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## ECONOMIC IMPACT OF KISAN CREDIT CARD SCHEME ON PROFITABILITY OF CROPS IN DEORIA DISTRICT OF UTTAR PRADESH

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### ABSTRACT

*The study was confined to the Deoria district of eastern Uttar Pradesh. The district was selected purposively. 60 farmers were selected by simple random sampling method. The present investigation is a comparative study between KCC holders and non-KCC holders. Therefore, two types of respondents were required 30 KCC and 30 non-KCC holders. The KCC holders were those who were benefited under the scheme during the period of 2019-2020. The overall cost of sugarcane was worked out to be Rs 114762.58 in KCC holders which were high compared to non-KCC holders Rs.107979.88. Gross income per hectare was Rs.225812.10 in KCC holders more compared to Rs. 200904.60 in non-KCC holders per hectare. Net income was Rs.111049.52 in KCC holders more compared to Rs. 92924.72 in non KCC holders per hectare. The overall cost of paddy was worked out to be Rs 57287.10 in the KCC holders which was highest compared to non-KCC holders Rs.53729.90. Gross income per hectare was Rs.117784.16 in KCC holders and Rs. 104580.09 in non KCC holders per hectare. Net income*

*was Rs.52028.23 in KCC holders and Rs.42741.66 in non- KCC holders per hectare. The overall cost of wheat was worked out to be Rs 53850.21 which was high compared to non- KCC holders Rs.51720.97. Gross income per hectare was Rs.82920.79 in KCC holders more compared to Rs.77409.10 in non- KCC holders per hectare. Net income was Rs.29070.58 in KCC holders more compared to Rs. 25688.13 in non KCC holders per hectare. Impact of the KCC scheme on production, productivity and income increased under all the categories after availing credit under KCC scheme. It can also be seen that productivity of the sugarcane, paddy and wheat crop was found increased with increase in farm size.*

**KEYWORDS:** *Kisan Credit Card, KCC Holders, Non-KCC Holders, Cost Of Production, Cost Concepts, Farm Income Measures*

## INTRODUCTION

To sustain the growth in agriculture, credit plays a vital role and also key factor in agriculture development. Agriculture development and growth are possible only if adequate capital and proper technology are used. The change in the technology of agriculture enhanced the need for credit. Credit also acts as a catalyst, to move the farmers from traditional agriculture to modern agriculture. Kisan Credit Card (KCC) is one the many innovative products designed by NABARD with an objective to enable farmers to meet their credit requirements, preferably production credit, from financial institutions in a timely and hassle-free manner. The KCC scheme which was introduced in 14<sup>th</sup> August 1998, has gone through several changes since then and now incorporates many new features over and above the financing of crop production requirements, viz. consumption, expenditure, maintenance of farm assets, term loan for agriculture and allied activities, coverage of KCC holders under Personal Accident Insurance Scheme (PAIS) and very recently the coverage of KCC holders under Atal Pension Yojana. Today KCC is considered to be one of the most convenient banking products for farmers. Government of India introduced the KCC scheme in 1998 as an innovative credit delivery mechanism to enable the farmers to meet their production credit requirements in a timely and hassle-free manner.

The state government has given special emphasis in Agriculture Policy on availability of crop loan through Kisan Credit Card to all eligible farmers of the state in view of ensuring easy availability of farm inputs and increasing utilization of crop loan in it. Government of India has accepted the recommendations of task force organized by Government of India, Ministry of Finance, Department of Finance Services to review the scheme of Kisan Credit Card and convert it into smart card cum debit card.

**Objectives of Kisan Credit Card (KCC) scheme;** to provide adequate and timely credit to farmers, to meet short term production needs for the cultivation of crops for the entire year, to augment flow of credit to farmers, especially small, medium, tenant farmers, oral lessees, share croppers/individuals taking up farm activities, to build mutual trust and confidence between bank and target group. to provide food security to vulnerable section by enhancing agricultural production, productivity and livelihood promotion through joint liability group mechanism, to meet contingency expenditure for ancillary expenses as medical, education and other needs.

**Salient features of the Kisan Credit Card (KCC) Scheme;** eligible farmers to be provided with a Kisan Credit Card and a pass book or card-cum pass book. Revolving cash credit facility involving any number of drawals and repayments within the limit. Limit to be fixed on the basis of operational land holding, cropping pattern and scale of finance. Entire production credit needs for full year plus ancillary activities related to crop production to be considered while fixing limit. Sub-limits to cover short term, medium term as well as term credit are fixed at the discretion of banks. Card valid for 3 to 5 years subject to annual review. As incentive for good performance, credit limits could be enhanced to take care of increase in costs, change in cropping pattern, etc. Each drawal to be repaid within a maximum period of 12 months Conversion/ reschedulement of loans also permissible in case of damage to crops due to natural calamities, Security, margin, rate of interest etc. as per RBI norms. Operations may be through issuing branch (and also PACS in the case of Cooperative Banks) through other designated branches at the discretion of bank, Withdrawals through slips/cheques accompanied by card and passbook.

**Revision in Kisan Credit Card Scheme,** Recommendations of Working Group constituted by Government of India, under the Chairmanship of Shri T M Bhasin, Chairman & Managing Director, Indian Bank on redesigning of KCC scheme to make it Smart Card-cum-Debit Card were accepted and a revised KCC scheme has been introduced in April 2012.

**The salient features of the revised KCC scheme are as under;** assessment of crop loan component based on the scale of finance for the crop plus insurance premium x Extent of area cultivated + 10% of the limit towards post-harvest / household/consumption requirements + 20% of limit towards maintenance expenses of farm assets. Validity period of KCC and its periodic review may be decided by the bank. Margin may be decided by the bank. The repayment period may be fixed by banks as per the anticipated harvesting and maturity period for the crops for which a loan has been granted. Interest subvention /incentive for prompt repayment to be available as per the Government of India and State Government norms. One time documentation at the time of first availment and thereafter simple declaration (about crops raised/ proposed) by farmer. KCC cum SB account instead of farmers having two separate accounts. The credit balance in KCC cum SB accounts to be allowed to fetch interest at saving bank rate. Disbursement through various delivery channels, including ICT driven channels like ATM/ PoS/ Mobile handsets.

NABARD, in January 2013 set up special project unit – Kisan Credit Card (SPUKCC) with a mandate for encouraging co-operative banks and Regional Rural Banks across the country to issue RuPay KCC debit cards. The core objective of the unit is to facilitate issuance of cards by these banks through guidance, coordination with national payment corporation with national payment corporation of India and interaction with sponsor banks of RRBS and Co-operative banks. The overall goal is to develop cashless ecosystem by enabling the community to avail all new banking facilities at par with urban area of the country. The SPU undertakes policy formulations, capacity building and networking with the various stake holders to achieve above objectives. The new KCC guidelines specify that all KCC customers should have the facility of withdrawal through ATM/Debit cards. NABARD, with a view to facilitate early action in this direction, as already floated schemes providing financial support to RRBS and cooperatives for issuing these cards.

