Present Scenario of Indigo Cultivation in Rangpur Division : Observations from Socio-Economic Context

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[**Abstract** : The study investigates the present scenario of Indigo cultivation, particularly in the Rangpur region. This study is empirical. A well constructed questionnaire is used for collecting data that includes questionnaire focusing demographic information and Likert scale is used to measure the perception of the respondents. 200 participants responded to the questionnaire who are recognized as agriculture specialists, academicians, and persons who have the experience of cultivation. With the help of the SPSS 23 version, the collected data has been processed and analyzed. The research outcome has been presented in the research paper by graphs, tables, and figures for better understanding. Thousands of people in the Rangpur region involved in Nil cultivation proved that it is a better platform to make themselves self-reliant and to reduce poverty. The study's findings will help the authorities give a look and rethink different issues of economic development from regional consideration.]

Keywords : Indigo, Optimistic, Poverty Eradication, Rangpur Zone, Self-reliant.

Introduction

Bangladesh is a country of substantial natural resources where land makes a well-received position because it has fertile land with a high capacity of numerous productions (Riaz, 2016; Agarwal, 1994). This study is related to a particular type of crop production. Elongation was departed when the farmers snubbed to plant a single sapling of Indigo (locally termed as Nil) plant and confronted the British rulers' domination. Indigo husbandry has now turned into a benediction, a mode of changing the socio-economic grade of hundreds of farmers in the Rangpur division (especially in Rangpur and Nilphamari districts). It is observed that 32% people are under the poverty line in this region (Rukunujjaman, 2016), so it is an optimistic question whether the Indigo cultivation creates a space to struggle by creating more opportunities to eliminate the extreme poverty line. A report shows that about 2,000 impoverished people make themselves self-reliant by involving in indigo cultivation in Rangpur district (Express, 2020). These statistics indicate a good sign of the change in the socio-economic development of poor people.

On the other hand, there are thousands of new hopes in the Nilphamari district to lead lives by immersing in indigo cultivation. It is recognized that indigo

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cultivation is beneficial just before the Aman (a type of paddy) season. Many farmers and the young generation are turning into indigo cultivation while Tobacco cultivation makes them very pessimistic about land and hope (Karmaker, 2019)). Bangladesh government is working on poverty reduction and supporting to increase the country's sustainability through different types of cultivation by using the uncultivated or fallow land to help millions of people in Bangladesh, particularly in the Rangpur region. This study explores the comprehensive fact of Indigo cultivation. It also investigates how people can get advantages of the economic crop in the existing socio-economic context with the following research objectives. The study's main objective is to evaluate overall scenario of Indigo cultivation and present scenario of Rangpur division's existing socio-economic context. Besides, the specific objectives of this study are :

- to explore the present scenario of Indigo cultivation of Rangpur division
- to discover the challenges of Indigo cultivation in the Rangpur division
- to investigate the effectiveness of Indigo cultivation for economic development in the socio-economic context of Rangpur division
- to reveal the prospects of indigo cultivation in the Rangpur division

2. Background and Literature Review

The purpose of this research is to bring a wise assessment of the past inquiry, all of which is associated with indigo cultivation, encircled by the past researches those complete the subsequent study. Indigo, the most beautiful and expensive of all dyes of everyday use, has ever been closely related to India, as its name implies (Leggett, 2009). Greeks and Romans used the blue dye and the suppliers collected that from India. Although it was lost to Europe during the more significant part of the middle age, enormous quantities had been imported for commercial purposes during the last hundred years (Wolf, 2010). In the British period, the manager was responsible for collecting assistants –young men from England, who until they came under his care, generally had the vaguest notion of what it means to be "in Indigo" (Travis et al. 1992).

