

The marketing constraints faced by the farmers have been introduced in Table 5.

The Indian farmer is a price taker and not a price fixer. It is all the more so in crops where price policy is totally missing as if there should arise in the case of flowers and vegetables. Thus, the unfavorable market price may cause enormous monetary losses. Farmers got great costs from worldwide business sectors when contrasted with the domestic market. Indeed, even in the domestic market, farmers brought great prices during the months of January-April and the season is commonly slack during September to December. Stressed the significance of Government involvement in the price policy instrument to prevent price fluctuation. The inadequacies in the foundation, for example, poor evaluating and transport offices and cold chain the board joined with market acts of neglect add to the danger part of farmers in India. The markets for polyhouse products are generally exclusive

and far, sometimes crossing the boundary of the Districts. The average distance from the nearest market (Pune) for farmers of Sangamner and Rahata in Ahmednagar ranged between 125 to 150 km, whereas it was less than 50 km for farmers of the Nashik Rural district. The average distance from the nearest market (Pune) for Sinner farmers is more than 200 km and hence they had to incur very high expenditure on transportation costs.

The Pune Flower Market is a public division market selective for flowers and is closest for the farmers of Ahmednagar Rural district. However, farmers from the Nashik Rural area communicated that this market is out of reach as a result of its area in the center point of the city. Hence, they wanted to sell their produce in another market for example nearby market Shirdi. It showed that area of the market is likewise significant as it influences the cost of transportation.

**Table 5 Marketing constraints as perceived by farmers in the adoption of polyhouse technology (n=120)**

Constraint	Ahmednagar		Nashik	
	Relevancy coefficient	Rank	Relevancy coefficient	Rank
Changes in market costs	0.61	IV	0.77	I
Absence of promoting offices at neighborhood place (block/area central command)	0.44	V	0.68	II
Absence of elite business sectors for blossoms/vegetable become under polyhouse	0.37	VI	0.52	III
Presence of center men (dalal) misbehaviors	0.83	I	0.44	IV
Absence of particular stock chain In management including cold chain	0.34	VII	0.39	V
Trouble in reviewing the produce at the creation level	0.74	II	0.36	VI
Challenges emerges because of quick need of cash	0.71	III	0.32	VII

### Strategies to facilitate the pace of adoption of polyhouse technology

The systems reflect the needs as seen by different partners to improve appropriation of polyhouse technology among farmers. The strategies as seen by farmers to build the pace of adoption of polyhouse technologies are introduced in Table 6.

It is finding that some low quality produce with pesticide residues has involved incredible concern. These issues can without much of a stretch be tended to by production and protection practices including location-specific designing and construction of the polyhouses for efficient input use. Efforts such as investment in marketing facilities and creating new markets for polyhouse products will enhance the profitability of polyhouse cultivation.

Farmers likewise need to take suitable and logical measures in the determination of area and site for polyhouse cultivation and its proper administration. Utilization of certain Indigenous Technical Knowledge (ITKs) and locally accessible resources may demonstrate

useful for expanding the effectiveness and supportability of polyhouse cultivation and relief from risk. Working Group Report on Development of Protected Cultivation in Haryana and recommended that innovative marketing approaches, for example, cluster and cooperative based marketing will build the negotiations chance to farmers in this manner giving them the capacity to fix the price of their items in the market Government support needs to be extended for self-fabrication module of temporary low-cost structures like insect-proof net houses, shade net houses, walk-in-tunnels, and self-fabricated low-cost protected structures for the production of vegetables and flowers. There is a requirement for normal continuous power supply to keep up ideal developing conditions inside ensured structures. To give a better return to the farmers, there is a need to offer help with appropriate market linkages, market intelligence, and supply chain management including cold chain.