The cost of cultivation was more for KCC holders when compare to control farmers i.e. Non-KCC farmers. The cost of cultivation per acre was higher by 8.2 per cent for paddy KCC farmers then Non-KCC farmers. The cost of cultivation was higher for KCC farmers on account of comparatively higher doses of application of inputs resulting in higher yield by KCC farmers as compared to the Non- KCC farmers under paddy crop (Parta and Sahu, 2011). The average cost of cultivation is more in case of KCC holders (Rs. 65886.27 /ha) compare to non KCC holders (Rs. 65184.43 /ha) and net returns obtained by KCC holders is more (Rs. 121483.36 /ha) as against non KCC holders (Rs. 119606.91 /ha) for sugarcane Sajane *et al.*, 2011). The cost of cultivation for paddy was Rs 11100 to 14500 for KCC farmers and Rs 10500 to 13000 was for non KCC holders. The cost of cultivation per acre was higher by 7.6 per cent for paddy. The cost of cultivation was higher for KCC holders compare to non-KCC holders under paddy cultivation (Olekar, 2012). The KCC beneficiaries incurred higher cost in cultivation of paddy by 14.21 per cent 19.89 per cent 11.10 per cent and 12.22 per cent in case of marginal, small medium and large farms, respectively when compare to Non-KCC beneficiaries (Patel, 2012). The cost of cultivation of KCC holders farmers was higher (Rs. 31225.9 /ha) as compared to Non-KCC holders (Rs. 27611.8 /ha) and net returns obtained by KCC farmers is more (Rs. 3649.2 /ha) as against the Non-KCC farmers (Rs. 2565.5 /ha) (Prakash, 2013). The cost of cultivation of banana for KCC holder farmers was higher (Rs. 132516) as compared to Non-KCC holder farmers (Rs.117774). It was due to application of higher amount of purchased inputs facilitated by the borrowed money and gross returns per hectare for banana crop were also higher for KCC holder when compared to Non-KCC holders (Bhangale and Sarodae, 2015).

## MATERIAL AND METHODS

The study was confined in eastern Uttar Pradesh which comprises five divisions Viz. Varanasi, Gorakhpur, Azamgarh, Mirzapur and Basti. Gorakhpur division consists of four districts namely –Gorakhpur, Deoria, Kushinagar and Maharajganj. Deoria district was selected purposively. A list of all 16 blocks was prepared on the basis of KCC holder's area. One block namely Baitalpur block was purposively selected for the study. There are 91 villages in Baitalpur block. 3 villages were selected on the basis of the important crops grown in the study area under Wheat, Rice and Sugarcane cultivation. The present investigation is a comparative study between KCC holders and non-KCC holders. Therefore, two types of respondents were required. 30 KCC and 30 non-KCC. In study area selection of respondents is done by random sampling method. Each village farmers are divided in four categories according to their land holding i.e. marginal, small, medium and large farmers. In each village 20 farmers (10 KCC and 10 non-KCC) will be identified for the field study therefore total sample size 60 (30 KCC and 30 non- KCC) from selected village. The KCC farmers were those who were benefited under the scheme during the period of 2019-20 considered for the investigation. Prior to actual selection of targeted respondents, a comprehensive list of KCC respondents and non-KCC respondents was prepared. The farm level data and required information of KCC holders and non-KCC holders pertaining to crop year 2019-2020, was during March-April. The collected data were compiled and analyzed with a tabular method of analysis, simple statistical tools such as arithmetical averages and percentages were worked out for the purpose of interpretation of results. To work out the cost of cultivation standard method of cost cultivation employed by Commission for Agricultural Costs and Prices (CACP), directorate of economics and statistics, government of India was adopted.

### Cost concepts as per the CACP classification

The cost concepts approach to farm casting is widely used in India. To work out the cost of cultivation standard method of cost cultivation employed by commission for agricultural costs and prices (CACP), directorate of economics and statistics, government of India was adopted. These include Cost A<sub>1</sub>, Cost A<sub>2</sub>, Cost B<sub>1</sub> Cost B<sub>2</sub> Cost C<sub>1</sub>, Cost C<sub>2</sub>, and CostC<sub>3</sub>. Various costs have been worked out by applying following method:

**Cost A<sub>1</sub>:** all actual expenses in cash and kind incurred in production. CostA<sub>1</sub>: consists of following 14 costs items:

1. Value of hired human labour (permanent & casual).
2. Value of owned bullock labour.
3. Value of hired bullock labour.
4. Value of owned machine labour.
5. Hired machinery charges
6. Value of fertilizers.
7. Value of manure (produced farm and purchased).
8. Value of seed (both farm- produced and purchased).
9. Value of insecticides, pesticides and fungicides.
10. , irrigation charges (both owned and hired tube wells pumping sets etc.).
11. Canal water charges.
12. Land revenue, cesses and other taxes.
13. Depreciation on farm implements and machinery (both bullock drawn & worked with human labour, farm building and farm machinery).
14. , interest on the working capital..

**Cost A<sub>2</sub>:** Cost A<sub>1</sub> + Actual rent paid for leased in land

**Cost B<sub>1</sub>:** Cost A<sub>1</sub>+ Interest on value of owned fixed capital assets (excluding land)

**Cost B<sub>2</sub>:** Cost B<sub>1</sub> + rental value of owned land

**Cost C<sub>1</sub>:** Cost B<sub>1</sub>+ imputed value of family labour

**Cost C<sub>2</sub>:** Cost B<sub>2</sub> + imputed value of family labour

**Cost C<sub>3</sub>:** Cost C<sub>2</sub>+ 10 percent of cost C<sub>2</sub> to account for managerial function perform by farmer.

### Farm income measures

Under farm income, gross income, net income, were worked out:

**Gross income:** gross income pertains to the total value of the potato production during the year valued at the average prices of the year.

**Net income:** Net income was worked out on by deducting cost  $C_2$  gross income.

**Benefit-cost ratio (BCR):** Benefit – cost ratio is obtained by ratio of total gross return to the total cost

## RESULT AND DISCUSSION

### Per hectare cost and returns of sugarcane production

The Table 1 shows that the overall cost incurred by the KCC beneficiaries was worked out to be Rs 114762.58 which was high compared to non KCC beneficiaries Rs.107979.88. out of total cost that overall operational cost of KCC beneficiaries was Rs.71148.81 and non KCC beneficiaries was Rs. 72549.01. The fixed cost of KCC and non KCC was Rs. 36248.40 and Rs.35430.87 respectively. Total cost per hectare was higher in KCC farmers compared to non KCC farmers. This difference was mainly due to higher cost of variable input used in KCC farmers compared to non KCC farmers. Gross income obtained per hectare was more in KCC beneficiaries. It was Rs.225812.10 in KCC beneficiaries and Rs. 200904.60 in non KCC beneficiaries per hectare. But net income was more in KCC beneficiaries compared to non KCC beneficiaries. It was Rs.111049.52 in KCC beneficiaries and Rs. 92924.72 in non KCC beneficiaries per hectare. This was due to the comparatively lower expenditure on sugarcane production of non KCC beneficiaries. *From Table 2.* It is clear that the Cost  $A_1$  and cost  $A_2$  were found to be same as there was no land was taken on lease. Cost  $B_1$ , cost  $B_2$ , Cost  $C_1$  and  $C_2$  was more of KCC farmers than the non KCC farmers. *From Table 3.* shows that the total output of sugarcane under the KCC was 707.34 q/ha was higher than non KCC farmers 628.84 q/ha. The returns of KCC farmers are somewhat more than the non KCC farmers.

