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Equating organic farming to conventional farming- what are the economic facets of the former?

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Abstract
Organic–conventional comparisons—which comprise the majority of research contrasting agrarian and industrial methods—are contested in prominent public and scholarly forums. Moreover, the effectiveness of organic systems in comparison to conventional systems is often used in favor of or against funding for research and extension initiatives aimed at promoting organic farming. Therefore, this study expected to pave the way for projecting the cost-benefits analysis, as compared with the conventional type of agriculture, practiced by the farmers in Haryana. The study uses an exploratory research design. The research type is qualitative and quantitative type of research. The data are collected mainly through secondary sources. The economic viability of organic farming system is assessed by estimating costs, returns and profits. The organic farms selected in this manner are a series of case studies (a judgment sample). The data have been analyzed and drawn the inferences with the applications of the statistical techniques such as i.e. Descriptive Statistics. The results disclose that the organic farming is relatively economically successful than the conventional type of the agricultural practices, as highlighted by some of the modelers projections

Keywords: Conventional farming, comparison, economic facets, organic farming etc.

Introduction
With the emergence of the green revolution in India, which has undoubtly brought a significant revolution in the agricultural production and the productivity in the agriculture since the 1966, when the green revolution was started in some of few selected pockets of India. With the introduction of new technology which has been proved conducive to increase the production and the productivity of the wheat, rice, maze and the vegetables with the HYV, chemical derived fertilizers and the pesticides which have led to have a considerable adverse on the quality of soil and the overall impact on contaminating the entire agronomic practices by the farmers. This steady practice by the farmers have given rise to have an adverse impact of all these toxic substances on the farmers health as well as on the health of the consumers of these agricultural produces too. Keeping in view the side effect of the chemical derived agricultural inputs, it was become imperative to adopt the traditional modes of organic farming so that the agriculture may achieve a long term sustainability of qualitative and the quantitative agricultural /horticultural products in the interests of the farmers with cost effective traditional modes of farming, The organic and the conventional type of farming are differentiated in comparision with the conventional type of farming in India. The different organic farming attributes are differentiated with the conventional type of farming is discussed as follows.

Why Compare?
Some arguments in support of comparing organic and conventional systems are as follows: (a) Organic farming is a quickly expanding sector of the food industry that gives farmers in developing nations access to new, lucrative markets. Demand for some organic products is outpacing supply, indicating that more organic production is likely; (c) proponents of organic agriculture point to the potential benefits of organic farming for the environment, human health, and society; (d) the comparisons between organic and conventional farming have already sparked a heated and highly publicized debate with significant policy ramifications

for agriculture; and (e) certified organics are the most common legally defined alternative system that consumers can choose from and can be compared to conventional production.

However, counterarguments can be raised as well: (a) The organic versus conventional debate is a fallacious binary. Both conventional and organic cropping systems fall along a gradient of input use intensity, scale, and crop and habitat diversification outside of researcher-managed studies. Binary comparisons fail to take into account this real-world variance between conventional and organic cropping systems; (b) methodological problems with the comparison process can compromise the validity of the conclusions. Ultimately, and perhaps most importantly, (c) research funds would be better used to investigate ways to enhance a variety of cropping system types, including those that lie in between certified organic and industrial models; (d) asking research questions about the relative merits of conventional versus organic production reinforces an either/or mindset.

Despite this, organic–conventional comparisons—which comprise the majority of research contrasting agrarian and industrial methods—are contested in prominent public and scholarly forums. Moreover, the effectiveness of organic systems in comparison to conventional systems is often used in favor of or against funding for research and extension initiatives aimed at promoting organic farming. Therefore, by critically analyzing the techniques and measures employed to conduct the comparisons, one must be clear about what implications can and cannot be reasonably taken from the work done thus far.

