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Revisiting Policies for Enhancing Minimum Support Price (MSP): Evidences From Cost of Cultivation Data of Bihar (India)

Nasim Ahmad[1*], D. K. Sinha[2], K.M. Singh[3] and R. R. Mishra[4]

Department of Agricultural Economics, Dr. Rajendra Prasad Central Agricultural University,
Pusa (Samastipur), Bihar, India, PIN - 848125
*Corresponding Author E-mail: nasim.rau@gmail.com

ABSTRACT

Farmers have played decisive role not only in making India self-sufficient in food production but also in exporting foodgrains to many countries. Prices affect both income and expenditure of the farmers. Poor income from farming resulted in increased indebtedness, widespread suicides of farmers across the nation. A significant increase or decrease in the price of a crop may result in increase or decrease in the area under that crop. The study revealed that farmer's gains from paddy, wheat and maize over operational cost A_2 were found 81.62%, 89.40% and 85.44%, respectively during the period TE-2015. Further, if we take family labour cost into account percentage gains assessed to be 37.85, 55.53 and 49.18 for paddy, wheat and maize, respectively. To achieve the fixed target only a little effort has to be made on optimizing input costs. For wheat we already have achieved the target of 1.5 time cost of produce during TE-2015. If we account cost C_2, the farmers may be in losses. The gain percentage over cost C_2 during TE-2015 were computed only 0.60%, 9.37% and 2.14 for paddy, wheat and maize only in Bihar. To enhance the profitability of the farmers, the major cost components like labour charges, fertilizer cost, irrigation charges has to be optimize by fabricating implements suitable for marginal and small farmers, using information of soil heath cards in application of fertilizers and shifting irrigation from diesel pumping sets to electric and submersible pumping sets or solar pumping sets. Strong linkages of procurement agencies have to establish at Punchayat level. To address the farmer's distress government should come forward to develop infrastructure, revise and strengthen the co-operatives and local communities. The price policy should be aimed at providing firm support, encouragement and enforce thrust on farming activities in such a way that farmers may not quit the farming and the youth may also be attracted forwards and take farming as profession.

Key words: *Minimum support Price (MSP), Cost of cultivation, Food-sufficient, Indebtedness, Mechanization, Soil health card*

INTRODUCTION

After bifurcation, Bihar has got only agricultural lands. Agriculture is the main source of economy of the state. About 89 % population is still dependent on agricultural and allied activities in the state. Due to diverse agro-climatic conditions, fertile soils, abundant water resources, mainly ground water, varieties of crops are grown in the state. Between 2011-12 and 2015-16, the annual growth rate of agriculture sector was 0.1% while, the manufacturing sector and service sectors grew at an annual rate of 8.4% and 9.9%. The share agriculture reduced from 25% to 18% during the same period

Agricultural price policy has an important role in obtaining growth in Indian economy in general and agriculture in particular. The main aim of price policy was to protect farmers as well as consumers. Prices affect both income and expenditure of the farmers. Food security was one of the major challenges of the country as well as the state. Now the nation has achieved not only self-sufficiency but also became exporter of some cereals to the other nations. The socio-economic conditions of the cultivators are reportedly pitiable even today. Poor income from farming resulted in increased indebtedness, widespread suicides of farmers across the nation. A steep decline or rapid increase in price of a particular crop forces the cultivator to decrease or increase the cultivation of that particular crop. In case of decreased prices, there may be gap between supply and demand. In case of increased prices, consumers have to suffer. Both the situations are disastrous for the economy of the nation in general and state as particular. We are experiencing these situations in the recent days. Price policy in developed countries is to prevent drastic fall in agricultural income but in developing nation, it is to enhance agricultural production.