### Per hectare cost and returns of paddy production

The Table 4. indicates that the overall cost incurred by the KCC beneficiaries was worked out to be Rs 57287.10 which was highest compared to non KCC beneficiaries Rs.53729.90. Out of total cost that overall operational cost of KCC beneficiaries was Rs.38522.90 and non KCC beneficiaries was Rs. 35099.01. The fixed cost of KCC and non KCC was Rs. 18764.15 and Rs.18630.82 respectively. Total cost per hectare was higher in KCC farmers compared to non KCC farmers. This difference was mainly due to higher cost of variable input used in KCC farmers compared to non KCC farmers. *From Table 5.* It is clear that the Cost  $A_1$  and cost  $A_2$  were found to be same as there was no land was taken on lease. Cost  $B_1$ , cost  $B_2$ , cost  $C_1$  and  $C_2$  was more of KCC farmers than the non KCC farmers. The perusal of Table 6. It is clear that the total output of paddy under the KCC was 61.34q/ha was higher than non KCC farmers 56.08 q/ha. The returns of KCC farmers are somewhat more than the non KCC farmers. Gross income obtained per hectare was more in KCC beneficiaries. It was Rs.117784.16 in KCC beneficiaries and Rs. 104580.09 in non KCC beneficiaries per hectare. But net income was more in KCC beneficiaries compared to non KCC beneficiaries. It was Rs.52028.23 in KCC beneficiaries and Rs.42741.66 in non KCC beneficiaries per hectare.

### Per hectare cost and returns of wheat production

The table 7 shows that the overall cost incurred by the KCC beneficiaries was worked out to be Rs 53850.21 which was high compared to non KCC beneficiaries Rs.51720.97. Out of total cost that overall operational cost of KCC beneficiaries was Rs.35939.28 and non KCC beneficiaries

was Rs.33763.02. The fixed cost of KCC and non KCC was Rs. 17910.93 and Rs.17957.97 respectively. Total cost per hectare was higher in KCC farmers compared to non KCC farmers. This difference was mainly due to higher cost of variable input used in KCC farmers compared to non KCC farmers. From the Table 8. Shows that the Cost  $A_1$  and cost  $A_2$  were found to be same as there was no land was taken on lease. Cost  $B_1$ , cost  $B_2$ , cost  $C_1$  and  $C_2$  was more of KCC farmers than the non KCC farmers. The Table 9. shows that the total output of wheat under the KCC was 41.37q/ha was higher than non KCC farmers 37.96 q/ha. The returns of KCC farmers are somewhat more than the non KCC farmer. Gross income obtained per hectare was more in KCC beneficiaries. It was Rs.82920.79 in KCC beneficiaries and Rs.77409.10 in non KCC beneficiaries per hectare. But net income was more in KCC beneficiaries compared to non KCC beneficiaries. It was Rs.29070.58 in KCC beneficiaries and Rs. 25688.13 in non KCC beneficiaries per hectare.

**TABLE 1: COST OF CULTIVATION PER HECTARE OF SUGARCANE FOR DIFFERENT CATEGORIES OF FARMERS (RS. /HA)**

Sl. No.	Cost Items	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
<b>Operational cost</b>											
1.	Human labour	24508.17 (22.99)	23024.51 (20.87)	23854.88 (20.09)	23790.61 (19.31)	23794.54 (20.73)	23808.17 (23.78)	23024.51 (21.99)	22456.36 (20.37)	22930.91 (19.68)	23054.99 (21.35)
	a) Hired labour	6884.03 (6.45)	7308.64 (6.62)	8925.77 (7.51)	17884.22 (14.51)	10250.67 (8.93)	6884.03 (6.87)	7308.64 (6.98)	8617.82 (7.81)	12675.25 (10.87)	8871.43 (8.21)
	b) Family labour	17624.14 (16.53)	15715.87 (14.24)	14929.11 (12.57)	5906.39 (4.79)	13543.88 (11.80)	16924.14 (16.90)	15715.87 (15.01)	13838.54 (12.55)	10255.66 (8.80)	14183.55 (13.13)
2.	Sett's/ seeds	11290.66 (10.59)	12584.65 (11.40)	14688.56 (12.37)	15338.05 (12.44)	13475.48 (11.74)	10066.67 (10.05)	11433.33 (10.92)	12666.67 (11.44)	14024.04 (12.03)	12047.68 (11.15)
3.	Manure	2575.12 (2.41)	2298.78 (2.08)	2050.33 (1.72)	2045.23 (1.66)	2242.36 (1.95)	2275.05 (2.27)	2488.78 (2.37)	2023.33 (1.82)	1815.12 (1.55)	2150.57 (1.99)
4.	Fertilizers	6250.45 (5.86)	7324.56 (6.63)	8575.33 (7.22)	9523.32 (7.73)	7918.14 (6.89)	5945.04 (5.93)	6455.05 (6.16)	7366.76 (6.65)	8323.33 (7.14)	7022.54 (6.50)
5.	Plant protection	1900.65 (1.78)	2335.45 (2.11)	2536.67 (2.13)	2723.04 (2.21)	2373.95 (2.06)	1500.05 (1.49)	1878.12 (1.79)	2166.67 (1.95)	2368.78 (2.03)	1978.40 (1.83)
6.	Irrigation	9485.5	10625.	12985	13084	11545	7423.	8833.	10368.	11612.	9559.

	n charges	6 (8.90)	55 (9.63)	.50 (10.93)	.05 (10.62)	.16 (10.06)	33 (7.41)	33 (8.43)	67 (9.36)	11 (9.96)	36 (8.85)
7.	Machin e labour	9656.3 6 (9.06)	10456. 24 (9.47)	11068 .24 (9.32)	13023 .28 (10.57)	11051 .03 (9.62)	8636. 67 (8.63)	9862. 33 (9.42)	11888. 78 (10.74)	12818. 12 (11.00)	10801 .48 (10.00)
8.	Miscell aneous expense s	827.25 (0.77)	926.67 (0.84)	1025. 21 (0.86)	1128. 04 (0.91)	976.7 9 (0.85)	997.0 4 (0.99)	845.2 5 (0.80)	1320.1 2 (1.19)	1588.7 8 (1.36)	1187. 80 (1.10)
9.	Interest on working capital	4654.5 9 (4.36)	4870.3 4 (4.41)	5374. 93 (4.52)	5645. 89 (4.58)	5136. 43 (4.47)	4245. 64 (4.24)	4537. 44 (4.33)	4918.0 1 (4.44)	6384.8 4 (4.53)	5021. 48 (4.65)
z	<b>Total operati onal cost</b>	<b>71148. 81 (66.76)</b>	<b>74446. 75 (67.48)</b>	<b>82159 .65 (69.20)</b>	<b>86301 .51 (70.05)</b>	<b>78514 .18 (68.41)</b>	<b>64897 .66 (64.83)</b>	<b>69358 .15 (66.26)</b>	<b>75175. 37 (67.93)</b>	<b>80764. 87 (69.32)</b>	<b>72549 .01 (67.18)</b>
<b>Fixed costs/overhead cost</b>											
10.	Land revenue	42.00 (0.04)	42.00 (0.03)	42.00 (0.04)	42.00 (0.03)	42.00 (0.03)	42.00 (0.04)	42.00 (0.04)	42.00 (0.04)	42.00 (0.03)	42.00 (0.04)
11.	Deprecia tion	1578.7 7 (1.48)	1983. 65 (1.79)	2602. 32 (2.19)	2902. 10 (2.35)	2322. 64 (1.61)	1378. 88 (1.37)	1480. 04 (1.41)	1645.2 5 (1.48)	1866.6 7 (1.60)	1592.7 1 (1.47)
12.	Rental value of owned land	30000. 00 (28.15)	30000 .00 (27.19)	30000 .00 (25.26)	30000 .00 (24.35)	30000 .00 (26.14)	30000 .00 (29.97)	30000 .00 (28.66)	30000. 00 (27.10)	30000. 00 (25.75)	30000. 00 (27.78)
13.	Interest on fixed capital	3794.4 9 (3.56)	3843. 07 (3.84)	<b>3917. 32 (3.29)</b>	3953. 29 (3.21)	3883. 75 (3.38)	3770. 50 (3.76)	3782. 64 (3.61)	3802.4 7 (3.43)	3829.0 4 (3.28)	3796.1 6 (3.51)
	<b>Total overhea d cost</b>	<b>35415. 26 (33.23)</b>	<b>35868 .72 (32.51)</b>	<b>36561 .64 (30.79)</b>	<b>36897 .39 (29.94)</b>	<b>36248 .40 (31.58)</b>	<b>35191 .38 (35.16)</b>	<b>35304 .68 (33.73)</b>	<b>35489. 72 (32.06)</b>	<b>35737. 71 (30.67)</b>	<b>35430. 87 (32.81)</b>
	<b>Total cost</b>	<b>10656 4.07 (100.0 0)</b>	<b>11031 5.48 (100.0 0)</b>	<b>11872 1.29 (100.0 0)</b>	<b>12319 8.90 (100.0 0)</b>	<b>11476 2.58 (100.0 0)</b>	<b>10008 9.04 (100.0 0)</b>	<b>10466 2.83 (100.0 0)</b>	<b>11066 5.09 (100.0 0)</b>	<b>11650 2.58 (100.0 0)</b>	<b>10797 9.88 (100.0 0)</b>