There are many kinds of Indigo, and there exists many different qualities of each kind of Bengal Indigo. The expert can distinguish those depending on different qualities. Calcutta is the central market of all India, and sales are held here from December to February, agents come to buy from New York, London, and the European Capitals (Chapman, 1979). Indigo is a global story now, with chemical blue being increasingly condemned as a health hazard. Bengal Indigo, the export of which had left East India Company's coffers brimming, stills hold a tremendous potential (Li, 2005.) As a natural dye, Indigo had been long known before the arrival of the British (Adrosko, 1971). The British planters started taking a keen interest in Indigo when its supply forms other sources dried up, and India emerges as its largest exporter (Dey, 2011).

Generally, Indigo naturally occurring dyestuff is obtained from various plants, particularly the genus Indigo era (Balfour-Paul,1999). They are found to grow wild in India, Central America, and China. Most commercial dyeing now uses synthetic Indigo, and in 2002 synthetic indigo production was 17,000 tones (Olah, 1995). The world's current production of natural Indigo could not cope with the demand for this dye. However, environmental concerns and increased demand for natural and sustainable dyes may lead to natural indigo production (He et al., 2014). The British textile industry was mostly dependent on North and Central American dye (Smelser, 2013).). During the American Revolution, the British lost their American sources. As a result, the East India Company was encouraged to grow Indigo in Bengal (Marshall, 2005). From 1830 onward, Indigo's demand increased tremendously in Europe's textile factories, and Dhaka became the main distribution center (Ahmed, 2018).

Towering two meters tall in the field, the plants are not susceptible to damage from cattle, and, as they are leguminous, they also improve soil fertility (Bene et al.,1977). Poverty concentration-based survey in recent years shows that still high in 10 districts, five of them are in the Rangpur division. Apart from Kurigram, four other poverty-ridden districts of Rangpur division are Dinajpur with a poverty rate of 64.3 percent, Gaibandha with 46.7 percent, and Rangpur with 43.8 and Lalmonirhat with 42 percent (Correspondent, 2020). Rangpur is considered having the highest poverty rate despite the government’s efforts to eliminate MONGA (seasonal starvation in Rangpur division) from over the previous years' experience of the northern regions, so it is questionable whether poverty can be eliminated by creating different working opportunities.

Indigo Cultivation has a dark past and a brutal history, but it has come looking for a bright future from the darkness after a long time. British ruled over farmers and farmers were forced to grow it for their benefit or their business advantages; nevertheless, they increased the burden on the general people to recompense different charges. As a result, general people didn't get any benefit but oppression. That was the backwardness of Indigo cultivation. Nevertheless, it is now better than any other crop, and this is why farmers are encouraged to grow Indigo. This study covers the reasons for Indigo cultivation. The study above mostly overwhelmed indigo cultivation issues for several concerns like history, revolt, production system, and economic contribution. But this study focuses on regional development in the socio-economic context of Bangladesh through the cultivation of Indigo and it gives insinuations how to eliminate poverty by the multi-dimensional uses of land and creating more working opportunities.

3. Methodology

The present study is explorative. To conduct the study systematically, it must follow multiple research methods for systematic investigation because most of the research's information and data are both qualitative and quantitative. In

addition to this procedure, the study has demanded depth and focus on interviews and discussions with the relevant stakeholders.

3.1 Area

Rangpur division is the most impoverished area of Bangladesh (Sohel, 2014). Thus, the study that has been conducted over Indigo cultivators of Rangpur division. Furthermore, based on the historical background, the well-perceived message is that Rangpur and Nilphamari are the two districts that are essential part of the socio-economic development of the Rangpur division. So, to make it fruitful it has been categorized into two areas. One is Rangpur District and another is the Nilphamari district. The research has been conducted on four regions of Rangpur district named Gangachara, Rajendrapur, Taraganja, Paglapir, and two regions named Kishorganja, Joldhaka of Nilphamari district.

3.2 Sampling and Sample Size

A purposive sampling technique has been used for selecting the sample. Through purposive sampling, 200 participants related with indigo cultivation are selected randomly for collecting the primary data. They are generally related to indigo cultivation fully or partially. To collect the data, the researcher has taken the assistance of different agriculture specialists and NGO's, concerned of people in that region. The reported data has been prepared with the help of face-to-face discussion with the respective expertise of the crops cultivation sector, experienced cultivators, agriculture specialists, journalists and academicians.