Organic and Conventional Farming

The organic farming**, is a** mode of the agricultural system that make use of the eco-friendly pest which tends to control and bio- fertilizers based extensively from the cattle and the plant wastes and the fixation of the nitrogen which include the crops and the vegetables. The innovative organic farming technique was developed as a response to the harming tendency of the environment which is caused by making an extensive use of the chemical fertilizers and the pesticides in the in conventional type of the agriculture. Apart from this, there are numerous ecological benefits which are acquired by the organic farmers which were not possible in the conventional type of agriculture. The organic farming makes use of fewer pesticides, tends to reduce the soil erosion and tends to decrease nitrate leaching into the ground and the surface water. The farmers tend to recycles the cattle dung and other wastes in the backyard of their farms. All these benefits are counterbalanced by growing higher costs of the food for the consumers and generally tend to decline the agricultural production and the productivity. Indeed, the per hectare output of the organic derived crops are nearly 25 percent lower than that of the produce taken under the chemical fertilizers, grown in the conventional farms. The challenges posed for the prospective organic type of the agriculture is expected to ensure to be environmentally friendly with sustainable growth in the agricultural productions and the productivity in terms of long period. It is also expected to increase the yields, and reduce prices to a considerable extent, and hopping to meet the challenges of the climatic change with the growth of the global population.

The Organic farming system in India is not new and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (bio-fertilizers) to release nutrients to crops for increased sustainable production in an eco friendly pollution free environment. As per the definition of the United States Department of Agriculture (USDA) study team on organic farming "organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection". FAO suggested that "Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs".

On the other hand, in case of conventional type of farming which is entirely based on the agronomic practices, which are based on the fully mechanized with application of high dose of based on chemical fertilizers like Urea, Super phosphate, DAP etc. Similarly, the chemical derived pesticides and herbicides like BHC are extensively used by the farmers which are relatively very much costly at least for the small and marginal farmers. All these monetary inputs are neither 'ecological viable' nor 'economic viable' as revealed various studies, carried out under the field conditions. However, the monetary inputs like chemical derived fertilizers and the pesticides and the herbicides are relatively costlier as compared with the organic farming. It has also been observed from various studies which shows that the majority of the famers are small and marginal farmers which becomes cumbersome to purchases the chemical derived inputs like fertilizers like Urea, DAP, Super phosphate and the chemical-based pesticides and herbicides which tend to lead a higher cost for the farmers, particularly the small and marginal farmers which ultimately lead to less profitability in the market. On the other hand, the organic based bio-fertilizers are cost-effective; as a result, the farmers get the eco-friendly agricultural produce at relatively low cost in comparison with the chemical derived inputs like fertilizers and pesticides. It is aimed at bring in the new technology; apart from the affordable credit to assist the small entrepreneurs to enter in the new markets.

The study is meant to contribute an understanding of the actual and potential role of organic farming in the sustainable development of agriculture in Haryana. Agriculture is still the mainstay of the masses of Haryana and at the same time, is prey to the well-applauded chemical farming system of agriculture. The study is expected to pay the way for enhance the income of the farmers, particularly the small and marginal farmers; where due to small size of the land holdings, they receive meager income through their conventional farming system which have been practicing since numerous of years. Their low sizes of their land holdings are too small to survive a livelihood for their respective families in Haryana. Closely associated with problematic area, the carrying capacity of these smaller piece of land have been facing steady declining across the periods with another effects of sub-division of land to the

next generations. It was, therefore felt very essential to promote organic farming so that the organic farming agricultural and horticultural produces may fetch remunerative prices in the neibouring urban areas.