Note: figures in the parentheses indicate percentages to total



**TABLE 2: COST OF CULTIVATION AS PER THE CACP APPROACH (RS./HA.)**

Sl. No.	Costs/ Category	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Over all	Marginal	Small	Medium	Large	Over all
1..	Cost A <sub>1</sub> (all actual expenses)	55145 .44 (47.04)	60756 .53 (50.06)	69874 .86 (53.50)	83339 .22 (61.49)	67334 .94 (53.33)	49394 .40 (44.86)	55164 .32 (47.91)	63024 .08 (51.77)	72417 .88 (56.50)	60000 .17 (50.51)
2.	Cost A <sub>2</sub> = Cost A <sub>1</sub> + rent paid for leased in land	55145 .44 (47.04)	60756 .53 (50.06)	69874 .86 (53.50)	83339 .22 (61.49)	67334 .94 (53.33)	49394 .40 (44.86)	55164 .32 (47.91)	63024 .08 (51.77)	72417 .88 (56.50)	60000 .17 (50.51)
3.	Cost B <sub>1</sub> = Cost A <sub>1</sub> +interest on value of owned fixed capital	58939 .93 (50.28)	64599 .60 (53.23)	73792 .18 (56.50)	87292 .51 (64.41)	71218 .69 (56.41)	53164 .90 (48.28)	58946 .96 (51.20)	66826 .55 (54.89)	76246 .92 (59.49)	63796 .33 (53.71)
4.	Cost B <sub>2</sub> = Cost B <sub>1</sub> + rental value of owned land	88939 .93 (75.87)	94599 .60 (77.95)	10379 2.18 (79.47)	11729 2.51 (86.55)	10121 8.69 (80.18)	83164 .90 (75.53)	88946 .96 (77.25)	96826 .55 (79.54)	10624 6.92 (82.90)	93796 .33 (78.96)
5.	Cost C <sub>1</sub> =: Cost B <sub>1</sub> + imputed value of family labour	76564 .07 (65.31)	80315 .47 (66.19)	88721 .29 (67.93)	93198 .90 (68.77)	84762 .57 (67.14)	70089 .04 (63.66)	74662 .83 (64.85)	80665 .09 (66.26)	86502 .58 (67.49)	77979 .88 (65.65)
6.	Cost C <sub>2</sub> = Cost B <sub>2</sub> + imputed value of family labour	<b>10656</b> <b>4.07</b> <b>(90.90)</b>	<b>11031</b> <b>5.48</b> <b>(90.90)</b>	<b>11872</b> <b>1.29</b> <b>(90.90)</b>	<b>12319</b> <b>8.90</b> <b>(90.90)</b>	<b>11476</b> <b>2.58</b> <b>(90.90)</b>	<b>10008</b> <b>9.04</b> <b>(90.90)</b>	<b>10466</b> <b>2.83</b> <b>(90.90)</b>	<b>11066</b> <b>5.09</b> <b>(90.90)</b>	<b>11650</b> <b>2.58</b> <b>(90.90)</b>	<b>10797</b> <b>9.88</b> <b>(90.90)</b>
7.	Cost C <sub>3</sub> = Cost C <sub>2</sub> + 10 percent of cost C <sub>2</sub> to account for managerial function	<b>11722</b> <b>0.48</b> <b>(100.00)</b>	<b>12134</b> <b>7.02</b> <b>(100.00)</b>	<b>13059</b> <b>3.41</b> <b>(100.00)</b>	<b>13551</b> <b>8.79</b> <b>(100.00)</b>	<b>12623</b> <b>8.84</b> <b>(100.00)</b>	<b>11009</b> <b>7.94</b> <b>(100.00)</b>	<b>11512</b> <b>9.11</b> <b>(100.00)</b>	<b>12173</b> <b>1.59</b> <b>(100.00)</b>	<b>12815</b> <b>2.84</b> <b>(100.00)</b>	<b>11877</b> <b>7.87</b> <b>(100.00)</b>

perform by farmer.											
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Note: figures in the parentheses indicate percentages to the total cost ( $C_3$ )

**TABLE 3: RETURNS FROM SUGARCANE PRODUCTION FOR DIFFERENT CATEGORIES OF FARMERS**

Sl. No.	Particulars	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
1.	Cost of cultivation (Rs./ha)	10656 4.07	1103 15.48	1187 21.29	1231 98.90	1147 62.58	1000 89.04	1046 62.83	11066 5.09	1165 02.58	1079 79.88
2.	Yield of main product (Q./ha)	667.0 4	686.6 7	721.1 2	754.5 5	707.3 4	590.2 5	615.2 3	633.3 3	676.5 4	628.8 4
3.	Yield of By product (Q./ha)	45.00	47.00	50.00	58	50.00	42.00	45.00	48.00	53.00	47.00
4.	Prices of main product (Rs./Q.)	315.0 0	315.0 0	315.0 0	315.0 0	315.0 0	315.0 0	315.0 0	315.0 0	315.0 0	315.0 0
5.	Prices of By product (Rs./Q.)	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
6.	Returns of main product (Rs./ha)	21011 7.60	2163 01.05	2271 52.80	2376 83.25	2228 12.10	1859 28.75	1937 97.45	19949 8.95	2131 10.10	1980 84.60
7.	Returns of By product (Rs./ha)	2700. 00	2820. 00	3120. 00	3480. 00	3000. 00	2520. 00	2700. 00	2880. 00	3300. 00	2820. 00
8.	Gross return (Rs./ha)	21281 7.60	2191 21.05	2302 72.80	2411 63.25	2258 12.10	1884 48.75	1964 97.45	20237 8.95	2164 10.10	2009 04.60
9.	Net income Rs./ha	10656 4.53	1088 05.57	1115 51.51	1179 64.35	1110 49.52	8835 9.71	9183 4.62	91713 3.86	9990 7.52	9292 4.72
10.	Cost of production (Rs./Q)	159.7 5	160.6 5	164.6 3	163.2 7	162.2 4	169.5 7	170.1 1	174.7 3	172.2 0	171.7 1
11.	B:C ratio (BCR)	1.99	1.98	1.93	1.95	1.96	1.88	1.87	1.83	1.85	1.86