3.3 Respondents Feature and Demographic

In terms of gender, most of the respondents (200 respondents) are categorized as males. The usage of land to produce Nil varies from farmers to farmers. However, the amount of land to utilize for the production of Nil is 0-6 acre(s). Experience is positively related to bring success in a particular job : about 86.5% (173) of respondents had significant experience of cultivating Nil. On the contrary, 27 (13.5%) respondents reported that they were not engaged in Nil cultivation in the past time. Mindset of Nil production comes from the family tradition: in that case, 143 (71.5%) respondents chose the "yes" response option, and 57 (28.5%) respondents chose the "no" response option. Only four (2.5%) respondents reported that they got organizational support from various institutions for cultivating other crops instead of Nil cultivation; it means that 195 (97.5%) respondents were not offered any organizational support. Somehow, government benefits and agricultural facilities are available only for two (1%) respondents, and 198 (99%) respondents are not blessed by the government and its agricultural bodies to boost up the Nil cultivation opportunities.

3.4 Data Analysis Strategy

For the rationale of this research and attaining the project's objectives, both data are from primary and secondary sources. Secondary data have been collected from the related authorities, journals, articles, books, Internet, etc. After collecting the relevant data, it has been scrutinized and summarized for tabulation and representation. Different statistical tools have been used to process and analyze the data with statistical packages for social science (SPSS) version 23. This research considers different componential variables in prospects and problems related with Nil cultivation, so it has been factorizing the data through factors test analysis where KMO value highly considers prone to the 1(one).

To do the research and to ensure more conformity of the objective, the data collected by setting a questionnaire has been arranged through descriptive statistics, and the variable's used factor test.

4. Findings and Analysis

4.1 The present scenario of Indio cultivation of Rangpur division

Nil cultivation is one of the historical cultivations of the Indian subcontinent for many reasons; in the British period, Bangladesh was essential for agricultural importance. British rulers tried to keep force on the ferment only to get the economic benefit; they did not think about the peasants' biological facts and condition; thus, there happened massive revolution and arose problematical issues of society. Through the study, it is observed that Nil cultivation is now showing the hope for many farmers in the north zone of Bangladesh.

In this study, we have taken 200 respondents to make the consistency level appropriate of the result. It is seen that most of the respondents are male; they usually use their land to cultivate Nil within 6 acres that is huge. Most of the farmers experience cultivating this crop as an economic crop. They did not take proper training, although few people are getting the chance to take part in the training session and this information is provided by some NGOs. There are no organizations that give support as they expect but few NGOs who support them to produce Nil. Role of the Government and agricultural organizations is an essential part of any production; in that case, the scenario is not good enough; Government and other agricultural organization’s support are not available.

It is noticed that the Mean value is presented here which is the middle value of 'agree and strongly agree.' Result shows that labor cost is very high in terms of Nil cultivation, and misconception about Indigo exists in the country. They face marketing problem when they go for sale in the market. Standard deviation of 'Land Management Problem' is .72006, which indicates that farmers are unable to select their land for cultivating Indigo. Most of the farmers, on average 4.4600,

have firmly said that the government has no policy to improve this sector and lacks consultancy facilities that can give some guidelines to do better to cultivate Indigo. Farmers are affected by dissatisfactory prices and lack of credit or finance. The standard deviation of 'lack of credit or finance' is .74737, which means there is no credit facility to cultivate Indigo.

Processing system of Indigo is also unknown to the peasant, and it is almost impossible for the farmer to make the final product. Few little buyers buy this raw leaf of Indigo at a very cheap rate from the farmer, and the buyer sets the price where the seller doesn't have any authority to change the price, average 4.3900 respondents agree or strongly agree with this problem. They fear the role of society and government in terms of indigo cultivation, though they do not face any government restriction about indigo cultivation, and no one gives them courage to cultivate Indigo. The biggest problem is 'Restrictive government policies' where the standard deviation of .77161 dictates that without any doubt almost every respondent realizes the demotion of this sector is caused by the government policies. The respondent believes that the history of Indigo also affects the farmer and the view of society. A number of respondents agree or strongly agree on the average value, which is 4.2950. Respondent also replies that Indigo cultivation does not damage land and has no negative effect in the future. The unprecedented matter is that the cultivation of Indigo makes the land fertile.