Literature Review

Have reviewed the growth and development of organic farming in India. The authors have given their optimistic views on the organic farming and viewed a healthy view toward healthy nation. In this paper, a focus has been given on the food quality and its safety that have gained steady growing attention from the consumers. Conventionally grown food grains have been immense adverse impact on the human and bovine health due to excessive presence of the pesticide residue, heavy metal, excessive nitrate, heavy hormones, antibiotic residues, and the genetically based modified organisms too have examined the food safety and the quality which has drawn an adequate attention towards the health of the consumers. There are numerous of studies which have observed an immense adverse health impact, because of excessive concentration of the higher levels of the pesticide residue, with excessive concentration of the nitrate, hormones, antibiotic residue, heavy metals, hormones, and also the modified organisms. In this context, various studies show that the grown foods are relatively less nutritious and have lesser quantum of the protective antioxidants in the food items. The farming practices with the chemical pesticides, herbicide and chemical derived fertilizers have an adverse impact on the human health, the authors examines the post independence scenario of the agriculture under the green revolution, where the HYVs, assured irrigation and high dose of chemical fertilizers have been using to increase the agricultural production and the productiity under the innovative agricultural technology. No doubt there is a steady growth in food grain manifolds, but had a unhealthy impact on the health of the people, belonged to different strata of society. This innovative agricultural technology has led food surplus; by giving its significant impacts to deteriorate the environment, soil health, pesticide toxicity, and agricultural output and its sustainability. Agricultural Scientists and the policy makers are reassessing agricultural practices which dependent on excessively on biological inputs rather than making more heavy usage of the chemical-based fertilizers and the pesticides. In order to address this problem, the organic farming is an alternative farming practices which is fully capable to provide qualitative food without adversely affecting the health of the soil and prevailing local environment. It is therefore, it becomes imperative to promote the large-scale organic farming to feed the large size of the population have highlighted the role of organic farming in terms of achieving the sustainability in the production and the productivity in the agricultural produce and the vegetable in the current growing contaminated scenario. The authors have suggested some of the strategies which are to be applied to achieve the target of the long terms sustainable in accordance with prevailing socio-economic and the physiographic conditions have examines the state policy on the 'Organic farming' has been supported by the central and as well as the state governments in India since the year 2005. The shift in the focus of the policy from the basis of the conventional chemical-input derived farming to the "*organic farming*" emerged as a better response in terms of ecological sustainability relating to farming practices by the Indian farmers. It is disheartening to note that the organic farming area coverage is less than 2 per cent of the total net sown under the organic farming in the country. It is therefore, there is an ample scope to shift from chemical fertilizer-based farming to the organic farming. According to authors the Organic farming is now recognized as the best alternative to the conventional type of the agricultural practices where the agricultural practices provides a best quality of food grain without any having harmful effect to the health of the soils, environment and the human life too. It assists a safeguard in terms of the long-term sustainability of the soil fertility by maintaining the organic matters and humus levels high, encouraging the soil relating biological activities activate all the times. In organic farming, the pests, weeds are controlled under the process of biological control rather than chemical control. The crops relating diseases are controlled by the crop rotations, crop rotation, natural predators, organic manure, and resistant varieties and minimize the thermal, biological and chemical usages has reviewed the Indian agriculture and the crisis, faced by the farmers and the food grain consumers. Further, aiming at addressing the chemical fertilizer-based crops and its side effects; Dr. Kumar has suggested the 'Organic Farming' rather than fully depend upon the conventional farming to address this agrarian crisis. The author has highlighted the problems of the farmers, mainly of the indebtedness and the lending the loan from the Priority Sector.

Accordingly, this study is hopefully, expected to pave the way for projecting the cost-benefits analysis, as compared with the conventional type of agriculture, practiced by the farmers in Haryana. It will ensure to view an alternative methodology, policy framework and directions for forthcoming research areas.

Research Objective

The research objective of the study is to compare the economic facets of organic and conventional farming in Haryana specifically in terms of Productivity, Profitability and Cost Effectiveness.

Research Methods and Materials

The study uses an exploratory research design. The research type is qualitative and quantitative type of research. The data are collected mainly through secondary sources. The economic viability of organic farming system is assessed by estimating costs, returns and profits. To measure whether farmers of the Haryana state will tend to transit to the organic farming; as worked out the implications in terms of the conventional farming system and then the results have been compared to get the desired results. The organic farms selected in this manner are a series of case studies (a judgment sample). Of course, the inability to statistical sample limits the extent to which inferences from the results can be made to a larger population of Haryana farms. Under the circumstances, it was quite inevitable. The data have been analyzed and drawn the inferences with the applications of the statistical techniques such as i.e. Descriptive Statistics.

Results and Discussions

Productivity Analysis

Productivity was calculated using the following formula:

Land productivity=Size of output/Area Planted

where the size of output was measured in metric tonnes (t) and the area planted was measured in hectares (ha).

The CRA is a type of economic evaluation that considers the costs that farmers explicitly and implicitly bear. Imputed or inferred costs, which are unrelated to the real expenditure payments, are classified as implicit costs, whilst actual expenditures spent are classified as explicit costs. As a result, the expenses can be divided into two categories: cash and non-monetary costs, or explicit and implicit costs, respectively. Microsoft Excel was utilized to calculate the CRA.