The agricultural Price Policy in India was coined as a result of food scarcity and price fluctuations faced in consequences of drought, floods and international prices for exports and imports. This policy was targeted towards ensuring reasonable and affordable food prices for consumers in general, by providing food grains through Public Distribution System (PDS)[9]. The thought behind price policy was adoption of the new technologies for enhancing productivity by providing a price support through Minimum Support Price (MSP) system. MSP is considered as a market intervention by the central government and as one of the safety nets for cultivators. In this context, two important aspects require due attention, first protecting farmers against the unwarranted fluctuations in prices, which may be caused by erratic climatic conditions or by variation in international prices second formation of an incentive structure aiming at the allocation of resources for specific crops. Procurement of food grains at MSP is carried out by government agencies. Procurement agencies are not functioning well in all the states. Many studies have pointed out that MSP is leading to regional imparity in incomes as it is effective in some states only, where government procurements are working efficiently[2,10]. The agricultural produce marketing Committee (APMC) is for the name sake in many states. In Bihar, there is no such market. Farmers in these states are deprived of the benefit of MSP. Farmers have to sell the produce below MSP. It is said that MSP has favoured cereal crops like paddy, wheat and maize at the cost of pulses and oilseeds[1,5,6,7,8].

During 2007-10 a survey was conducted by NITI Aayog for evaluation of MSP in the 17 states of the country. It was inferred from the result that in Bihar the farmers knew about MSP but the awareness about the time of their announcement was very low. During study period, none of the interviewed farmers sold paddy or wheat at MSP; and the sugarcane was sold at Fair and Remunerative Price (FRP) in the district of West Champaran. The reason for not selling at MSP was that the purchase centers were located at distance which required high transportation costs. In addition to this, there was no transparency in the system. The involvement of middlemen was very high at

the Block Purchase Centers. Nevertheless, the farmers were optimistic about selling their produce at MSP and some had already sold because of the presence of purchase centres in the villages itself[4].

Hence, in light of the above backgrounds, it is the need of the time for formation of some policy alternatives and view effectiveness of MSP as protective and supportive instrument both for producers and consumers angles.

The present study is aimed to examine farmers gain at Minimum Support Price (MSPs) over different costs and to assess the trends of different input costs involved in production of paddy, wheat and maize in the state of Bihar.

MATERIAL AND METHODS

In order to assess the trends of area and production of paddy, wheat, maize and total cereals, secondary data published in various statistical reports have been used. Cost of major cereal crops like paddy, wheat and maize cultivation estimates generated by the Commission on Agricultural Costs and Prices (CACP) for Bihar were used for analysis for making valuable conclusions and suggesting policy measures. For this purpose, cost A_2 which includes all variable costs and rent paid for leased in land and depreciation on machineries used in production process by farmers as well as cost C_2 which includes interest on value of owned capital assets (excluding land), rental value of owned land and rent paid for leased-in land, imputed value of family labour were considered. Cost of cultivation data of last fifteen years were used for the study however, cost of cultivation data of TE-2003, TE-2006, TE-2009, TE-2012 and TE-2015 were used for detailed study.

The profitability of any enterprise can be increased through three routes: (i) reducing cost of inputs; (ii) increasing the system efficiency of enterprise; and (iii) increasing price of end product through government intervention which in this case is to be higher minimum support price. Out of these three, third alternative is easiest to adopt and

implement but is fraught with consequences for overall economy. Further it has not much for the regions where penetration of public procurement agencies is not sufficient. Consequently, farmers of this region have not been able to sell their produce to this agency to a great extent. Thus first two options need to be examined about their feasibility.

For assessment of the trends in various costs for inputs involved in cost of cultivation of the crops under investigation like casual labour cost, animal labour cost, seed cost, machine labour cost, Irrigation cost fertilizers and manures cost and interest on working capital were considered for detailed analysis Tabular analysis was carried out to find out the meaningful results.

RESULTS AND DISCUSSION

Present status of cereal crops in Bihar

Cereals were found the dominating crops in Bihar as about 81.30% area was under cereal crop during TE-2017. Among cereals, paddy, wheat and maize were the main crops and they occupied about 43.48%, 28.16% and 9.42% area of the gross cropped area of the state (Table 1). Total cereal production in the state was assessed 15502.51 thousand tonnes in TE-2017. The shares of production of paddy, wheat and maize were about 50.06%, 30.73% and 19.01% respectively (Table 2). Compound growth rates of area under total cereals and paddy was computed to be negative while wheat and maize registered positive growth. Growth rates of production of all the crops under investigation were found positive (Table 3).

