

# DISILLUSIONMENT, DISSONANCE AND ENTROPY AMIDST INDIAN AGRICULTURE: THE REFLECTION AND REFRACTION

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## **ABSTRACT**

According to primer and various propositions, the farmers and the farm economy of India have adequate reasons to be called fatigued and disillusioned. A scenario where more than 2.5 lakh farmers committed suicide, outnumbering the count of people killed in any big war between nations. Even in this situation, we remained fearsome to observationally substantiate that it was another fight against humanity, whereby those travailing hard to guaranty food security for a nation have become victim to ruthless insecurity and devastated their own lives. The stress, chaos, entropy, and the dissonance being inflicted into the psychology of farmers in India have seldom been researched from an ecological point of view. If a farmer has to spin constantly under stress, no NPK can reach the field to attain the golden harvest. The study was conducted at Fingtore village of Labpur Block, in Birbhum district of West Bengal. It includes a dependent variable, i.e. disillusionment (Y1), which was foretold using a set of 19 exogenous variables. In total, 130 respondents were selected through both purposive and random sampling approaches to ultimately deduce and evoke their behavioural attributes in defining the disillusionment. Some self-evident clarification suggest that haphazard income from agriculture, whims of market response, dishonour of agricultural job condition in an open-air and crude exposure to harsh weather parameters, transformation of risks into threats are hindering agriculture from becoming a profitable venture and remunerative pursuits. The emergence of off-farm economy as well as economically viable service sectors have gone miles to refute the so-called profitability of agriculture over other rural livelihood options. Even under good weather and with splendid technological support to potato growers, and of course for a resultant record production of potato, the farmers were thrown into an extreme entropy [AQ: Please check the use of the word "entropy" for clarity and correctness in this context and edit as necessary here as well as in the article title and throughout its occurrence in the article.] due to market failure, and in worst cases some of them committed suicide. Sometimes good harvests bring more misery to growers, leading to an inharmonious situation. To understand the factor contributing to social disorder, before adding to a new order into the same system, it is necessary that new age extension research should throw light on system rather than simply on adoption research.

KEYWORDS: Disillusionment, Dissonance, Off-Farm Migration, Social Entropy, Chaos, Socialization of Technology

#### Article History

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## **INTRODUCTION**

About 42% of the Indian farmers are now ready to leave agriculture. Here cost is a sensation whose but returns always remain uncertain, causing most serious paradox. Apart from this, the impulsive behaviour of climate, lack of market accessibility and disconnected government policy increased abnormality and are hindering agriculture to continue as profitable and remunerative venture. The process of disillusionment corroborated with unabated rise in price and substantive slashing of minimum support prices. Moreover, the farmers are theoretically confused and confounded. All these are gradually being imbued into the attitude of farmers, which in turn makes them too fearsome to adopt innovation for their betterment. As a cumulative effect, these negative forces within their psyche go through a process of hypertrophy [AQ: Please check the use of the phrase "process of hypertrophy" for clarity in this context.] and forms an invisible psychological barrier to socialization of technology.

#### **RATIONALE BEHIND THE STUDY**

An elevation of transformation has become a day-by-day experienced, i.e., either from farmers to pseudo farmers or from entrepreneurs to pseudo entrepreneurs. A totally deviated perception of challenges are inviting them to show their survival ability. However, we should remember that the brightest opportunity lies in the wombs of serious contradictions. This paper examines the concepts of disillusionment, stress, chaos, off-farm migration, self-efficacy within Indian farming in the context of its degradation and finds the reasons behind these from the point of view of social entropy and theory of chaos. Some self-evident clarifications suggest that to look forward to certain emerging issues that can play a remedial role in the contextual background of this tough reality. A strengthened supply chain is solemnly desired by the farmers where value addition can benefit them, fetching some more hard cash. Moreover the transformation of the biological production to entrepreneurial product will give them the capability to cope with the ruthless insecurity.

### **OBJECTIVES**

#### **General Objective**

To study the issues of Disillusionment, Chaos and Entropy in Farmers' Psyche.

#### **Specific Objective**

To highlight and examine the *concepts of Disillusionment*, *Chaos and Entropy* in farmers' boundary and its impact on the farmers.