4.2 Challenges of Indigo cultivation in the Rangpur division

The survey's complex variables specify the number and percentage of total respondents measuring five significant values: strongly disagree, disagree, neutral, agree, and strongly agree. The maximum number of respondents is 127 (63.5%), who selected the “strongly agree” option, and 59 (29.5%) respondents chose the “agree” option. Five (2.5%) respondents were neutral, and the rest were in favor of strongly disagree or disagree in this aspect. In terms of the misconception of Nil cultivation, 18 respondents strongly agree, and 81 respondents agree, and 100 respondents are neutral; only one respondent says that there is no misconception of Indigo cultivation. Marketing issue is another problem for the farmers, and 48.5% respondents strongly agree, 39.5% respondents agree about marketing problems, and 24 respondents chooses ‘neutral’ option to answer this question and the percentage is 12. Farmers are facing problems to manage the land for cultivating Indigo: 44.5% respondent strongly agrees about it, 40% agree, 15.5% keep them neutral, and no one disagrees or strongly disagrees.

Most interviewers strongly agree with 'Lack of homogenous Cultivator', and their percentage is 52. Most of the respondents are agreed or strongly agreed about 'Lack of government facilities', and the number is respectively 107 and 78, where

the total number is 200 respondents. None is disagreed or strongly disagreed about this problem. One hundred respondents strongly agree about 'Lack of consultancy service' where 37% are agreed and 13% remain neutral, none is disagreed or strongly disagreed about this problem. Ninety-seven from the total respondents strongly agree that credit or finance is not available from the total respondents, and 34.5% agree with this problem; 17% are neutral. None is disagreed or strongly disagreed about this problem. Dissatisfaction with price, 47% of respondents are strongly agreed, and 42% of respondents are agreed, but 22 respondents are neutral about this problem. 48% of respondents face buyer problems vigorously, and 43.5% of respondents are agreed with this problem. Sixteen respondents are neutral, and only one respondent disagrees about the buyer problem. Farmers are not encouraged to cultivate Indigo and 41% strongly agree, 39.5% agree with this notion and 19.5% are neutral.

Government policy is not suitable for cultivating Indigo and 88 respondents strongly agree, and their percentage is 44, but 1 respondent has disagreed. Another respondent also strongly disagrees about this problem, and 31 respondents keep themselves neutral to answer the question. 47.5% of respondents strongly agree, and 35.5% agree about the historical black day concept available in the country and society. Only 1% does not think like this, but 16% keep themselves neutral to answer the question. One hundred fifty-three respondents strongly do not believe that Indigo damages the fertility of the land, and their percentage is 76.5%, but very few respondents believe it damages the land. Figure 1 depicts the overall problematic scores set.



Figure 1 : Overall Problematic scores and problematic scores set
Source : Authors' compilation

Figure 1 shows the overall average score of complex survey variables where the overall score is 4.13, which lays down the value among agreeing and strongly agree to the server's question. The highest value is 4.57 indicates the high prices

of labor to cultivate Indigo. Damage of the land's fertility rate shows the value is 1.48, but it is noticed that the question is used negatively for acquiring knowledge about the damage of land. Most of the respondents stand opposite to the damage of fertile land by cultivating Indigo. Government policy is not suitable for Indigo, and the government has not taken any practical steps till now, an average of 4.46 respondents indicate it.