Cost of cultivation and return over cost A_2 and cost C_2

The average cost of cultivation, cost A_2 and cost C_2 of paddy, wheat and maize for the state of Bihar is presented in Table 4 and Table 5. As can be seen from the table cost A_2 and cost C_2 both increased over the different period of times as the cost of inputs and wages also increased with time. The cost A_2 for paddy increased from Rs. 6698.39 in TE-2003 to Rs. 19221.22 in TE-2015 Similar increase was noticed in case of wheat and maize i.e. from

Rs. 8478.58 to Rs. 19886.73 and Rs. 7637.35 to Rs. 20694.52, respectively in TE-2003 to TE-2015.

In case of cost C_2 similar trend of increase was noticed during the period of investigation. The costs C_2 for paddy, wheat and maize increased to Rs. 34700.18/ha, Rs.34436.44 and Rs. 37571.49/ha, respectively in TE-2015 from Rs. 12368.63, Rs. 14573.57/ha and Rs. 13690.33 for paddy, wheat and maize respectively in TE-2003. The increase costs were attributed on account of hike in prices of various inputs and labour charges over the time span.

Percentage gains over support prices of paddy, wheat and maize in Bihar on the basis of cost A_2 have been presented in Table 6. The percentage gain was assessed at 86.86%, 73.10% and 90.64% in TE-2003 if the produce were sold on MSP; these grains would have decreased to 71.79% and 52.60% in TE-2006. The lower returns may be due to comparatively low productivity of these two crops. But return in case of maize was recorded an upward trend due to the fact that area under maize increased hence the production also enhanced. Highest returns were recorded during the period TE-2009 in all the crops under study. The reasons may be enhanced productivity, favourable climatic conditions and improved use of technology. But gains started declining in case of wheat and maize in TE-2012 and TE-2015. The changes may be due to hike in inputs prices and enhanced wages and lack of procurement process specially in case of maize. Paddy exhibited almost stagnant gain during TE-2012 to TE-2015.

When cost A_2 and family labour cost per hectare was taken into account for assessing gain over MSP (Table 7), the result indicated that percentage gain over cost A_2+FL were 37.85%, 55.53% and 49.18% during TE-2015. The observations reflected that only a little reduction in human labour and fertilizer cost the 1.5 times of cost of produces may easily be achieved in case of paddy and maize crops. Gain in case of wheat was found almost upto the expectation/target of the government.

When cost C_2 which includes interest on value of owned capital assets (excluding land), rental value of owned land and rent paid for leased-in land, imputed value of family labour was considered in estimating gains if it was supposed that all the produced was sold on MSP, the gains so calculated were shown in Table 8.

The results indicated that percentage gain over cost C_2 were 1.2%, 0.73% and 6.35% for paddy, wheat and maize respectively in Bihar. Which further went down and negative gain was observed in case of paddy and wheat during TE-2006. Again the gains escalated to 14.81%, 26.43% and 47.15% for paddy, wheat and maize. These gains may be due to enhanced production of crops during that particular period. Again these gains shifted downwards and the gains were assessed only 0.60% for paddy, 9.37% for wheat and 2.14% in case of maize. The reasons may be erratic climatic conditions, steep hike in inputs and wages.

Trends in variable cost of inputs in cost of cultivation estimates

Percentage contribution of different cost components are presented in Table 9. On perusal of the table , it may be inferred that cultivation of paddy, wheat and maize were labour intensive as the percentage labour cost over operational cost were computed as 36.24%, 16.99% and 21.68% for paddy, wheat and maize respectively during TE-2003. The trend of labour charges were found fluctuating over the time but major share of labour charges was noticed in calculating cost of cultivation of the crops under study.

In case of paddy the share of human labour is the highest due to labour used in transplanting. If use of paddy transplanter could be popularized as well as better paddy transplanter could be designed to be suitable for small and marginal farmers, the cost of labour can be reduced significantly. Similarly with other crops better mechanization, the cost of labour can be easily reduced.