Note: figures in the parentheses indicate percentages to the total cost ( $C_3$ )

**TABLE 4: PER HECTARE COST INPUT OF FACTORS IN PADDY CULTIVATION  
(RS. /HA)**

Sl. No.	Cost Items	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
	<b>Operational cost</b>										
	Human labour	14008.17 (26.13)	14624.50 (26.09)	14854.88 (25.15)	14390.61 (23.80)	14469.54 (25.25)	13508.2 (26.67)	13724.4 (26.27)	13656.36 (24.77)	13330.91 (23.33)	13554.99 (25.22)
	a) Hired labour	2884.03 (5.38)	3308.64 (5.90)	5925.77 (10.03)	11884.22 (19.665)	6000.66 (10.47)	2884.03 (5.73)	3008.64 (5.76)	5217.82 (9.44)	10675.25 (18.69)	5446.43 (10.13)
	b) Family labour	11124.14 (20.75)	11315.87 (20.19)	8929.11 (15.12)	2506.39 (4.14)	8468.87 (14.78)	10624.14 (21.06)	10715.9 (20.51)	8438.54 (15.30)	2655.66 (4.64)	8108.55 (15.09)
	Seeds	2290.66 (4.27)	2384.65 (4.25)	2688.56 (4.55)	3038.05 (5.02)	2650.48 (4.53)	2066.67 (4.09)	2233.33 (4.27)	2666.67 (4.83)	2824.04 (4.94)	2447.68 (4.5)
	Manure	1575.12 (2.98)	1298.78 (2.31)	950.33 (1.60)	1045.23 (1.72)	1217.36 (2.12)	1475.05 (2.92)	988.78 (1.89)	1123.33 (2.03)	1215.12 (2.12)	1200.57 (2.28)
	Fertilizers	4950.45 (9.23)	5324.56 (9.50)	5575.33 (9.44)	6023.32 (9.96)	5468.41 (9.54)	3945.04 (7.82)	4455.05 (8.52)	5366.76 (9.73)	5923.33 (10.37)	4922.54 (9.16)
s	Plant protection	1900.65 (3.54)	2335.45 (4.16)	2536.67 (4.29)	2723.04 (4.50)	2373.95 (4.14)	800.05 (1.51)	1178.12 (2.25)	1366.67 (2.47)	1568.78 (2.74)	1228.40 (2.28)
	Irrigation charges	2485.56 (4.63)	2625.55 (4.68)	3985.50 (6.74)	4084.05 (6.75)	3295.00 (5.75)	3123.33 (6.19)	3233.33 (6.19)	3368.67 (6.11)	3612.11 (6.32)	3334.36 (6.20)
	Machine labour	4656.36 (8.68)	5456.24 (9.73)	6068.24 (10.27)	6223.28 (10.29)	5601.03 (9.77)	4036.67 (8.00)	4862.33 (9.30)	5488.78 (9.95)	6218.12 (10.88)	5151.48 (9.54)
	Miscellaneous expenses	827.25 (1.54)	926.67 (1.65)	1025.21 (1.73)	1128.04 (1.86)	976.79 (1.70)	997.04 (1.97)	845.25 (1.69)	1020.12 (1.85)	988.78 (1.73)	962.80 (1.79)
	Interest on working	2288.54 (4.26)	2448.34 (4.36)	2637.93 (4.46)	2705.89 (4.47)	2520.19 (4.39)	2096.64 (4.15)	2206.44 (4.22)	2384.01 (4.32)	2497.68 (4.37)	2229.19 (4.27)

	capital										
z	<b>Total operational cost</b>	<b>34982.81</b> <b>(65.26)</b>	37424.8 <b>(66.75)</b>	<b>40322.7</b> <b>(68.2)</b>	<b>41361.5</b> <b>(68.42)</b>	<b>38522.9</b> <b>(67.24)</b>	<b>32048.7</b> <b>(63.53)</b>	<b>33727.2</b> <b>(64.57)</b>	<b>36441.4</b> <b>(66.09)</b>	<b>38178.9</b> <b>(66.84)</b>	<b>35099.01</b> <b>(65.25)</b>
	<b>Fixed costs/Overhead cost</b>										
	Land revenue	42.00 (0.08)	42.00 (0.07)	42.00 (0.07)	42.00 (0.06)	42.00 (0.07)	42.00 (0.08)	42.00 (0.08)	42.00 (0.08)	42.00 (0.07)	42.00 (0.08)
	Depreciation	1578.77 (2.94)	1583.65 (2.82)	1682.32 (2.84)	2002.10 (3.30)	1711.71 (2.98)	1378.88 (2.73)	1480.04 (2.83)	1645.25 (2.98)	1866.67 (3.26)	1592.71 (2.96)
	Rental value of owned land	15000 (27.98)	15000.00 (26.76)	15000.00 (25.40)	15000.00 (24.81)	15000.00 (26.18)	1500.00 (29.73)	15000.00 (28.7)	15000.00 (27.20)	15000.00 (26.26)	15000.00 (27.91)
	Interest on fixed capital	1994.49 (3.72)	1995.07 (3.55)	2006.98 (3.39)	2045.29 (3.38)	2010.45 (3.50)	1970.56 (3.90)	1982.64 (3.79)	2002.47 (3.63)	2029.04 (3.55)	1996.16 (3.71)
	<b>Total overhead cost</b>	<b>18615.26</b> <b>(34.73)</b>	<b>18620.73</b> <b>(37.22)</b>	<b>18731.24</b> <b>(31.71)</b>	<b>19089.39</b> <b>(31.57)</b>	<b>18764.155</b> <b>(32.75)</b>	<b>1839.139</b> <b>(36.46)</b>	<b>18504.68</b> <b>(35.42)</b>	<b>18689.72</b> <b>(33.90)</b>	<b>18937.71</b> <b>(33.15)</b>	<b>18630.82</b> <b>(34.67)</b>
	<b>Total cost</b>	<b>53598.07</b> <b>(100)</b>	<b>56045.50</b> <b>(100)</b>	<b>59053.89</b> <b>(100)</b>	<b>60450.90</b> <b>(100)</b>	<b>57287.10</b> <b>(100)</b>	<b>5044.010</b> <b>(100)</b>	<b>52231.80</b> <b>(100)</b>	<b>55131.10</b> <b>(100)</b>	<b>57116.60</b> <b>(100)</b>	<b>53729.90</b> <b>(100)</b>

Note: figures in the parentheses indicate percentages to total

TABLE 5: COST OF CULTIVATION AS PER THE CACP APPROACH (RS./HA.)