Furthermore, factor analysis of complex variables is conducted by KMO and Bartlett's Test, and Figure 2 : presents the KMO and Bartlett's Test of Problematic variables **(**Factors Analysis of problematic Variables).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.538
Bartlett's Test of Sphericity	Approx. Chi-Square	281.284
	df	136
	Sig.	.000

Figure 2 : The KMO and Bartlett's Test of Problematic variables
Source : Authors' compilation

Figure 2 indicates that the KMO measure's value is 0.538, which is more than 0.5, and therefore, it can be accepted, and the significant level is also high because it is less than 0.005. After all, in combination of Figure 1 and Figure 2, it is clarified that the problem is nearby enormously significant for the farmers to produce Indigo.

4.3 The affectivity of Indigo cultivation for economic development in the socio-economic context of Rangpur division

The prosperity of Indigo production provides positive notion for the respondents. The standard deviation positively demonstrated each answer. Total respondents are 200, and they answer that it has a considerable probability to make the farmers self-sufficient through Indigo Cultivation. Producing Indigo Makes farmer self-reliant in real sense and here the mean value is 4.6550, and the standard deviation is .52665, which indicate positive relation about the prospect of the question. It helps to eliminate poverty and change the entire belief of farmer, and here the average mean value is 4.3550. The standard deviation is .64891, that means respondents' answers are reliable to reduce poverty of the farmer. Many respondents said that Indigo makes land fertile, and they think Indigo helps make suitable virgin land for cultivating. They also predict that it is better to cultivate Indigo instead of Tobacco and the average value is 4.2100, and the standard deviation is .95418. The weather

of Bangladesh is suitable for Indigo cultivation, and the average value is 4.2300, which is the middle of agreeing and strongly agreeing about this prosperity-related question. Comparatively easy to cultivate, most of the respondents are agreed or strongly agreed about this issue. There exists less risk than the cultivation of other crop , most of the respondents agree with the question, and the value is 4.5550, and the standard deviation is so much positive that is .59897 for the answer of this question. Most of the respondent think If Indigo cultivation increases, employment opportunities will be created.

4.4 Prospects of Indigo cultivation in the Rangpur region

The present study describes the prospective variables in the survey by specifying the number and percentage of total respondents measuring five significant values: strongly disagree, disagree, neutral, agree, and strongly agree. 'Makes self-reliant in real sense' 136 respondents strongly agree with this question, and its percentage is 68%. Some agree and are neutral about this question, which is 29.55% and 2.5%, but no one comments on disagreeing and strongly disagrees with it. 'Helps to poverty elimination' respondents totally reject ‘disagree’ and ‘strongly disagree’ option with this point and the percentage of ‘ neutral’, ‘agree’, and ‘strongly agree’ options are respectively 9.5%, 45.5%, and 45%. Only .5% respondent does not think about 'getting popularity day by day' by cultivating Indigo in Bangladesh.

Still, many respondents believe positively; it is popular in the country and here 90 respondents strongly believe, 95 respondents agree with the statement, and 14 respondents keep themselves neutral. Regional land is congenial to cultivate Indigo where 1.5% disagree, and 1% strongly disagrees, 18% are neutral, 37% agree, and 42.5% strongly agree about the prosperity of Indigo. It does not hamper the fertility rate of land. Ten respondents strongly disagree, and six respondents disagree about the issue, but 16.5% respondents strongly agree, 31.5% respondents agree, and 44% are neutral about the question. Seven respondents strongly disagree about 'better to cultivate Nil instead of Tobacco,' and 47.55% strongly agree about this question.

Most of the respondents think that the weather is pleasant to cultivate Indigo. People are aware of cultivating it generally where no respondent disagrees about it, and 46.5% strongly agree. The cultivation of indigo 'Ignoring the social and environmental issues' 42% of respondents agree with the statement. Most respondents strongly agree about ‘comparatively easy to cultivate Indigo’, and their percentage is 51.5%. Virgin land becomes effective by cultivating Indigo, 144 respondents strongly agree with this statement, and their percentage is 72%. The respondents think that it can be a great source of employment in the country. Figure 3 depicts the overall scores of prospective variables.