Percentage of fertilizer cost over the operational cost is other major components of cost of cultivation of the crops under

investigation. Fertilizer cost account for about Paddy (11.42%), wheat (20.91%) and maize (20.99%) during TE-2003 and remained almost stagnant during TE-2015 i.e. paddy (11.06%), wheat (19.07) and maize (18.25%) respectively. Fertilizer cost was the second largest component, after casual labour charges, in the operational costs of cultivation. Fertilizer and manure being an important input leading to productivity of the crops, there is a tendency among farmers to go on increasing the application of fertilizers and manure along with high-yielding seeds. Chemical fertilizers induce weeds and pests which resulted in application of insecticides, pesticides and weedicides. Excess use of water, or too little use of water, have adverse effects the fertilizers responses. For controlled water use, cultivators have to implement new technologies of irrigation. High yielding varieties of the crops are short duration and needed inter-culturing in quick succession. This is only possible by adoption of new farming implements for different operations viz., land preparation, planting, watering, weeding, harvesting and threshing. Level of application of fertilizers and manure that determines the level of mechanization and the paid out costs in cultivation

Machine labour charge which was 9.71%, 23.67% and 8.2% for paddy, wheat and maize over operational cost respectively during TE-2003, rose to 12.01%, 25.80% and 11.72% in TE-2012 again in case of paddy and maize machine labour cost went up to as much as 12.23% for paddy and 13.09% for maize but reduced in case of wheat during TE-2015.This could be attributed mainly due to growing diffusion in mechanization in all the operations of farming. In Bihar, number of farm holdings were about 1.61 crore of which 91% were marginal farmers. Use of machine labour on marginal lands was found costly.

Seeds are vital for harvesting good crops. The cost on seeds was found in the range of 7-16% of the operational cost in all the crops under investigation. More than 80 percent cultivators depend on farm-saved seeds. Farmers have to purchase seeds from private agencies. As these seeds are costlier and sometimes reported spurious. This is one of the reasons for higher production costs.

In Bihar seed replacement rate in case of paddy and wheat is very low i.e. 39.92% and 35.56% in paddy and wheat during TE-2015 (Table 10). Seed replacement rate was found comparatively higher in case of maize in the state. Bihar is known for highest rabi maize production in the country. Lack of proper marketing compelled the farmers to fetch low income from sale of maize.

The irrigation charges indicated that paddy accounted least irrigation charges as it is a kharif crop and mainly depend upon rain water. The irrigation charge on paddy cultivation was estimated 0.97% during TE-2003 and increased to 6.49% during TE-2015. This may be due to erratic nature of monsoon. The irrigation charges were assessed higher in case of wheat and maize as these crops are grown in rabi season in Bihar and needed comparatively higher irrigation. Irrigation in Bihar is generally by diesel pumps which are costlier and resulted in enhanced cost of cultivation. Maize is also grown in kharif season in Bihar but the rabi maize is more prevalent in the state.

Animal labour charges were found 8.73%, 7.13% and 8.12% for paddy wheat and maize in cultivation in Bihar over the operational cost. Animal labour charges gradually decreased with the time and assessed to 2.72% for paddy, 2.01% for wheat and 0.06% for maize. The decreasing trend in animal labour cost may be on account of use machines for ploughing, harvesting and threshing of the produce in the state.

Interest on working capital was computed and found in the range of 2% to 4% for all the crops under study. Interest on operation cost was found least among all costs involved in the cost of cultivation.

Hypothetical assumption to enhance gains

Perusal of tables 9 revealed that human labour cost was found major component followed by fertilizer cost of operational cost. It was further revealed that human labour cost was assessed highest in paddy. An assumption that if human

labours reduced by 20%, fertilizer cost by 10% and with proper management of farm yield increased only by 5%, the increase in farmers gain is depicted in the following figure Thus if we can reduce labour cost by 20% through mechanization, fertilizer cost by 10% through targeted fertilization, If we assume that just by seed replacement, yield will increase by 5% which is at lower end of estimate, the income will increase by 57.09% for paddy, 73.83% for wheat and 66.78% for maize. It will further increase if we could reduce post harvest losses and do some value addition.