Sl. No.	Costs/Category	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
1..	Cost A <sub>1</sub> (all actual expenses)	25479.44 (43.21)	277(44.98) (44.98)	33117.91 (50.98)	40899.21 (61.50)	31807.74 (50.47)	22845.44 (41.17)	24533.34 (42.70)	29690.11 (48.96)	37431.91 (59.58)	28625.17 (48.43)
2.	Cost A <sub>2</sub> = Cost A <sub>1</sub> + rent paid for leased in land	25479.44 (43.21)	277(44.98) (44.98)	33117.91 (50.98)	40899.21 (61.50)	31807.74 (50.47)	22845.44 (41.17)	24533.34 (42.70)	29690.11 (48.96)	37431.91 (59.58)	28625.17 (48.43)
3.	Cost B <sub>1</sub> = Cost A <sub>1</sub> + interest on value of	27473.93 (46.59)	29729.65 (48.22)	35124.83 (54.07)	42944.50 (64.58)	33818.19 (53.66)	24816.00 (44.73)	26515.98 (46.15)	31692.58 (52.26)	39460.95 (62.80)	30621.33 (59.10)

	owned fixed capital										
4.	Cost $B_2 =$ Cost $B_1 +$ rental value of owned land	42473. 93 (72.04 )	44729. 65 (72.55 )	50124 .83 (77.1 6)	57944. 50 (87.13 )	48818. 19 (77.46 )	39816. 00 (71.76 )	41515. 98 (72.25 )	46692. 58 (76.99 )	54460. 95 (86.68 )	45621. 33 (77.19 )
5.	Cost $C_1 =$ Cost $B_1 +$ imputed value of family labour	38598. 07 (65.46 )	41045. 52 (66.57 )	44053 .94 (67.8 1)	45450. 89 (68.35 )	42287. 06 (67.10 )	35440. 14 (63.87 )	37231. 88 (64.80 )	40131. 12 (66.17 )	42116. 61 (67.03 )	38729. 88 (65.53 )
6.	Cost $C_2 =$ Cost $B_2 +$ imputed value of family labour	53598. 07 (90.90 )	56045. 50 (90.90 )	59053 .89 (90.9 0)	60450. 90 (90.90 )	57287. 10 (90.90 )	50440. 10 (90.90 )	52231. 80 (90.90 )	55131. 10 (90.90 )	57116. 60 (90.9 0)	53729. 90 (90.90 )
7.	Cost $C_3 =$ Cost $C_2 +$ 10 percent of cost $C_2$ to account for managerial function perform by farmer.	58957. 88 (100)	61650. 07 (100)	64959 .33 (100)	66495. 979 (100)	63015. 77 (100)	55484. 15 (100)	57455. 07 (100)	60644. 23 (100)	62828. 27 (100)	59102. 87 (100)

Note: figures in the parentheses indicate percentages to the total cost ( $C_3$ )

**TABLE 6: RETURNS FROM PADDY PRODUCTION FOR DIFFERENT CATEGORIES OF FARMERS**

Sl. No.	Particulars	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
1.	Cost of cultivation (Rs./ha)	5359 8.07	5604 5.50	5905 3.89	6045 0.90	5728 7.10	5044 0.10	5223 1.80	55131 .10	5711 6.60	5372 9.90
2.	Yield of main product (Q./ha)	58.0 4	60.67	62.12	64.55	61.34	54.25	55.23	56.33	58.53	56.08
3.	Yield of	50.0	55.00	56.00	58.00	54.75	48.00	50.00	53.00	56.00	51.75

	By product (Q./ha)	0									
4.	Prices of main product (Rs./Q.)	1680.12	1720.25	1750.75	1815.00	1741.53	1600.10	1620.25	1700.00	1800.20	1680.13
5.	Prices of By product (Rs./Q.)	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
6.	Returns of main product (Rs./ha)	97514.16	104367.57	108756.59	117158.25	106834.16	86805.42	89486.41	95761.00	105365.70	94230.09
7.	Returns of By product (Rs./ha)	10000.00	11000.00	11200.00	11600.00	10950.00	9600.00	10000.00	10600.00	11200.00	10350.00
8.	Gross return (Rs./ha)	1075014.2	115367.60	119956.60	128758.25	117784.16	96405.42	99486.41	106361.00	116565.70	104580.09
9.	Net income Rs./ha	42791.95	48006.17	51973.54	65800.97	52028.23	35341.14	36538.63	42791.34	56793.44	42741.66
10.	Cost of production (Rs./Q)	923.46	923.77	950.64	936.49	933.92	929.77	945.71	978.71	975.85	958.09
11.	B:C ratio (BCR)	2.00	2.05	2.03	2.12	2.05	1.91	1.90	1.92	2.04	1.94

**TABLE 7: COST OF CULTIVATION PER HECTARE OF WHEAT FOR DIFFERENT CATEGORIES OF FARMERS (RS./HA)**

Sl. No.	Cost Items	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
<b>Operational cost</b>											
1.	Human labour	11757.45 (23.27)	11959.97 (22.69)	11260.36 (20.54)	12191 (21.15)	11777.43 (21.87)	9656.24 (20.09)	10398.03 (20.52)	10754.88 (20.25)	9807.39 (17.80)	10154.14 (19.63)
	a) Hired labour	3534.12 (6.99)	5828.64 (11.05)	6421.82 (11.710)	8275.25 (14.43)	6014.96 (11.16)	3325.23 (6.91)	5412.80 (10.68)	5625.77 (10.60)	6593.15 (11.97)	52.39 (10.12)
	b) Family labour	8223.33 (16.27)	6131.33 (11.63)	4838.54 (8.82)	3856.67 (6.72)	5762.46 (10.7)	6331.01 (13.1)	4985.23 (9.84)	5129.11 (9.66)	3214.24 (5.83)	4914.89 (9.50)

2.	Seed	3314.74 (6.56)	3623.55 (6.87)	3885.25 (7.08)	4225.38 (7.36)	3762.24 (6.98)	3389.15 (7.05)	3525.23 (6.95)	3965.32 (7.46)	4425.85 (8.03)	3826.38 (7.39)
3.	Manure	2375.12 (4.70)	2398.78 (4.55)	2325.12 (4.24)	2365.25 (4.12)	2366.06 (4.39)	2378.45 (4.94)	2389.16 (4.71)	2314.25 (4.35)	2464.25 (4.47)	2386.77 (4.61)
4.	Fertilizers	3250.45 (6.43)	3324.56 (6.30)	4425.96 (8.07)	4878.20 (8.50)	3969.79 (7.37)	3125.12 (6.50)	3655.89 (7.21)	4065.23 (7.65)	5480.60 (9.95)	4081.71 (7.89)
5.	Plant protection	979.65 (1.94)	1210.45 (2.29)	1589.78 (2.89)	1678.30 (2.92)	1364.54 (2.53)	1225.40 (2.55)	1478.69 (2.92)	1535.95 (2.89)	1774.56 (3.22)	1503.65 (2.90)
6.	Irrigation charges	4285.56 (8.48)	4625.55 (8.77)	5271.90 (9.61)	5510.28 (9.60)	4923.32 (9.14)	4395.23 (9.24)	4735.78 (9.34)	5385.50 (10.14)	5723.48 (10.39)	5059.99 (9.78)
7.	Machine labour	4012.25 (7.94)	4516.26 (8.56)	4618.33 (8.42)	4890.22 (8.52)	4509.26 (8.37)	3450.78 (7.18)	3596.23 (7.09)	3610.14 (6.79)	3683.16 (6.68)	3585.07 (6.93)
8.	Miscellaneous expenses	727.25 (1.43)	849.25 (1.61)	996.12 (1.81)	1089.21 (1.89)	915.45 (1.70)	789.33 (1.64)	821.65 (1.62)	1086.68 (2.04)	1128.31 (2.04)	956.49 (1.84)
9.	Interest on working capital	2149.18 (4.25)	2275.59 (4.31)	2406.10 (4.39)	2573.81 (4.48)	2351.16 (4.36)	1988.68 (4.13)	2142.05 (4.23)	2290.26 (4.31)	2414.20 (4.38)	2208.79 (4.27)
	<b>Total operational cost</b>	<b>32851.68 (65.03)</b>	<b>34783.96 (66.00)</b>	<b>36778.92 (67.08)</b>	<b>39342.57 (68.58)</b>	<b>35939.28 (66.73)</b>	<b>30398.38 (63.25)</b>	<b>32742.71 (64.63)</b>	<b>35008.21 (65.93)</b>	<b>36902.80 (67.00)</b>	<b>33763.02 (65.27)</b>
<b>Fixed costs/overhead cost</b>											
10.	Land revenue	42.00 (0.08)	42.00 (0.08)	42.00 (0.08)	42.00 (0.07)	42.00 (0.08)	42.00 (0.08)	42.00 (0.08)	42.00 (0.08)	42.00 (0.08)	42.00 (0.08)
11.	Depreciation	729.45 (1.44)	956.25 (1.81)	1068.78 (1.94)	1045.12 (1.82)	949.90 (1.76)	725.63 (1.50)	956.90 (1.89)	1105.14 (2.08)	1179.84 (2.14)	991.87 (1.91)
12.	Rental value of	15000.00	15000.00	15000.00	15000.00	15000.00	15000.00	15000.00	15000.00	15000.00	15000.00