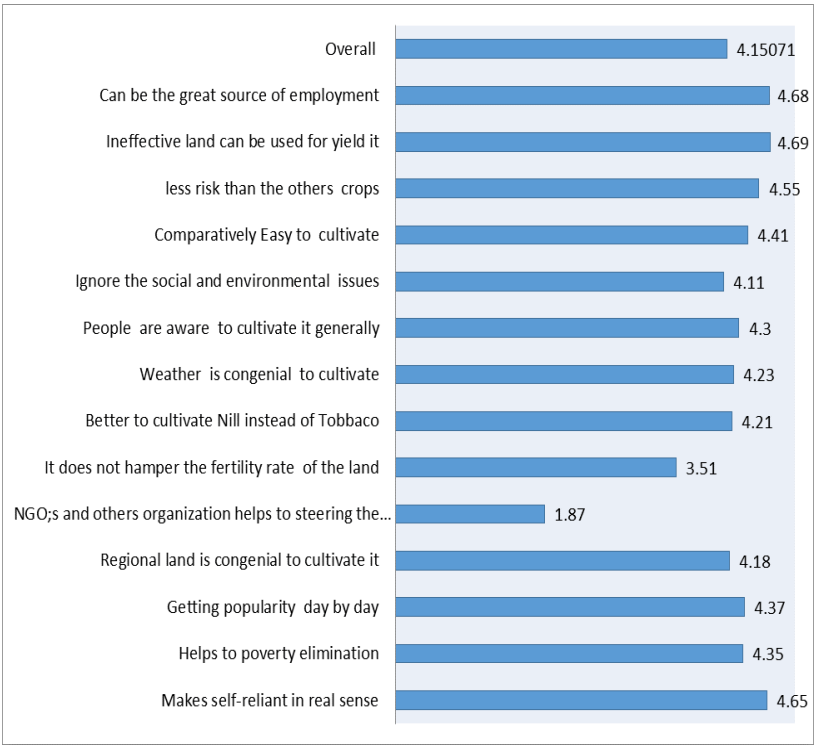


Figure 3 : The overall scores of prospective variables
Source : Authors' compilation

Figure 3 shows general prosperity-related questions, and the respondents' answer is 4.15 averagely agree or strongly agree about indigo prosperity. Here, the highest value is 5, where the lowest value is 1, and value 5 indicates strongly agree and value 1 indicates strongly disagree about the particular question. Indigo can be a great source of employment; the value 4.68 indicates most respondents strongly agree with the question. Ineffective land can be used to yield it. Most of the respondents strongly agree. The cultivation of Indigo is less risky than the other crops, and the score is 4.55. Comparatively, it is easy to cultivate where the score is 4.41. The score for ignoring the social and environmental issues is 4.11 that indicates, most respondents agree about the question.

The weather is pleasant to cultivate the indigo where the majority of respondents agree, and the score is 4.23. Almost all respondents strongly believe that it is better to cultivate Nil instead of Tobacco. It does not hamper the land's fertility rate, where most of the respondents keep themselves neutral from answering the question. NGOs and other organizations help steer Indigo's cultivation, most of

the respondents are showing disagreement about the question. Respondents agree about getting the popularity of Indigo day by day, and the score is 4.47. Indigo may become an arm to help in poverty elimination from the country; respondents have agreed with 'agree and strongly agree' options related with the topics. Makes self-reliant in real sense and the score is 4.65 which emphasizes that majority of the respondents agree and strongly agree with the points. Figure 4 shows the Factors Analysis of Prospective Variables' outcome by the KMO and Bartlett's Test of Prospective Variables.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.513
Bartlett's Test of Sphericity	Approx. Chi-Square	177.197
	Df	91
	Sig.	.000

Figure 4 : The KMO and Bartlett's Test of Prospective Variables
Source : Authors' compilation

Here, Figure 4 represents that the KMO measure's value is 0.513, which is more than 0.5 and therefore, can be accepted, and it is showing the greater significant area of the test because it is less than .005. Thus, in combination, Figure 3 and Figure 4 indicate that the prospects are immensely significant for the farmers to produce Indigo in this region.