If the whole scenario is seen in terms of crop rotation i.e. paddy-wheat and paddy-maize, the net return for a full year the income will increase by 49.61% and 65.55% and 58.84%, respectively if no increase in productivity is assumed.

It is therefore evident that enhancing MSP by 1.5 time of production cost is not difficult especially in low investment low productivity, low income scenario of Bihar agriculture. Only requirement is proper mechanization compatible to conditions of small and marginal farmers, reduction in cost of fertilizer with targeted fertilizer as well as using vermi-compost seed replacement, and electrification of irrigation pumps on input cost side. On the output side we need to reduce post harvest losses by adequate storage facilities and develop infrastructure for value addition at local level.

Table 1: Average area of major cereal crops of Bihar (000' ha)

Crop	TE-2003	TE-2006	TE-2009	TE-2012	TE-2015	TE-2017
Paddy	3597.57 (45.26)	3339.00 (44.17)	3478.33 (45.07)	3106.33 (42.10)	3237.73 (42.17)	3278.49 (43.48)
Wheat	2120.98 (26.68)	2033.67 (26.90)	2101.33 (27.23)	2119.33 (28.72)	2170.41 (28.27)	2123.66 (28.16)
Maize	606.20 (7.63)	634.67 (8.40)	644.00 (8.34)	664.00 (9.00)	710.62 (9.26)	710.79 (9.42)
Total Cereals	6366.00 (80.09)	6052.63 (80.07)	6261.17 (81.12)	5921.11 (80.24)	6144.78 (80.04)	6130.17 (81.30)
Gross cropped area (GCA)	7948.85	7559.40	7718.18	7378.85	7676.89	7540.50

Figures in parentheses are percentage of GCA, Source: Bihar Through Figures, Govt. of Bihar

Table 2: Average production of major cereal crops in Bihar (000'tonnes)

Crop	TE-2003	TE-2006	TE-2009	TE-2012	TE-2015	TE-2017
Paddy	5244.25 (47.54)	3856.28 (44.19)	5061.03 (43.93)	4992.12 (40.05)	7737.74 (49.05)	7760.87 (50.06)
Wheat	4289.88 (38.89)	3244.07 (37.17)	4536.15 (39.37)	5396.22 (43.29)	5293.05 (33.55)	4764.17 (30.73)
Maize	1425.74 (12.92)	1441.95 (16.52)	1777.07 (15.42)	2047.96 (16.43)	2712.98 (17.20)	2947.18 (19.01)
Total Cereals	11031.67	8726.67	11521.90	12464.62	15774.72	15502.51

Figures in parentheses are percentage of total cereal production, Source: Bihar Through Figures, Govt. of Bihar

Table 3: Compound growth rates (CGR) of area and production of major cereals in Bihar

Crops	Period (2000-01 to 2016-17 (CGR in %)	
	Area	**Production**
Paddy	-0.30	1.62
Wheat	0.08	1.09
Maize	0.51	2.48
Total Cereals	-0.10	1.55

Table 4: Average Cost of cultivation (Cost A$_2$) of major cereal crops of Bihar (Rs/ha)

Crop	TE-2003	TE-2006	TE-2009	TE-2012	TE-2015
Paddy	6698.39	8074.93	9107.45	12279.71	19221.22
Wheat	8478.58	8955.43	10512.05	13824.42	19886.73
Maize	7637.35	9078.50	12141.96	16374.05	20694.52

Source: Computed from CACP data

Table 5: Average Cost C$_2$ of major cereal crops of Bihar (Rs/ha)

Crop	TE-2003	TE-2006	TE-2009	TE-2012	TE-2015
Paddy	12368.63	14459.65	16211.87	22852.62	34700.18
Wheat	14573.57	15307.92	17407.16	24179.80	34436.44
Maize	13690.33	16308.20	20057.51	26721.56	37571.49

Source: Computed from CACP data

Table 6: Gain from MSP over cost A$_2$ of major cereal crops of Bihar (Rs/ha)

