SUMMARY, CONCLUSION & SUGGESTIONS
Agriculture sector includes production of not only food grain i.e. cereals and pulses but also Horticulture, animal raising, fisheries, poultry etc. This sector occupies the most important position in the nations economics as it accounts for largest sectional contributions to the G.N.P. It is most important sector in providing maximum employment to the rural mosses. The green revolution is introduced tendency of profit maximisation in agriculture. Agriculture as a way of living activity transferred into commercial activity which termed in to selection of enterprises by the farmers in such a manner that it must provide maximum profits. In this era i.e. in post green revolution period decision making regarding production process in agriculture became profit oriented. Land distribution pattern in eastern part of U.P. indicates uneveness. A large number of holdings in this area i.e. about 87 per cent are less than 1.00 hectare and these holdings have less than 10 per cent of agricultural land. The proportion of holding of 1-2 hectare size group is about 9.97 percent of total holdinhs having 21 per cent of agricultural land. In this situation there is lack of non agricultural remployment activities. No doubt, the green revolution in India has adequately supported the growth in food grain production to meet the rising demands of the present generation but production of fruits and vegetables in the country is not suffideient to the population in the country. Fruits and vegetable constitute or crucial nutrient source of
human diet. The economic importance of fruits and vegetables have been increasing on account of increase in domestic as well as international demand for them.

Chillies are an integral part of vegetable preparations throughout the country. These constitute an essential part of accompaniment to bhakri, sattu or parched grain for the working class. They are taken raw, cooked or in preserved form in lime juice, vinegar or oil and are a cheap source of vitamins C and A and minerals. There is a tendency to grow a few plants of chillies in every household. They are also grown in kitchen gardens and in small plots in vegetable belts throughout the year. Non-pungent, thick pericarped large, oblong or pear-shaped varieties generally called by the genetic name itself as capsicums are cooked like vegetables. The cultivation is mainly concentrated in the hills, from where they are supplied to consuming markets. There are no statistics on area and production of green chillies. Reported data pertain to only chillies which are dried and which are mainly used as a seasoning, flavouring and colouring agent. Different varieties of chillies for drying are grown as regular agricultural crop in large area. Although statistics pertaining to area and production of vegetables in general and chillies i.e. Pickle-chilli in particular is not available the availability of statistics is limited to potato and onion for the present. Statistics pertaining to area and production and even prices of dried chillies are also found but about green and pickle chilli, not reported.

Organised marketing of Pickle chilli is almost absent consequently fluctuation in daily prices and a large margin between the whole sale and retail prices is a common feature. The large margins are meant to cover risk of loss due to perisability of the produce accentuated by a very weak post
harvest infrastructure. The marketing cost, in the case of vegetable marketing, varies between 17 to 21 per cent of the market price.

Cultivation of Pickle chilli crop is area specific crop. It is crop of mainly one block of Mau district, though it is cultivated in some other districts of the Azamgarh division. In Mau district Development block Fatepur Madav is specialised in cultivating pickle chilli. Therefore, present study entitled "Economic Analysis of pickle chilli cultivation in Azamgarh Division of Uttar Pradesh". There is absence of empirical evidence in respect of cultivation of pickle chilli which this study proposes to provide. In view of the possibility of emergence of imirical evidence in respect of pickle chilli cultivation and its economics and output input relations the examination of the potential of its development as means for generating additional income and employment opportunities in the area under study.

This study is an attempt to examine economics of pickle chilli cultivation with various aspect of the problem. This study has following specific objectives.

Objectives of the Study:
1. To work out cost/Return Ratio of pickle chilli crop.
2. To estimate labour utilization in pickle chilli cultivation.
3. To study marketing economics of pickle chilli.
4. To estimate the response of pickle chilli production to various inputs.

It is expected that the findings of the study will be useful in extending Pickle chilli cultivation in not only Azamgarh division but also in most of the areas in which its production is suitable.
Multistage stratified random sampling procedure has been adopted in the study for drawing the sample. It comprises of four stages, viz. selections of district, selection of block, selection of villages and selection of pickle chilli cultivators.

District Mau was selected for the study on the criteria of maximum area under the crop pickle chilli.

On the basis of area under pickle chilli i.e. maximum proportion of cultivated area under the crop Fatehpur Madav Development block was selected.

On the basis of area under pickle chilli in all the villages of selected block, six villages were selected and from each selected village 20 pickle chilli cultivated according to size group of holding were chosen randomly.