5. Discussion and summary of reported data

Bangladesh has gone beyond the third world country because of the increased successful actions of Prime minister Sheikh Hasina (Word Economic Forum, 2019). It is now getting global attention for the garments industry, known for the cheap labor and basic garments' production as well as quality reputation. In recent years, many companies have started to encourage Indigo Cultivation means natural Indigo that will be used in dying high-quality handmade products that creates high demand on the luxury fashion market. In the fashion Market, sustainability is one of the essential terms for many sustainable, seasonal component of products for getting a place. In Germany, it is getting attention from local companies to produce more indigo denim fabrics. So natural Indigo can be a better way to vibrant the economy of Bangladesh. Not only for that reason, but also for it should be kept in mind that Bangladesh is globally known as one of the best brands of RMG. There is a need to keep pace to maintaining the standard of readymade garments sector, as we are proud of that. In RMG, Nil item can be used by giving strict attention to natural color. BGMEA expects to export $50 billion by 2021 through RMG, if possible, to create the linkage of Natural Indigo uses that will be the best advantage.

To make the study perfect, 200 peasants have been taken from the different places of Rangpur and Nilphamari districts. It is found that most of them are male. They are involved in cultivating Nil beside the other crops cultivation because Nil production does not have any environmental issues. The ineffective land can be used for cultivating. Farmers care about the land to produce Nil within average 0-6 acres of land. They believe that economic sustainability is suitable for Nil cultivation. It is seen that a few organizations work there to support Nil cultivation. Some non – government organizations (NGOs) are ahead to support the local farmer to encourage Nil cultivation, but it is not mentionable as per the requirements. In case of the high price of labor, 63.5% of respondents positively showed assertive behavior, and 29.5% showed generally positive favor; this nature shows the variable's positive effect. Misconception about Nil cultivation is one of the fundamental problems in Bangladesh. It was then the black concept that they produced Nil which was economical crops instead of the food crops and it was the biological term of the poor peasants, 50% of respondents have shown neutral behavior, 40.5% have agreed, and 9% have strongly agreed with that statement of the misconception that has influenced the Nil cultivation.

Marketing is one of the essential platforms for any crop when it is termed as economic production of any criteria; more than 39.5% believe that there exists marketing problem. On the other hand, 48.5% have shown a strong marketing problem in the flows of Nil cultivation. It is considered as a new concept now after elapsing huge time of history; Although Nil cultivation does not demand any special care of the land, there exist some land management problems and about 44.5% respondents agree strongly and 40% agree about the notion. There is no alternative option of government support to do better in any business to bring the sustainability of a country. In terms of Nil cultivation, about 39%+53.5% = 92.5% of respondents consider government support lacking.

There is a huge lacking in consultancy service : about 87% of respondents agree about the statement. Without financial and credit support, it with lag behind in terms of the contemporary world context business and production flows. Here about 48.5% strongly agree and 34.5% typically support the concept of lack of credit or financial support; price is one of the essential sensitive flows in crops marketing or production flows and here Nil is an economical product, so the price is one of the vital influential factors. Dissatisfactory price is one of the critical factors; about 47% respondents firmly agree and 42% shows normal positive behavior.

An economical product has no alternative to break the channel of sales, it is seen that 48% respondent have highly shown affirmative behavior and 43.5% have shown normal behavior, these respondents' behavior proves the lack of proper

buyer. For doing this job, there needs positive motivation to encourage them to make more adaptation with Nil cultivation; many peasants are not encouraged to do Nil cultivation; about 41% strongly agree with this statement as they are not encouraged to cultivate it, and 39.5% usually agree.