Crop	TE-2003	TE-2006	TE-2009	TE-2012	TE-2015
Paddy	86.86	71.79	104.37	80.51	81.62
Wheat	73.10	52.60	109.40	107.90	89.40
Maize	90.64	114.61	143.08	104.43	85.44

Table 7: Gain from MSP over cost A$_2$+FL (A$_2$+Family labour) for major cereal crops of Bihar (Rs/ha)

Crops	TE-2003			TE-2006			TE-2009		
	Return on MSP	**Cost A2+FL**	**%change (Gain/ loss)**	**Return on MSP**	**Cost A2+FL**	**%change (Gain/ loss)**	**Return on MSP**	**Cost A2+FL**	**%change (Gain/ loss)**
Paddy	12513.7	8502.257	47.18	13870.8	10055.49	37.94	18634.63	11176.37	66.73
Wheat	14671.37	9898.87	48.21	13659.33	10450.32	30.71	22304.07	12175.06	83.19
Maize	12409.03	9513.02	30.44	19087.38	10486.87	82.01	26137.6	12704.18	105.74

Crops	TE-2012			TE-2015		
	Return on MSP	**Cost A2+FL**	**%change (Gain/loss)**	**Return on MSP**	**Cost A2+FL**	**%change (Gain/loss)**
Paddy	22365.97	16792.33	33.19	35025.13	25408.88	37.85
Wheat	28727.05	17534.43	63.83	37662.67	24215.75	55.53
Maize	30444.00	17914.27	69.94	38125.47	25556.22	49.18

**Table 8: Percentage gain over MSP on average cost C_2 of major cereal crops of Bihar (Rs/ha)**

Crop	TE-2003	TE-2006	TE-2009	TE-2012	TE-2015
Paddy	1.20	-4.06	14.81	-3.00	0.60
Wheat	0.73	-10.75	26.43	18.88	9.37
Maize	6.35	19.47	47.15	25.26	2.14

Table 9: Percentage value of different operational cost components

Period	Operational cost of paddy cultivation (%)						
	Casual labour	**Fertilizer & manure**	**Machine labour**	**Seed**	**Irrigation**	**Animal labour**	**Interest on working capital**
TE-2003	36.24	10.42	9.71	9.26	0.97	8.73	2.36
TE-2006	33.54	11.06	11.32	8.37	5.1	7.61	2.42
TE-2009	38.01	11.46	12.55	8.45	1.81	5.92	2.45
TE-2012	32.69	8.49	12.01	7.55	4.75	4.75	2.2
TE-2015	34.42	11.06	12.23	5.88	6.49	2.72	2.28
	Operational cost of wheat cultivation (%)						
TE-2003	16.99	20.91	23.67	11.89	16.36	7.13	3.04
TE-2006	13.45	19.2	25.49	13.13	18.12	7.57	3.04
TE-2009	15.34	17.39	26.1	14.56	18.18	5.38	3.03
TE-2012	17.07	16.33	25.8	15.06	17.96	4.75	3.03
TE-2015	25.34	19.07	23.33	12.79	14.66	2.01	2.8
	Operational cost of maize cultivation (%)						
TE-2003	21.68	20.99	8.82	7.27	10.33	8.12	2.42
TE-2006	20.01	16.23	12.86	8.38	15.87	4.01	2.43
TE-2009	20.50	17.09	12.5	10.48	18.77	2.41	2.56
TE-2012	20.39	15.32	11.72	14.29	17.7	0.51	2.51
TE-2015	21.85	18.25	13.09	10.18	11.27	0.06	2.35

Table 10: Seed replacement rates (SRR) in Bihar (%)