Primary data used in the study has been obtained from the selected pickle chilli cultivators with the help of prelisted schedule. The secondary data was obtained from different published and unpublished records of the Board of Revenue Uttar Pradesh, District and Block Revenue and Development Offices, Directorate of Agriculture, U.P. Horticulture Department, U.P., Lucknow and different Journals and Residicals listed in the reference pertaining to this study.

The data used in this study refers to two agricultural years, i.e. 1998-99 and 1999-2000.

It was found that the per hectare cost of cultivation of pickle chilli
is Rs. 27840.50. The per hectare average production of the crop is 66.89 quintals. The estimated cost of production per quintal is Rs. 418.22. It was found that the seed cost constitute maximum of 31.27 per cent of total cost of cultivation followed by human labour cost of 23.85 per cent. Its further distribution indicates that the proportion of 16.62 per cent and 7.28 per cent were towards hired labour cost and family labour cost respectively. The per hectare cost of manure and fertilizers was 12.73 per cent and 8.64 per cent respectively. Irrigation cost was reported 3.86 per cent. On the basis of these estimates, it was reported that cost $A_1$ and $A_2$ per hectare constitute is Rs. 23822.07 and cost $B$ Rs. 25812.67 per hectare. It was also estimated that per hectare cost $C$ i.e. total cost was Rs. 27840.50. The average returns per hectare of pickle chilli on sample farms was Rs. 58526.30. The input output ratio was estimated 1:2.1022 the production of pickle chilli in the study area was found quite coompetitive and profit oriented.

The per hectare net income over cost $A_1$ and $A_2$ is Rs. 34704.23 while it is over cost $B$ Rs. 32713.63 and over cost $C$ is Rs. 30685.80.

Thus, it was found that being a labour intensive crop, its cultivation is more important in generating employment for human labour. The employment generation from pickle chilli is high being 210 mandays per hectare. Operationwise variability of human labour in pickle chilli cultivation was found high. The maximum employment was found in harvesting of pickle chilli with an average of 69.04 mandays per hectare i.e. 32.88 per cent of total mandays employed in pickle chilli cultivation. Continuous requirement of human labour for picking of pickle chilli over a period of three months contributed to higher labour use. In cultivation of pickle chilli irrigation 14.46 per cent watch and ward 14.42 per cent
weeding and earthing up 13.28 per cent are found to be other major labour intensive operation. It was reported that there was variability between different cost components. The maximum variation in the cost component was reported in hired and owned machine labour cost with an average of Rs. 1419.87 (±203.42 CV) followed by hired human labour cost Rs. 4625.74 (±162.88 CV) cost C Rs. 27840.50 per hectare (±148.20 CV) Cost B Rs. 25812.67 (±142.36 CV) per hectare. Cost A1 Cost A2 Rs. 23822.07 (±138.20 CV) per hectare, Fertilizer cost Rs. 3544.10 per hectare (±107.02 CV). Imputed value of family labour Rs. 2027.83 per hectare (±87.90 CV), Manure cost Rs. 2405.42 (±81.39 CV).

Correlation coefficients between per hectare yield of pickle chilli (Y) with different input factors viz. human labour cost per hectare (x1) per hectare seed cost (x2) per hectare manure and fertilizer cost (x3) and per hectare irrigation cost (x4) indicated that there is positive and signified correlation between per hectare yield (Y) with human labour cost per hectare (x1) 0.315872, with per hectare seed cost (x2) 0.407381, with manure and fertilizer cost per hectare (x3) 0.463862 and with irrigation cost (x4) 0.511643. Between cost factors such as per hectare human labour cost (x1) with per hectare seed cost (x2) non significant and positive relationship 0.152238 was reported but per hectare human labour cost (x1) with per hectare manure and fertilizer cost (x3) 0.376137 positive and significant, per hectare human labour cost (x1) with per hectare irrigation cost (x4) 0.402264 positive and significant was found. The relationship of per hectare seed cost (x2) with per hectare manure and fertilizer cost (x3) was 0.481162 positive and significant and with per hectare irrigation cost (x4) 0.392218 positive and significant also showing increasing trend. The coefficient of correlation between per hectare manure and fertilizer cost (x3)
and per hectare irrigation cost 0.463817 positive and significant.