- To focus on their relationship with the off-farm migration and tendency of farmers committing suicide.
- To *observationally study the issues* of disillusionment, chaos and disorder and their impact on *socio-economic life of farmers* with regard to farm level interaction

• To *recommend and suggest* some issues as well as the adaptation strategy that can heal the situation to some extent.

## THE RESEARCH METHODOLOGY

#### **Concept Building**

A concept is an abstraction or generalization from experience or the result of a transformation of existing ideas. The concept is instantiated (reified) by all of its actual or potential instances, whether these are things in the real world or other ideas. Concepts are treated in many if not most disciplines both explicitly and implicitly. In informal use the word concept often just means any idea, but formally it involves the abstraction of component. In this paper, the authors tried to build a multifarious and multidimensional frame consisting of some emerging concepts related to the topic.

And for this it has followed the process of self-evident interpretation.

#### **Concept Refinement**

Having collected the data from farmers, the concepts were advanced by consulting with different agricultural experts. In this aspect, we took help from related portals. To understand the diversion, the copybook concept was matched with the field reality.

#### **Opinion and View Integration**

Having reflected the ancillary views, the responses of many agricultural officers, experts of SAU, and scientists to review and to integrate something innovative were considered.

#### Locale of the Study

Data were collected from 130 agricultural farmers of Jamne Gram panchay at area with special attention to Fingtore village of Labpur block of Birbhum district in West Bengal. The Labpur block was selected for 3 reasons.

- The farmers were trained to move from organic to chemical farming,
- The farmers were trained to move from traditional crops (paddy, jute, vegetables) to non-traditional crops (wheat, potatoes, mustard etc.) and
- The area was very close to Bolpur by road.

#### **Collection of Data**

Focused group discussion was conducted initially to prepare introductory schedule. The meeting was held in a cottage on 17th November 2016.

Step	Items	Level	Approach
1	State	West Bengal	Purposive
2	District	Birbhum	Purposive
3	Subdivision	Bolpur	Purposive
4	Block	Labpur	Purposive
5	Gram Panchayat	Jamna	Purposive
6	Village	Fingtore	Purposive
7	Respondents	130	Random

## **Table 1: Sampling Technique and Sampling Design**<sup>a</sup>

<sup>a</sup>Total No. of respondents:130.

#### **Demographic and Agricultural Variables**

### Table 2

1. Age $(X_1)$	8. Total no. of livestock( $X_8$ )	15. Risk orientation( $X_{15}$ )
2.Education (X <sub>2</sub> )	9. Annual income (X <sub>9</sub> )	16. Economic motivation $(X_{16})$
3.Familysize (X3)	10. Per capita annual income $(X_{10})$	17. Competition $(X_{17})$
4. Gender ratio $(X_4)$	11. Income ratio $(X_{11})$	18. Information index $(X_{18})$
5. Educational aspiration $(X_5)$	12. Capital intensity $(X_{12})$	19. Distance matrix $(X_{19})$
6. Farm size $(X_6)$	13. Scientific orientation $(X_{13})$	
7. Cropping intensity (X7)	14. Self–efficacy $(X_{14})$	

# PREDICTED VARIABLE Disillusionment (Y1)

# Literally "disillusionment" means a feeling of disappointment resulting from the realization that something is not as good as it was believed to be. These were assessed using introductory schedule. As local people produced paddy, jute, vegetables, mustard and wheat crops, only these crops were used in the schedule. These variables have been purposefully chosen to reach the invisible factors to be understood.

# **CONCEPTUAL FRAMEWORK AND DISCOURSES**

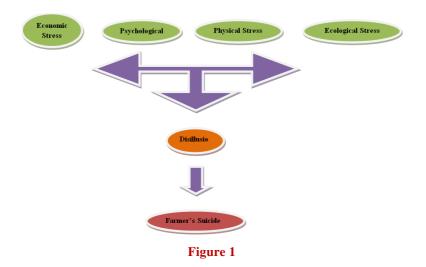
### **Stress in Agriculture Leading to Disillusionment**

The very nature of farming itself is the cause of tension for farming families. Farming can be an isolating profession, as farmers traditionally work long hours, outside, and often in bad weather. A farmer takes all the required measures to ensure proper nourishment of the crops he raises.