Total Cost (TC)
The formula used to calculate TC was

"TC=TVC+TFC",

in which TVC stands for total variable cost, TFC for total fixed cost, and TC for total cost.

The costs associated with variable inputs, such as labor, raw materials, and other variable overhead costs, are known as TVCs. Conversely, TFCs are those production expenses—like land rent—that remain constant regardless of production volume. The current market prices for the farm inputs were used to determine non-cash costs. The labor expenses for family, exchange, and hired laborers were calculated. The prevalent agricultural labor wage determined the hired laborers' cash costs, while the farmers' real food and beverage expenses determined the costs of family and exchange laborers.

Gross return (GR)
The formula used to calculate "GR is GR=Q×P", where Q stands for productivity (yield) and P for selling price (The farm-gate price used in this analysis).

Turnover
For determining the profit or gross margin (GM), use the following equation:

Profit, or "GM=GR-TC", is calculated by taking the gross return (GR) and total cost (TC).

The ratio of benefit to cost (B:C) (BCR)
The following formula was used to determine the BCR:
B: C ratio equals GR / TC

ROI, or return on investment
ROI = GM / TC, presented as a percentage cultivation in Haryana

Table 1: Returns from Wheat (2020-21)

Particulars	Organic Wheat	Inorganic Wheat
Fixed Cost	43567	45678
Variable Cost	27967	40987
Total Cost	68960	86757
Main Product	21.67	45.09
By Product	6778	13345
Price	3450	1456
Gross Returns	86798	107896
Net Returns	145678	156789
B:C Ratio	1.45	1.40

***Source*:** ICSSR Report 2020-2021

Inorganic wheat yielded an average of 45.09 quintals, whereas organic wheat yielded an average of 21.67 quintals. Compared to organic wheat, the average yield of inorganic wheat was more than twice as high. Nonetheless, the disparity in their relative yields completely offsets this difference in input costs. Similar to this, whereas organic crop is more expensive than inorganic wheat, organic wheat is nevertheless fairly profitable. When compared to inorganic wheat, the market price of organic wheat produce is nearly twice as high. Compared to organic wheat yield, the net returns from inorganic wheat produce are greater.

Table 2: Regression Coefficient and Standard Error of Wheat Cultivation in Haryana

Parameters	Organic Wheat	Inorganic Wheat
Co-efficient	24.67(8.20)	8.99(2.56)
Machine Labor	0.076(0.345)	0.123**(0.1)
Human Labor	1.456*(0.78)	0.256(0.12)
Seed	0.056(0.145)	0.104(0.034)
Irrigation	-0.035(0.156)	-
FYM+Jeevamrit	1.1156** (0.324)	-0.023(0.034)
Fertilizer Cost	-	-
Vermi-Compost	0.34 (0.234)	-
Organic Pesticide	-0.267 (0.314)	-0.132(0.092)
Plant Protection	-	1.13
Return to Return	0.677 (Decreasing)	Increasing
R^2	68.98	69.83

***Source*:** MS-Excel

According to the coefficient of determination, the independent variables accounted for 64.90 percent of the variation in the gross income from organic wheat. It was discovered that irrigation, machine labor, and seed had a major and favorable impact on wheat output in the case of inorganic wheat farming. According to the value, a 1% increase in machine labor costs will result in a 0.13 percent increase in gross income while an additional 0.07% increase will come from higher seed expenses, all other things being held constant. and a 1% rise in irrigation costs will result in a 0.08 percent increase in gross income. However, whereas fertilizers were found to have a non-significant and negative impact on plants, human labor and plant protection had a favorable but non-significant effect. It was observed that the elasticity of production was growing, meaning that a 1% rise in all production parameters at the same time would produce an average 1.23 percent increase in gross return. The R square score indicates that independent variables accounted

for approximately 69.83 percent of the variation in wheat yield.