As this crop is a history-based product, some people believe that there are restrictive government policies. It is not one type of invisible barrier actually; 80% people have positively agreed about that statement. Bangladesh is a country of different weather, so the weather is a challenging parameter for production. In terms of Nil cultivation, weather problem is a fact, about 75 % agree on that statement. It is a general term that Nil damages land's fertility. Still, it is a wrong concept we know; 87.5% peasants believe that Nil cultivation never damages the land's fertility. Nil cultivation is now showing the new era of hope for the elimination of poverty of many peasants in Bangladesh's northwest zone. More than 2000 people are leading their life partially or fully by cultivating other crops beside Nil cultivation. They think that Nil cultivation makes them self-reliant and about 68% peasants strongly agree with the statement, 29.5% peasants just agree with this statement. Poverty is one of the impediments to ensure a country's general flow of development. 90.5% positively agree with the statement that it helps to poverty elimination. Many fallow lands are seen in the area of the villages that can be used as the primary source of income to reduce poverty and 41.5% peasants strongly agree, and 37% usually agree that the regional land is suitable to cultivate Nil. To cultivate and to boost any kind of crops they need support. We know that Bangladesh agricultural federation and Bangladesh government are keeping pace to develop agriculture, non-government and other organizations are working on the development of local cultivation and in the case of Nil cultivation there are few organizations who work to boost up Nil cultivation.

According to the global trend of economy, Tobacco is not an environment friendly product or crop. It is observed that many peasants believe that Tobacco decreases the fertility rate of land when repetitive cultivation occurs in the same land. Nil doesn't change the environment rapidly, it is seen that our country's environment and weather are changing day by day; if it is possible to cultivate it properly, it will be beneficial because the weather is pleasant to cultivate it and 84% people believe this. Misconception is reducing day by day about Nil cultivation and people are becoming aware of it gradually. 84.5% peasants are agreed and believe that many people are encouraged day by day.

More than four core people are unemployed in Bangladesh. It is just a statistics, but there exist huge number of people who feel the scarcity of livelihood in the local areas. Therefore, it can be a great source of employment. 98.5% peasants believe that if it is possible to establish more organizations like denim and

clothing in concord with Nil cultivation, it may create working opportunities for a huge number of people. It is expected that if it is possible to raise the facilities to form the local organization it can be possible to bring enormous economic change. More than 92% believe that the facilities to from the local organization should be ensured.

On one hand, the government is the key factor in Bangladesh to make any positive change. 90% believe that government cooperation is necessary. Research related support is necessary and 88% peasants expect that kind of cooperation. On the other hand, agriculture is the backbone of economy of Bangladesh, so a specific level of agro-economy is needed according to 84.5% cultivator. The government should establish industry in concord with Nil ingredients.

The northern region of Bangladesh is historically famous for producing Indigo cultivation. The British for its “Nil” named Nilphamari farming, and that was the core area of Rangpur for the best production of Nil product, so it is observed that the land of this region is the most suitable for Nil cultivation. More than 2000 farmers are involved in Nil cultivation and it is actually an optimistic scenario. Still, government support is necessary to raise the production system and encourage farmers. These are the problems, possibilities, and susceptive concepts about Nil cultivation and poverty reduction of Bangladesh's north region. Many people can get the working opportunities if Nil cultivation and consistent supply of raw materials of Nil into the RMG sector are ensured. The cultivation of Indigo can be beneficial after the cultivation of Tobacco and potato in the same land. Farmers believe that it will be possible to make a better income source and working opportunities by expanding the production system and support.

6. Conclusion

A distinctive type of product is now showing the hope of future from the dark past. Generally, Indigo Cultivation besides the cultivation of other crops shows multiple ways of using same land, while Tobacco cultivation is very detrimental to the farmers and the environment. It makes 2000 poor people self-reliant directly or indirectly in the Northern Zone of Bangladesh. They are cultivating Indigo and producing the best quality of the dye with the brand name "True Bengal Natural Indigo Dye". It is becoming popular globally and attracting many international trading houses and companies. This study is related to Indigo cultivation of Rangpur localities for different interests. There exist huge number of people who are living under the poverty line. By implementing this Indigo cultivation, it will be possible to create a vast span of working opportunities along with multiple uses of land. Though there are huge demands of Tobacco cultivation, Nil cultivation can be the best option. Indigo cultivation can play a

vital role in eliminating the unemployment problem of the local people of Rangpur Region and ensuring a bright future for Indigo planters of these regions forgetting the black past.

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