Stress Information Network (RSIN), says, 'Farmers are at a very vulnerable stage, they are exposed to a lot of criticism, and they do feel that society is against them'.

Stress can be of physiological, psychological and social nature, which can threaten the integrity, the personality or the social system. Threat can disturb psychological well-being and psychological functioning. Social institutions cause psychological stress.

Disillusionment, Dissonance and Entropy Amidst Indian Agriculture: The Reflection and Refraction



"An additional stress for many farmers is the drastic and fast changes within the industry over the last 10 years. Now government and EEC regulations have introduced mountains of paperwork that many farmers find stressful. "At the same time, farming families have faced critical public opinion and press coverage in recent years." says Caroline Davies, director of the rural.

A state of stress exists when unusual or excessive demands threaten a person's well-being or honour. Extraordinary efforts are needed to conquer the situation and there is the danger that coping capacities will be overpowered as a consequence of disturbed functioning, pain or anxiety, illness or even death. Stress is defined neither by the person (coping resources, ego, and strength) nor by his reactions (stress responses, but rather by the interplay of all the three).

At the time of interviewing the farmers, everyday stress situations they were especially related to agricultural work and the ill-effects of the strains were carefully observed. The 3-point rating scale categories of stress level were (i) severe, (ii) moderate, and (iii) low.

Stress Levels	Respondents	Percentage
Severe	36	27.69
Moderate	68	52.31
Low	26	20.00

Table 3

### **Disillusionment and Off-Farm Migration**

Literally "disillusionment" means a feeling of disappointment resulting from the realization that something is not as good as it was believed to be [AQ: This sentence is a repetition in this article. Please check]. Here the unwillingness of Indian farmers to be attached with farming activity is discussed. Chased by the aforesaid stress factor, it is understood that the farmers are not doing farming with interest rather as a compulsion.

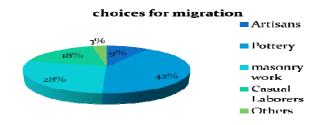
This gradually leads them to migration towards other sectors apart from agriculture, leading to off- farm migration as those are seemingly gainful to them.

Another issue included in that schedule is their growing unwillingness towards the farming practices. Some questions related to their satisfaction, profit level, encouragement for the next generation was also asked to get an idea of the extent of their disillusionment. A part of the interview also intended to explore their proneness to the other sectors instead of farming. What is compelling them to migrate, and if so, what are the facilities they are getting upon migration. In this way, the tendencies towards off-farm migration were apprehended. They were asked to choose from choices given, with regard to the migration they want make under these strenuous situations.

### Table 4

Choices for Migration	Artisans	Pottery (specially making earthen God)	Masonary Work	Casual Laborers	others
Respndents	12	54	37	23	4
Percentage	9.23	41.54	28.46	17.69	3.08

Here we see that the most migration is towards pottery (41.54%) due to its off seasonal work opportunity, remuneration and less strenuous work, which is followed by masonary (28.46%) and casual labour (17.69%) work.



## Self-Efficacy of Farmers and its Impact on Disillusionment

Self-referent thoughts play a very important role in various psychological aspects. Bandura (1977) introduced the concept of perceived self-efficacy with reference to cognitive behaviour modification. Self-efficacy is a key contract in social cognitive theory.

Wood and Bandura (1989) defined self-efficacy as "beliefs in one's capabilities to mobilize the motivation, cognitive responses, and courses of action needed to meet the given situational demands". Revelationto different information and adoption of new technologies are presumed to improve farmer's self-efficacy.

Following the interview with farmers, agricultural officers and members of KPS (krishi prajukti sahayak), we appraised the extent of belief farmers have in self-recognition, their curiosity to know/learn, their competency, their openness to adopt challenging farming methods, and their proactive nature. The 5-point rating categories are

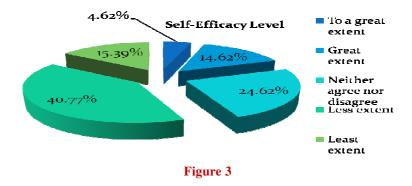
- To a greater extent
- Great extent
- Neither agree nor disagree.
- Less extent
- Least extent

Higher score indicates higher level of self-efficacy.