	owned land	(29.69)	(28.46)	(27.36)	(26.15)	(27.85)	(31.21)	(29.60)	(28.25)	(27.23)	(29.00)
13.	Interest on fixed capital	1892.57 (3.74)	1919.79 (3.64)	1933.29 (3.52)	1930.45 (3.36)	1919.02 (3.56)	1892.12 (3.93)	1919.87 (3.79)	1937.65 (3.64)	1946.62 (3.53)	1924.06 (3.72)
	<b>Total overhead cost</b>	<b>17664.02</b> <b>(34.96)</b>	<b>17918.04</b> <b>(33.99)</b>	<b>18044.07</b> <b>(32.91)</b>	<b>18017.57</b> <b>(31.41)</b>	<b>17910.93</b> <b>(33.26)</b>	<b>17659.75</b> <b>(36.74)</b>	<b>17918.77</b> <b>(35.36)</b>	<b>18084.80</b> <b>(34.06)</b>	<b>18168.46</b> <b>(32.99)</b>	<b>17957.94</b> <b>(34.72)</b>
	<b>Total cost</b>	<b>50515.70</b> <b>(100)</b>	<b>52702.00</b> <b>(100)</b>	<b>54822.99</b> <b>(100)</b>	<b>57360.15</b> <b>(100)</b>	<b>53850.21</b> <b>(100)</b>	<b>48058.12</b> <b>(100)</b>	<b>50661.47</b> <b>(100)</b>	<b>53093.00</b> <b>(100)</b>	<b>55071.26</b> <b>(100)</b>	<b>51720.97</b> <b>(100)</b>

Note: figures in the parentheses indicate percentages to total

**TABLE 8: COST OF CULTIVATION AS PER THE CACP APPROACH (RS./HA.)**

Sl. No.	Costs/ Category	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
1..	Cost A <sub>1</sub> (all actual expenses)	2539 9.80 (45.71)	2965 0.88 (51.14)	3305 1.16 (50.98)	3657 3.02 (61.50)	3116 8.72 (50.47)	2483 5.00 (41.17)	2875 6.38 (42.70)	3102 6.24 (48.96)	3491 0.40 (59.58)	2988 2.00 (48.43)
2.	Cost A <sub>2</sub> = Cost A <sub>1</sub> + rent paid for leased in land	2539 9.80 (45.71)	2965 0.88 (51.14)	3305 1.16 (50.98)	3657 3.02 (61.50)	3116 8.72 (50.47)	2483 5.00 (41.17)	2875 6.38 (42.70)	3102 6.24 (48.96)	3491 0.40 (59.58)	2988 2.00 (48.43)
3.	Cost B <sub>1</sub> = Cost A <sub>1</sub> + interest on value of owned fixed capital	2729 2.37 (49.11)	3157 0.67 (54.45)	3498 4.45 (54.07)	3850 3.47 (64.58)	3308 7.74 (53.66)	2672 7.12 (44.73)	3067 6.25 (46.15)	3296 3.89 (52.26)	3685 7.02 (62.80)	3180 6.06 (59.10)
4.	Cost B <sub>2</sub> = Cost B <sub>1</sub> + rental value of owned land	4229 2.37 (76.11)	4657 0.67 (80.33)	4998 4.45 (77.16)	5350 3.47 (87.13)	4808 7.74 (77.46)	4172 7.12 (71.76)	4567 6.25 (72.25)	4796 3.89 (76.99)	5185 7.02 (86.68)	4680 6.06 (77.19)
5.	Cost C <sub>1</sub> = Cost B <sub>1</sub> + imputed value of	3551 5.70 (63.91)	3770 2.00 (66.503)	3982 2.99 (67.81)	4236 0.14 (68.35)	3885 0.20 (67.10)	3305 8.13 (63.87)	3566 1.48 (64.80)	3809 3.00 (66.17)	4007 1.26 (67.03)	3672 0.95 (65.53)



	family labour										
6.	Cost $C_2 =$ Cost $B_{2+}$ imputed value of family labour	5051 5.70 (90.9 0)	5270 2.00 (90.9 0)	5482 2.99 (90.9 0)	5736 0.15 (90.9 0)	5385 0.21 (90.9 0)	4805 8.12 (90.9 0)	5066 1.47 (90.9 0)	5309 3.00 (90.9 0)	5507 1.26 (90.9 0)	5172 0.97 (90.9 0)
7.	Cost $C_3 =$ Cost $C_{2+}$ 10 percent of cost $C_2$ to account for manageria l function perform by farmer.	5556 7.27 (100)	5797 2.20 (100)	6030 5.28 (100)	6309 6.17 (100)	5923 5.23 (100)	5286 3.93 (100)	5572 7.62 (100)	5840 2.3 (100)	6057 8.39 (100)	5689 3.07 (100)

Note: figures in the parentheses indicate percentages to the total cost ( $C_3$ )