**Table 6** Strategies to facilitate the rate of adoption of polyhouse technology as seen by farmers

Strategies	Ahmednagar		Nashik	
	Garrett Mean Score	Rank	Garrett Mean Score	Rank
<b>Policy activities</b>				
Value Strategy system	64.88	II	89.525	I
Normal and standard force supply (three stage)	77.53	I	78.025	II
Perfect Time accessibility of quality planting material locally	61.89	III	64.875	III
Higher appropriation for secured development under polyhouse	55.41	IV	43.088	IV
Formation of essential preparing offices at ranch entryway level	45.49	V	28.231	V
<b>Research and development activities</b>				
Diminishing the especially high beginning venture	78.63	I	79.625	I
Decreasing the cost of development	61.82	III	68.562	II
Standardization of plans and Plans of ease polyhouse for various agro-climatic locales of the nation	77.57	II	65.451	III
Improvement of simple to utilize Package of Practices	50.63	V	50.698	IV
Standardization of developing innovation under polyhouse	36.55	IV	48.854	V
<b>Marketing activities</b>				
Accessibility of crude material of required quality at close to advertise	42.48	IV	79.250	I
Advancement of direct promoting and forward publicizing of the produce	58.55	III	61.587	II
Production of independent payload trips for public and global business sectors to send out the crop	75.54	I	56.258	III
Formation of a specific brand for the produce and thought market for the produce	63.59	II	41.658	IV
<b>Famer level activities</b>				
Bunch and helpful based methodology underway and Promoting of created crop	61.66	II	86.578	I
Suitable decision of zone and site for polyhouse establishment	77.65	I	71.865	II
Foundation of downpour water collecting procedure to lessen irrigation cost	49.83	IV	52.598	III
Usage of native specialized information for control of temperature and moistness	43.66	V	48.962	IV
Diminishing polyhouse portion cost by utilizing privately made material	58.55	III	41.857	V

#### IV. Findings of the Study

The high beginning venture costs, absence of accessibility of value planting materials and information sources, helpless post-gather framework, and nonattendance of value strategy have prompted restricted selection of this innovation by couple of farmers in specific pockets of the state.

Great strategy estimates, for example, expanding the degree and measure of appropriation; arrangement of value planting material and contributions at moderate costs; interest in framework to plug post-collect misfortunes and evaluating strategy would improve the profitability and supportability alongside expanding the reception of this innovation.

The re-innovations in plan and structure of polyhouse by farmers likewise credit due acknowledgment and consideration of exploration and augmentation organizations. Innovative work activities should target growing minimal effort plans and lessening the cost of erection of polyhouse and cost of development. High initial venture, nonattendance of accessibility of value planting materials and information sources, helpless post-collect framework, and nonappearance of value strategy have prompted extremely restricted selection of this innovation by couple of farmers in explicit pockets of the state.

### V. Conclusion

However, the needs of marketing organizations spin around improving the availability of technologies and contributions to farmers and the requirement for the foundation of promoting framework by Government. They in like manner imagined that interest in making an establishment should be made to prod the appropriation of polyhouse innovation. Reception of Good Agricultural Practices by farmers would moreover assemble the market worth and charge ability of their produce. Innovative work activities should target growing minimal effort plans and diminishing the cost of erection of polyhouse and cost of development. The re-developments in plan and structure of polyhouse by farmers likewise credit due acknowledgment and consideration of exploration and expansion offices. The accomplishment of the selection of this innovation likewise relies upon how well the farmers incorporate this innovation on their homesteads to suit their financial and agro-environmental conditions.

High basic investment, nonattendance of accessibility of value planting materials and information sources, helpless post-collect framework, and nonappearance of value strategy have prompted extremely restricted

reception of this innovation by couple of farmers in explicit pockets of the state. Great procedure gauges, for instance, developing the degree and proportion of endowment arrangement of value planting material and contributions at reasonable costs; interest in framework to plug post-reap misfortunes and evaluating strategy would improve the profitability and supportability alongside expanding the reception of this innovation. Imaginative work exercises should target developing insignificant exertion designs and reducing the cost of erection of polyhouse and cost of development. The re-manifestations in the arrangement and structure of polyhouse by farmers in like manner credit due affirmation and consideration of exploration and expansion workplaces. The achievement of the determination of this innovation moreover depends upon how well the farmers organize this innovation on their homestead to suit their financial and agro-environmental conditions.

### VI. Suggestions of the Study

The opportunities existing with the Protected Cultivation to improve the overall productivity and profitability of agriculture must be realized by small and marginal farmers as well, who are deprived of such issues because of lack of financial resources, lack of information, and fear of approaching Governmental agencies / or financial institutions. Improving access to credit, technology, and markets to the farmers and make them acquainted about the benefits and opportunities associated with Protected Cultivation through small scale and low investment requiring technologies, such farmers are slowly getting into the interventions and improving their income from a small patch of lands owned by them. Farmers are constantly threatened by adverse weather and environmental conditions make them aware of this thing so they change their farming style.

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