Levels Of Self Efficacy	To a Greater Extent	Great Extent	Neither Agree nor Disagree	Less Extent	Least Extent
Respondents	6	19	32	53	20
Percentage	4.615	14.615	24.615	40.769	15.385

Table 5

In the case of a farmer, self-efficacy means the farmer's capabilities to organize and execute courses of action required to attain desired types of agricultural accomplishment. Self-efficacious farmers believe that they are more competitive, challenging, recognized, curious to try new farming practices, able to perceive environmental uncertainty, motivated to learn new skills for adaptation and able to easily understand social needs. When farmers lose belief, their self-efficacy deteriorates and prolonged deterioration leads them to commit suicide or go for some other profession. The studies related to farmers' suicidal rate provide theoretical base to understand different correlates of self-efficacy.



## DISSONANCE

Dissonance means literally lack of agreement or harmony between people or things. Here we discuss the disarranged condition in Indian agriculture

#### **Class-Caste Conflict**

Andre Beteille in his article "Class Structure in an Agrarian Society" writes about some of the castes in rural society, particularly in West Bengal (where he had conducted his study), forming class but the course of movement is clear.

When a caste is transformed into a class, the caste–class conflict crops up in a particular social condition, which leads to caste wars. For example, in Uttar Pradesh and Bihar, caste wars are very frequent. In Kerala there is a marshalling of power based only on caste and class.

Caste and class nexus hints at observing the two as mutually inherent areas. Tension and contradiction between caste and class not only are recognizable but also cause differential consequences on different castes and classes. This nexus also implies going beyond caste and going beyond class in understanding social reality.

### Traditional Knowledge VS Modern Knowledge: the Non-Compliances and Conflict

For many centuries, indigenous knowledge made agriculture sustainable in all parts of the world. The new technologies contribute to an external dependency that kills the scarce resources these small farmers have. Hence, a conflict arises, adding dissonance to the farmers' mind.

#### Decrease in Land-Man Ratio but Not Increasing Productivity

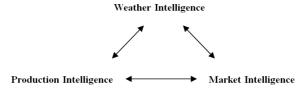
Cultivable land increase does not happen in a geometric manner as the number of land holders is increasing day by day. As a consequence, land fragmentation is inevitable as well as the land–man ratio is falling abruptly, but the productivity is not getting its way ahead. So a conflict arises.

### Information Overload/Meta-Cognitive Stress

The farmers are continuously provided with a lot of recurring information. The information is sometimes provided without such amenities to carry out those which in turn create agitation within the farmer. This created a gap between releasing motivation and social entropy, causing dissonance.

The reasons of dissonance are the following

- If we consider agriculture as a whole system, then its elements produce undirected to and fro movements which are the symptoms of a chaotic system.
- Lack of Market Negotiator results in not getting market access in spite of production.
- Product Negotiation Process is also Lacking, compelling them to face an unrest condition.
- In Spite of a Huge Uncertainty in Farm Income, the cost is certain and this leads to an imbalanced situation in agriculture.
- An Intelligence Trio can be formed among weather intelligence, market intelligence, and production intelligence.



- Any disturbance in these trio produces chaos. It is well understood that any of these combination has a huge possibility to a negative correlation with the other. Then the whole system gets disturbed.
- **Relative Value of Agriculture** industry is comparatively lower than the other industries, which is a major cause of disillusionment and chaos.
- Lack of Demand and Supply Projection is another aspect of the farmers' unrest.
- Farmers are Lagging far Behind in the Race of Service Holders versus farmers, and these are also the causes of social unrest.
- Basic Amenities are Becoming Essential for everyone nowadays, but for farmers these are becoming hard to get.