**TABLE 9: RETURNS FROM WHEAT PRODUCTION FOR DIFFERENT CATEGORIES OF FARMERS**

Sl. No.	Particulars	KCC holders					Non KCC holders				
		Marginal	Small	Medium	Large	Overall	Marginal	Small	Medium	Large	Overall
1.	Cost of cultivation (Rs./ha)	5051 5.70	5270 2.00	5482 2.99	5736 0.15	5385 0.21	4805 8.12	5066 1.47	5309 3.00	5507 1.26	5172 0.97
2.	Yield of main product (Q./ha)	38.04	40.67	42.12	44.67	41.37	34.04	36.23	39.25	42.33	37.96
3.	Yield of By product (Q./ha)	34.00	35.00	36.00	36.00	35.25	33.00	33.00	34.00	35.00	33.75
4.	Prices of main product (Rs./Q.)	1720.00	1750.00	1800.00	1925.00	1748.75	1720.00	1740.00	1780.00	1850.00	1772.50
5.	Prices of By product (Rs./Q.)	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00
6.	Returns of	6542	7117	7581	8598	7234	5854	6304	69886	7831	6728

	main product(Rs./ha)	8.80	2.50	6.00	9.75	5.79	8.80	0.20	5.00	0.50	4.10
7.	Returns of By product (Rs./ha)	1020 0.00	1050 0.00	1080 0.00	1080 0.00	1057 5.00	9900. 00	9900. 00	10200 .00	1050 0.00	1012 5.00
8.	Gross return (Rs./ha)	7562 8.80	8167 2.5	8661 6.00	9678 9.75	8292 0.79	6844 8.80	7294 0.20	80065 .00	8881 0.50	7740 9.10
9.	Net income Rs. /ha	2511 3.10	2897 0.50	3179 3.01	3942 9.60	2907 0.58	2039 0.68	2277 8.73	26972 .00	3373 9.24	2568 8.13
10.	Cost of production (Rs./Q)	1327. 96	1295. 84	1301. 59	1284. 08	1301. 67	1411. 81	1398. 32	1352. 68	1300. 99	1362. 51
11.	B:C ratio(BCR)	1:1.4 9	1:1.5 4	1:1.5 7	1:1.6 8	1:1.5 3	1:1.4 2	1:1.4 3	1:1.50	1:1.6 2	1:1.4 9

**TABLE 10: IMPACT OF KISAN CREDIT CARD SCHEME ON AGRICULTURAL PRODUCTION, PRODUCTIVITY AND INCOME OF MAJOR CROPS**

Sl. No.	Particulars /crops	Non KCC holders	KCC holders	Non KCC holders	KCC holders	Non KCC holders	KCC holders	Non KCC holders	KCC holders	Non KCC holders	KCC holders
		Marginal farmers		Small farmers		Medium farmers		Large farmers		Overall	
<b>Sugarcane</b>											
1.	Productivity (q./ha.)	590.25	667.04	615.23	686.67	633.33	721.12	676.54	754.55	628.84	707.34
2.	Gross income (Rs./ha.)	188448.75	212817.60	196497.45	219121.05	202378.95	230272	216410.10	241163.25	200904.60	225812.10
3.	Net income (Rs./ha.)	88359.71	106564.53	91834.62	111551.51	917133.86	111551.51	99907.52	117964.35	92924.72	111049.52

<b>Paddy</b>											
1.	Productivity (q./ha.)	54.25	58.04	55.23	60.67	56.33	62.12	58.33	64.55	61.34	56.08
2.	Gross income (Rs./ha.)	96405.42	107514.20	99486.41	115367.60	106361.00	119956.60	116565.70	128758.25	117784.16	104580.09
3.	Net income (Rs./ha.)	35341.14	42791.95	36538.63	48006.17	42791.34	51973.54	56793.44	65800.97	52028.23	42741.66
<b>Wheat</b>											
1.	Productivity (q./ha.)	34.04	38.04	36.23	40.67	39.25	42.12	42.33	44.67	37.96	41.37
2.	Gross income (Rs./ha.)	68448.80	75628.80	72940.20	81672.50	80065.00	86616.00	88810.50	96789.75	77409.10	82920.79
3.	Net income (Rs./ha.)	20390.68	25113.10	22778.73	28970.50	26972.00	31793.01	33739.24	39429.60	25688.13	29070.58

### Impact of Kisan Credit Card Scheme on crop Production, Productivity and Income

Table 10. reveals that the impact of the KCC scheme on production, productivity and income increased under all the categories after availing credit under KCC scheme. It can also be seen that productivity of the sugarcane, paddy and wheat crop was found increased with increase in farm size. Overall Gross income of sugarcane crop per hectare was more in KCC holders. It was Rs.225812.10 in KCC holders and Rs. 200904.60 in non- KCC holders per hectare. But net income was more in KCC holders compared to non- KCC holders. It was Rs.111049.52 in KCC holders and Rs. 92924.72 in non- KCC holders per hectare. Overall Gross income paddy crop per hectare was more in KCC holders. It was Rs.117784.16 in KCC holders and Rs. 104580.09 in non KCC holders per hectare. Net income was more in KCC holders compared to non KCC holders It was Rs.52028.23 in KCC holders and Rs.42741.66 in non KCC holders per hectare. Overall Gross income of wheat crop per hectare was more in KCC holders. It was Rs.82920.79

in KCC holders and Rs.77409.10 in non KCC holders per hectare. Net income was more in KCC holders compared to non KCC holders. It was Rs.29070.58 in KCC holders and Rs.25688.13 in non KCC holders per hectare.

## CONCLUSION

Total cost per hectare was higher in KCC farmers compared to non- KCC farmers. This difference was mainly due to higher cost of variable input used in KCC farmers compared to non- KCC farmers. The cost of cultivation shown increasing trend from marginal to large farmer in KCC holders and non KCC holders. It due to fact that large size of holding farmer could incur more expenditure on modern farm input like quality of seed, hired labour, manure, fertilizers, plant protection and machine labour charges etc. Cost  $A_1$  and cost  $A_2$  were found to be same as there was no land was taken on lease. Cost  $B_1$ , cost  $B_2$ , cost  $C_1$  and  $C_2$  was more of KCC farmers than the non KCC farmers. It was found the impact of the KCC scheme on production, productivity and income increased under all the categories after availing credit under KCC scheme. Among the different categories of farmers, productivity of marginal, medium, and large KCC holders has been recorded higher compared to non-KCC holders. Production of sugarcane, paddy and wheat crop on KCC holders' farms was also found to be higher compared to non-KCC holders. The productivity per hectare was increased on their farms due to use of credit amount availed under the KCC scheme for purchasing the best quality inputs. At the overall, gross returns, net returns of sugarcane, paddy and wheat crops was higher in KCC holders compared to non-KCC holders.

## REFERENCES

1. Bhangale, A. I. and Sarode, A. P. (2015). Impact of the Kisan Credit Card scheme on the farmers in Jalgaon district with particular reference to banana cultivation. *Indian Streams Research Journal*, 5(7): 1-10.
2. Olekar, (2012). Effectiveness of Kisan Credit Card scheme in Karnataka state. *International Journal of Research in Commerce, IT and Management*, 2 (7):104-109.
3. Patra, S. and Sahu, K. K. (2011). An econometric study of determinants of credit under Kisan Credit Card. *International Journal of Arts and Commerce*, 1(2):100-113.
4. Patel, S. S. (2012). Performance of Kisan Credit Card scheme in Mahasamund district of Chhattisgarh: An economic evaluation, M.Sc. (Agri.) Thesis, Indira Gandhi Krishi Vidyalaya, Raipur, India.
5. Prakash, P. (2013). Impact of Kisan Credit Card on farm economy: A case study of Krishnagiri district of Tamil Nadu. M.Sc. (Agri.) Thesis, Indian Agricultural Research Institute, New Delhi.
6. Sajane, A. M., Basavaraja, H., Guledgudda, S. S., Patil, B. L., Mahajanshetty, S. B. and Bhat, A. R. (2011). Economic evaluation of Kisan Credit Card. *Karnataka Journal of Agricultural Sciences*, 24(2): 173-176.
7. Sajane, A.M., Shinde, V.A., Sale, Y.C. and Satpute, S.V. (2011). Economic Impact on Kisan Credit Card Scheme on Profitability of Crops. *International Research Journal of Agricultural Economics and Statistics*, 2(2): 324-327.