It was found that transportation of pickle chilli is done by bullock cart, tractor tralli, Bullock, Ass and Dunki. The rate of transportation varies between Rs. 100 per quintal per km. to Rs. 2.00 per quintal per km. The maximum distance covered in pickle chilli transportation is also varied. Tractor tralli is used to transport pickle chilli for 15 to 20 kilometre while bullock cart is used to transport pickle chilli within 10 km. Res: of the means of transportation viz. Bullock, Ass and Dunkies are useful to transport the commodity below 10 km. Assembling of pickle chilli is one of the important marketing function. It is found that private agencies of assembling have monopoly in assembling and about 34.23 per cent of marketed pickle chilli is assembled by whole sellers. The respective proportion of assembled quantity of pickle chilli by village traders 13.05 per cent, commission agents 31.43 per cent and producers 21.29 per cent of total quantity assembled. Cooperative marketing society helps in selling of the pickle chilli but not directly participates in purchasing of pickle chilli. In the markets only small units of processing of pickle chilli are found which are only on papers for getting loan from Banks. Though pickle chilli is produced and sold to the persons who prepare Achar at household basis. The commodity, pickle chilli is sold using two methods. By private negotiations method about 63.08 per cent of total quantity of sale is sold while open auction system of sale is used to sale remaining 36.92 per cent of quantity thus, it was found that private negotiations method of sale is common in pickle chilli marketing.

The producers share in consumers price is found about 57.14 per cent to 95.24 per cent which is not very high due to more marketing charges.
Channel 1 in this situation having no middle man. The producer harvests the pickle chilli in the village. Consumer at village level purchases the commodity and producer received 95.25 per cent of consumers price as producers share in consumers rupee. In this case producers of pickle chilli covers variable costs and also total cost of production per kg. of pickle chilli.

In the case of channel II producer harvests the crop in the village and sell to the village trader directly in the village and received 66.67 per cent producers share and consumers rupee. In this channel also producer covers the variable costs and also recovers the total cost of production.

In channel III producer of pickle chilli crop harvests the crop in the village, sells it to commission agent at the market and from commission agent retailer purchases the commodity and sold it to consumer. In this situation producers share in consumers rupee is found about 57.14 per cent. In this case also variable cost is covered by producer and total cost is also covered.

In this study factor response in cultivation of pickle chilli was studied with help of fitting of Cobb Douglas type of production function.

The model

\[ Y = a \cdot x_1^{b_1} \cdot x_2^{b_2} \cdot x_3^{b_3} \cdot x_4^{b_4} \cdot e \]

Where,

\[ Y = \] Production of pickle chilli (kgs. per hectare)
The value of $F$ was found significant therefore, it was found that the effect of various input factors is significant. The elasticities of the function applied in pickle chilli cultivation revealed that the variables under study i.e. manure and fertilizer cost (Rs. per hectare ($x_1$)), Irrigation cost Rs. per hectare ($x_2$), human labour deployment mandays per hectare ($x_3$) and bullock and machine labour cost (Rs. per hect.) ($x_4$) have jointly effective on production of pickle chilli KSS per hectare i.e. $Y$.

The estimates derived in pickle chilli presented in chapter V reveals that the coefficient of multiple determination ($R^2$) is 0.67096, indicating that about 67.096 per cent in production of pickle chilli is covered by the fitted equation. The fitted equation revealed that production of pickle chilli can be significantly increased through additional doses of manure and fertilizer, human labour deployment and bullock and machine labour cost. It is irrigation cost which is indicating that additional doses of irrigation would decline physical production of pickle chilli but the effect of
irrigation is insignificant. Therefore, the application of the factor irrigation is sufficient and further increase in the level is not needed to enhance production of pickle chilli in the area of study. The summation value of all the elasticities 1.16229, indicating the increasing return to scale in the production of pickle chilli in the study area. It also reflects that further investment of input factors would keeps the activity in further profits except irrigation costs.

In this study marginal value productivity of different factors were measured and it is found that marginal value productivity of manure and fertilizers, human labour deployment days, bullock and machine labour cost in pickle chilli cultivation are positive and indicating that increase in these factors would further increase the production of the crop only one factor i.e. irrigation is applied in over doses, therefore, its marginal value productivity is negative, indicating that further use of irrigation would decrease the yield of pickle chilli in study area.

Suggestions:

To develop pickle chilli cultivation in area specific and also in other area following steps should be taken.

1. At the production front, facilities of better seed, plant protection chemicals, manures and fertilizers etc. should make available to the farmers.

2. The use of those inputs which have significant positive elasticities should be enhanced.
3. Excess use of irrigation water in the area concern should be avoided.

4. Training and awareness of cultivators about proper use of the inputs and agronomic operations in pickle chilli cultivation should be provided to the cultivators.

4. At marketing of pickle chilli front organisation of cooperative marketing societies is essential and the financial position or there societies should be made strong so that active participation of these societies must be easy.

5. Cold storage facility should be developed in such a manner that losses in weight to some extent must be stopped.

6. The rate of remunerations of each and every functionaries should be fixed and it should be strictly followed.

7. Development of infrastructural facility would essentially make competition in market. therefore it must be increased.

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