## Farmer's Suicide: the Extreme/Worst form of Disillusionment and Dissonance

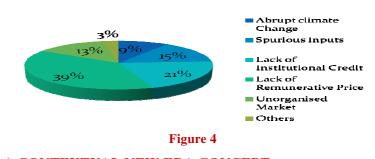
Farmers' suicides are the most tragic and dramatic symptom of the survival crisis of Indian peasants. Two factors that transformed the positive economy of agriculture into a negative economy for peasants are the rising costs of production and the falling prices of farm commodities. Paradoxically, Burdwan, where the highest number of suicides are reported, is known as the 'rice bowl' of the East. The farmers are unable to pay the 16% interest on loans charged by the public sector banks. The West Bengal left front government's much extolled programme of land reform – a key to its electoral success for more than two decades, is regressing under the impact of liberalization. Small and marginal farmers, who were the main beneficiaries of land reform, are the victims of fallout. The gradual withdrawal of state subsidies for inputs such as fertilizer and seeds, and the rising irrigation costs are making farming unaffordable for small and marginal farmers who form 76% of the agricultural population and operate 60% of the cultivable land.

Authors identified some psychological factors as loss of self-esteem, ego and pride; feeling of shame and insult; feeling hurt; suffering from alienation characterized by helplessness; isolation, meaninglessness, powerlessness, and self-estrangement. Assuming suicide is a solution for insoluble problems and termination of distressing thoughts and feelings, farmers committed suicide.

Table 6

Reasons for Committing Suicide	Abrupt Climate Change	Spurious Inputs	Lack of Institutional Credit	Lack of Remunerative Price	Unorganized Market	other
Respondents	12	19	27	51	17	4
Percentage	9.23	14.62	20.77	39.23	13.08	3.08
Rank	5	3	2	1	4	6

Reasons For Committing Suicides



# SOCIAL ENTROPY: A CONTEXTUAL NEW ERA CONCEPT

Farming system in India has been characterized with high level of adoption, rejection and discontinuance. Agriculture in India demands transfer of technology, external supply of inputs as well as knowledge, where rural people become bare recipient of input and technology. In India in general and West Bengal in particular through the continuous imposing of knowledge and motivation of the rural people a gap has been found between unleashed motivation unleashed and accomplishment made and there is a gradual dissolving of the most advance societies due to intrinsic disorder, which may be referred to as social entropy.

Social entropy is a macro-sociological system theory. It is a measure of the natural decay within a social system. It can be defined as the decomposition of social structure or the disappearance of social distinctions. Social entropy is the amount of motivation unavailable for performing in system. Mitchel (2009) studied a village (Jacobs) in 1998 through creative destruction developed and predicted the fate of communities that became the base of their development on the co-modification of rural heritage.

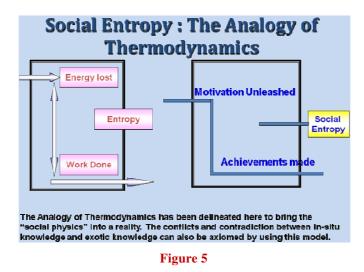
Farming systems deals with production system and function, it is load based, crop based, and natural resource based and thus crop productivity is a function of physical, biological and social subsistence. The phase of equilibrium,

physical, biological and social is the prime concern of any system, and it is more important for extension system because it aims at adding disequilibrium to a depletive function (e.g. poverty) in order to invite neo equilibrium (sustainable livelihood). People are more concerned about the conservation of energy that to in terms of fuel energy or electricity, power, etc but seldom we speak out conservation of social energy and recycling of motivation. Methodology for conservation of social energy includes training; education; meditation; simulation; psychotherapy; stimulation.

The lack of sustainability of the industrial approach to agriculture is not a matter of personal opinion. It is a direct consequence of the most fundamental laws of physics, namely, the laws of thermodynamics. The sustainability of agriculture, like the sustainability of any other type of development, ultimately depends upon the use of energy because anything that is useful in sustaining life ultimately relies on energy. All useful material things–food, clothes, houses, automobiles–require energy to make and to use. And all human energy–working, managing, and thinking–come from the food people eat, wear, or use. Physical scientists lump up all such useful activities together and call them "work.. All work require energy. And most important, each time energy is used to perform work, some of the usefulness of the energy is lost. In performing work, energy is always changed from more concentrated to less- concentrated forms.