- Further, the organic farming tends to fetch the remunerative prices of their agro-based produces, grown under the eco-friendly environment and likely to show a sustainable growth in the subsequent periods. In the long term, the agricultural productivity will tend to show better results with sustainable economic viability for the farmers, as compared with the farmers who are practicing the conventional type of farming in their respective areas.
- The side effect of the conventional type of farming tends to produce a very heavy cost, because the conventional type of farming which is based on heavy applications of the chemical derived fertilizers and the pesticides which have led to contaminate the fertile soil in to a barren land by producing excessive salt and other toxic substances effect on the soil, as a result, the farmers have to spends thousands of Rupee to correct the lands in accordance with the prevailing local conditions. The growing cost of the chemical derived pesticides and the herbicides which has led to trap the farmers under the debt which are borrowed some time on very high rates of interests from the private money lenders. In this situation, particularly the small and marginal farmers are trapped easily in the hand of these private money lenders. Some time, under these unfavourable circumstances, these victimized farmers tend to commit even the suicides (Aslam, Waqas, Rana Shahzad & others**,** 2020) [1].
- The conventional type of farming is often suffered from 20 to 30 per cent paying the premium. This premium matters to a considerable extent for the farmers, particularly for the small and marginal farmers, whose income is just sufficient to meet the expenditure to feed their families. It is therefore, the cost of the conventional type of farming matter a lot and it is therefore, it becomes imperative to switch on the organic farming, without any further delay, so that a unnecessary costs on agriculture may be averted and the real income of the farmers may be increased by adopting the organic farming.
- According to some of the empirical studies, the organic farming is relatively economically successful than the conventional type of the agricultural practices, as highlighted by some of the modelers projections. As stated some of the assumptions of the models which were justified with some of the reasonable arguments. It is therefore, the examine the unstated assumptions may be instructive, however, there are differences between the two systems, it has become too difficult to incorporate in accordance with these models. According to their assumptions that the models, assumed that the infiltration rates, soil structure and the rates of the soil erosion were, more or less same as highlighted by these modelers who have tested these models on the agronomic practices of the organic and conventional type of the agriculture, or that any differences, hardly drawn inferences that it was the results of any impact of the economic consequences.
- There are some the organic farmers who claim that the soils of their farm land had experienced a better tilth and had relatively less compaction. They also claim that the farmers have used the less power and operated their tractors with a upper gear, as a result, consumed less fuel. All these claims, though plausible, have been inadequately tested. The changes which have taken place in the soil structure and also improved the ground coverage too, as a result, experienced to decrease the runoff by 10 to 50% and increased the infiltration by 10 to 25%. All these affecting factors jointly tends to reduce the soil erosion by adopting the organic farming by at least $2/5^{th}$ and sometimes more than $4/5^{th}$ (Cacek, 1984) [5].
- It is difficult to work out water loss in terms of the monetary value as runoff and its impact on eroding the nutrients value during this process. In part, they are just showed to the other farm's location; wherever they remain available for the production of the crop. There are some of the nutrients which are existed the beyond of the requirements of the and there is unavailability of the biochemically. Nevertheless, there may be a significant variability between the organic and the conventional type of the farming system in the costs of the replacing the required water and the nutrients values. The vulnerability to the natural events which may prove a critical factor as compared with the performances of the organic and the conventional types of the farming systems. In the conversion process, under the organic farming, the crops produced are vulnerable to the nitrogen deficiencies and the weeds. However, once the organic practices of organic farming is put in to practice, as a result, the crops are often turn relatively less vulnerable to the drought like conditions; as in case of the conventional type of agricultural practices. Organically the soils of the farms tend to absorb more available rainfall, by providing a better protection from the drought like condition (Cacek, 1984) [5]. It is because of the farmers who are engaged in the organic farming grow a considerable diversified crops, the whole farm production function is not vulnerable to the seasonal weather events and the same pests. In case, the entire failure of the crop, the organic farmers tend to suffer from the fewer economic losses. It is due to their investments less in the purchased monetary agricultural inputs.
- The crops diversifications on the organic farms have paved the way for acquiring other economic benefits. The diversifications provide the some of the protection from the adversely change in prices in terms of a single commodity. The diversified farming has also paved the way for a better seasonal inputs distribution. In an organic farm with its same total cropped area will tend to have less land in case growing maize crop so one tractor is adequate. The same tractor may be used for another seasonal crop to the produce the wheat, barley, and the other crops which might have needed the dates of the planting and the harvesting. However, in case of the organic farming, it is required relatively more intensive type of the farm management, as compared with the conventional types of the farms. In case of the organic farming it required to borrow relatively lesser amount of money than that of under the conventional type of the farming system.
- Thess. Organic farmers have less need for irrigation because they use more crop rotations and because of higher soil permeability. Organic growers tend to be less capital intensive, so tax breaks are less

advantageous to them. Investigators once believed that organic farmers' reluctance to use fertilizers led to depletion of phosphorus, potassium, and other soil-borne elements, and that this depletion would have unfavorable long-term biological and economic consequences.