However, the total energy contained in a matter always remains unchanged. This is the first law of thermodynamics, the law of energy conservation, as in Einstein's famous  $E = mC^2$ . At first, it might seem that energy could simply be recycled and reused forever. If so, sustainability would be inevitable.

However, once energy is used to perform work, before it can be used again, it must be re-concentrated and restored, which necessarily requires energy. The energy used to re-concentrate and restore energy is simply no longer available to do anything else. It has lost its usefulness, meaning it has lost its ability to perform work. A sustainable agriculture must be fundamentally different from the mechanistic pattern of industrialization. Sustainable agriculture must be based on the pattern of living systems. Living things are self-making, self-renewing, reproductive, and regenerative (Ikerd, *sustainable capitalism [AQ: This phrase seems incomplete. Please check and edit as necessary.]* 



## **EMPIRICAL STUDY AND DISCUSSIONS**

It deals with the results of study or investigation. At the end of this chapter interpretation has been made,

explanation has been given and an attempt has been made to reveal the cause behind it.

SI No.	Variables	'R' VALUE	REMARKS ** Significant at the 0.01 Level *Significant at the 0.05 Level
1	$Age(x_1)$	0.0390	
2	Education $(x_2)$	-0.208	
3	Family size( $x_3$ )	0.015	
4	Gender $Ratio(x_4)$	-0.120	
5	Educational aspiration (x <sub>5</sub> )	-0.403	**
6	Size of holding $(x_6)$	-0.274	*
7	Cropping Intensity (x <sub>7</sub> )	-0.203	
	Ta	ble 7 Contd.,	
Sl No.	Variables	<b>'R' VALUE</b>	REMARKS ** Significant at the 0.01 Level *Significant at the 0.05 Level
8	Total no. of Livestock $(x_8)$	-0.055	
9	Total annual income (x <sub>9</sub> )	-0.513	**
10	Per capita annual income $(x_{10})$	-0.604	**
11	Income Ratio $(x_{11})$	-0.077	
12	Capital intensity $(x_{12})$	-0.085	
13	Scientific Orientation $(x_{13})$	-0.549	**
14	Self efficacy $(x_{14})$	-0.525	**
15	Risk Orientation $(x_{15})$	-0.583	**
16	Economic motivation( $X_{16}$ )	-0.576	**
17	Competition(X <sub>17</sub> )	-0.436	**
18	Information $Index(X_{18})$	-0.092	
19	Distance matrix( $X_{19}$ )	-0.411	**

Table 7: Coefficient of Corelation (r): Disillusionment (Y1) vs. 19 Independent Variables(x1,x19)

### **RESULTS**

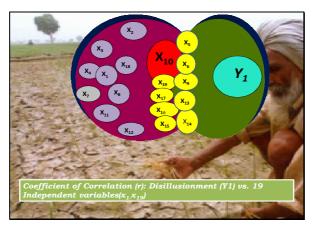
The table presents the coefficient of correlation between  $Y_1$  (Disillusionment) and 19 independent variables. It has been found that the following, viz. Educational aspiration ( $x_5$ ), Size of holding ( $x_6$ ), Total annual income ( $x_9$ ), Per capita annual income ( $x_{10}$ ), Scientific Orientation ( $x_{13}$ ), Self efficacy( $x_{14}$ ), Risk Orientation ( $x_{15}$ ), Economic motivation( $X_{16}$ ), Competition( $X_{17}$ ), Distance matrix( $X_{19}$ ), recorded significant correlation with the dependent variable.

#### REVELATION

The significant but negative correlation variables recorded are Educational aspiration ( $x_5$ ), Size of holding ( $x_6$ ), Total annual income ( $x_9$ ), Per capita annual income ( $x_{10}$ ), Scientific Orientation ( $x_{13}$ ), Self efficacy ( $x_{14}$ ), Risk Orientation ( $x_{15}$ ), Economic motivation ( $X_{16}$ ), Competition ( $X_{17}$ ), Distance matrix ( $X_{19}$ ); so it is well discernible that the lesser the psychological, managerial and educational proficiency of the respondent farmers, the higher the disillusionment(Y1).

For example, the poorer the economic motivation or risk orientation, the higher the disillusionment. The huge problem of the present day Indian farmers is the serious lack of self-efficacy and, of course, economic motivation when agriculture is being perceived as the worst choice out of a tiny basket, the disillusionment is a must to creeple into the psychic construct of farmers.

ICAR reports depict 42% farmers are ready to quit agriculture, given an alternative; non-farm economy is made available to them.





## The Policies we are Speaking About

- Equal Monthly Return (EMR) is an important issue that remains an illusion for the farmers because in other profession there is a certain monthly return but the agriculture sector provides EMR when the crop is harvested. It may be after 3 months, 6 months or even more. So there should be a provision of monthly return for the farmers as they can sustain their livelihood requirements.
- More Biological Production but Very Little Value Addition i.e., less than 2% contribution to global agriculture produce.
- Agriculture industry should **be Lucrative, Healthy** and attractive, so that the farmers come closer. The existing state of agriculture is miserable that the farmers who have a slightest chance to migrate to an off-farm economy move on as they are finding it more profitable.
- Agriculture industry should **cover a larger area** to be covered up. As we all know the economic rationale behind the Average cost of production being reduced as the quantity increased.
- Agriculture should bear some **social status** as many of the educated farm family members is not finding it prestigious to be attached with this sector, which is the so-called the primary sector of India.
- **Drudgery Reduction Technologies** should be adopted very intensively as many people nowadays find farm work too strenuous in comparison with the other jobs.
- **Sufficient Market Access** should be provided as it is understood that many villagers are able to produce a satisfactory level of crops but still are being compelled to distress selling due to lack of market access.
- Apart from the monthly return, the **relative value of profit** is another issue to be taken care of to allow the farmers to be in a higher position.
- Unlike this industries, this industry certainly has a **gestation period** with no returns so some initiatives have to be taken up for them.
- Small holdings are not bad, but it is found to be extremely fragmented which is dangerous.

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- Climate Change offers more stress, more migration, and less mitigation and stability.
- Intrusion of Heavy Metals and its subsequent biomagnifications leads to carcinoma, PSO (polycystic ovary) and diabetic problems.

Now the question comes

Should these Dissonace be Alleviated? Only then we can survive!!! The answer will be no. Here follows some "Adaptive Strategies"

- To sustain the family of the deceased, all **the financial help should be provided as 'fixed deposits'** in the bank, with quarterly interest payment.
- A **Comprehensive Agricultural Insurance Scheme** should be launched. Specific attention should be given to cover cash crops like cotton, sugarcane and edible oils.
- Organic farming should be promoted to avoid or minimize the cost of pesticides and fertilizers.
- **Biodiversity must be the basis of production** to reduce vulnerability to climate and markets.
- Strongest action under Indian Penal Code should be taken against suppliers and manufactures of spurious pesticides.
- Likewise, the suppliers of spurious/inferior seeds must be punished.
- Seed supply must be maintained as a public God to protect farmers' rights.
- Integrated pest management (IPM) should be popularized among farmers.
- Institutionalized credit system to the farmers must be simplified.
- Moneylenders charging exorbitant rate of interest must be punished.
- Gram panchayats should evolve a mechanism to identify the indebted and suicide-prone farmers and help them to overcome the crisis.
- Extension agencies with a vision of eco friendly sustainable development should guide the farmers to make efficient use of water, electricity, pesticide and other inputs.
- The role of commission agents, traders and intermediaries should be minimized to facilitate the farmers to fetch maximum price for their produce.
- Agriculture policy needs to shift from its current bias of 'corporate first' to 'farmers first'.

# CONCLUSIONS

Disillusionment and dissonance among the farmers regarding prescribed technology is apparently an aberrant social phenomenon that makes the farmers alienated from the technology socialization process. Innovative farmers adopt new technology, but when they are finally exposed to market infrastructure and profitability of the technology, they are confused and disillusioned. Moreover, the farmers are conceptually confused, operationally juxtaposed and

motivationally perplexed. This is an invisible psychological barrier towards effective socialization technology. This kind of empirical research can help in creating a resilient model accommodating effective and sustainable process of technology socialization. Confusion embedded within a farmer needs to be pumped out or resolved, otherwise the perplexed horse will be just limping without progress.

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