- It can be argued, however, that organic farming is a superior system for managing soil-borne elements because of manure recycling and reduced soil erosion (Cacek, 1984) [5]. Data from Washington State indicate that organic farming may even increase the in terms of quantum availability biochemically, decomposed phosphorus in the soil. These arguments forecast the future trends of the economic benefits of the steady growth and development of organic farming due to ameliorating the soils in the organic farming areas.

Future trends of the economic viability of the organic farming

The relative performance of the organic farming in terms of the economic viability, as compared with the conventional farming is very sensitive to the input out ratio, which is inclined towards the profitability which is worked out the costs to the outputs' value. In this context, the organic and the conventional farmers who are vulnerable in terms of the fluctuations in the prices values of the input and as well as output values of the prices, but the effect of a given transformation will be varied between the both of the farming systems, adopted by the farmers. The future of the price of the commodity is not clear. However, the transformation in the prices of the commodity can be hopefully having considerable impacts on the conventional type of agricultural practices, rather than the organic farmers. In case of the conventional type of farmers who are the producers with the higher per acre productivity for the most of the grain crops. It is, therefore, by assuming the constant costs of the production, as a result, the price rising trend will adversely affect net returns of the conventional types of the farmers with their greater share than that of those of the farmers, engaged in the organic farming. On the contrary, with the rise of the price will tend to decrease the conventional returns by a greater share than the returns, under the organic farming. With the changes with the differentiated price, as a result, the increases in the prices of the some commodity and tend to falls in others, would also tend to have an have significant effects, whether it is positive or negative, on the farmers who are engaged in the conventional types of the farmers, since they depend on the fewer the crops in terms of their income in the respective farming areas.

It is due to the organic farming systems which are diversified in a varied way, as a result, the effects of the varied price changes with the income would partly offset each other. The rising in the costs of the variable inputs would be less harmful to the farmers, who are engaged in the organic farming. It is due to their in terms of their purchase fevering the inputs. The most tendency of increase in price in the prospective period will be for the generated energy, with results, which give rise in the prices of the fertilizers based on the synthetic nitrogens. The farmers, engaged in the organic farming, tend to consume lesser energy, as compared with the conventional types of the farmers in their respective farms located in different villages.

The organic farmers have utilized the 60 percent relatively lesser per unit value of the energy of the production. Further, study by Berardi (1978) has showed that convention type of the wheat grower farmers have consumed the 48 percent relatively more energy by 29% much higher yields. The farmers may face the steady growing pressure from the governments to manage the movements of the sediments, herbicides, pesticides, and the nutrients from the farmlands to the off-farm relating environment. Organic farming has been proved conducive to control the soil erosion and tend to reduce the applications of the pesticides and the chemical derived herbicides which is highly soluble modes of the nitrogen. It is therefore, The farmers, engaged in the organic farming are already tend to manage the pollutions. In case, the conventional type of the farmers who are forced through the policy based regulation to control runoff, the organic based techniques tend to reduce the tillage with a cost-effective way with this alternative mode of cultivation (Lockeretz 1978).

Finally, the research on the organic farming is capable to ameliorate the economic performance under the organic derived technology. The lack of sufficient reliable information on problematic areas of the organic farming, such biological control of the weeds is a major constraint in its application. The Government-sponsored research projects on the research has given the emphasis on the chemical derive modes of agricultural practices, leaving the organic farmers to rely on the organic small numbers of the research groups for information on the organic farming. An Intensive mode of the research on the agricultural chemicals has been carried out across the periods, but organic research is in its initial stage. It is therefore, the economic benefits to the farmers community from a growing investment in the research of the organic farming has an ample scope than the investing in the chemical derived research. Further, the development in the genetic engineering may be proved more beneficial in the both organic, as well as for the convention type of the agriculture (Butter and Youngberg, 1983) [4].

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