Crop	TE-2003	TE-2006	TE-2009	TE-2012	TE-2015
Paddy	6.68	9.60	15.00	31.67	39.92
Wheat	8.61	9.37	16.67	29.77	35.56
Maize	26.82	40.00	75.67	90.67	86.67
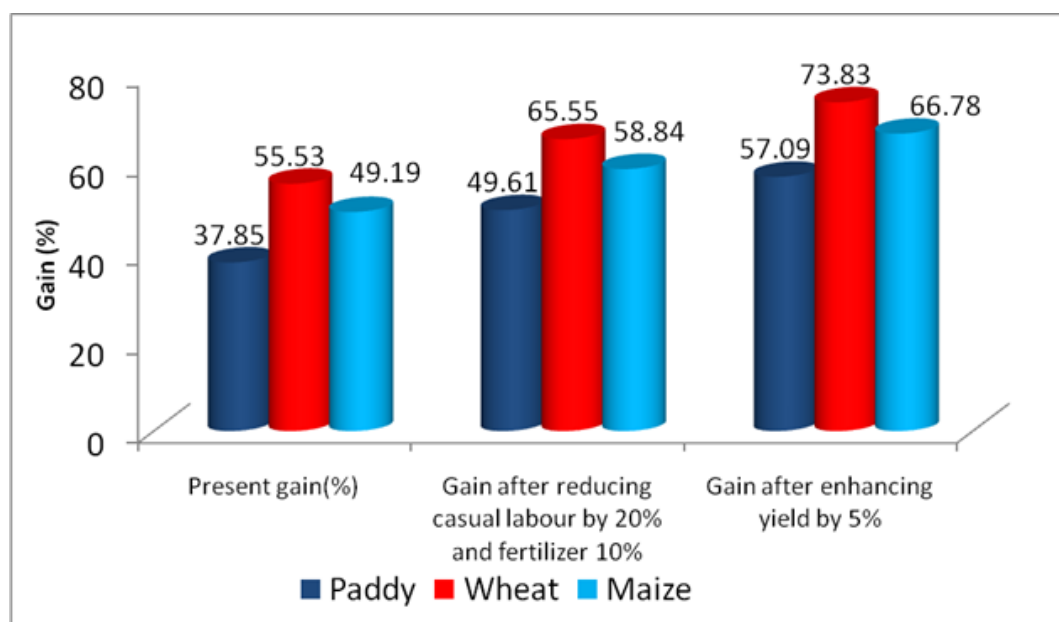
Fig. 1: Gain from MSP over A2+Family labour: Farmer's management policy

CONCLUSION

It may be concluded from the findings that farmer's gains from paddy, wheat and maize over operational cost (Cost A_2) were found 81.62%, 89.40% and 85.44%, respectively during the period TE-2015. Further, if we take family labour cost into account percentage gains were found to be 37.85%, 55.53% and 49.18% for paddy, wheat and maize, respectively. In this situation to achieve the fixed target only a little cost on human labour and fertilizer in case paddy and maize may have to optimize. In case of wheat we are already achieving the 1.5 time cost of produce during TE-2015. If we account cost C_2, the farmers may be in losses from the crops under study. The gain percentage over cost C_2 during TE-2015 were computed only 0.60%, 9.37% and 2.14 for paddy, wheat and maize.

It is evident from foregoing discussion that human labour cost was the highest among all components with maximum in paddy followed by maize and wheat as the percentage labour cost over operational cost were computed as 36.24%, 16.99% and 21.68% for paddy, wheat and maize respectively during TE-2003. The trend of labour charges were found fluctuating over the time but major share of labour charges was noticed in calculating cost of cultivation of the crops under study. This cost may be reduced by designing such implement which could be suitable for marginal and small farmers. Seed replacement rate in the state was found comparatively low if the existing seed may be replaced with certified and quality seed, the cost will increase but the productivity will also increase. The second largest component was fertilizer cost it may be reduced by using only the required nutrients on the basis of information obtained from Soil Health cards. The other alternative may be preparation of vermi-compost at village level using household waste i.e. linking it with *Swachhchh Bharat Mission* and payment of wages for labour may be made from MANREGA.

Irrigation in Bihar is mostly done by using diesel pump sets which is costlier if these diesel pumps is replaced by electric pumps the cost of irrigation may be reduced. If centrifugal pump presently in use is replaced by efficient submersible pumps, the cost may further be reduced. The public procurement system is not transparent, this should be made transparent and easy accessibility should be provided by operating procurement centres at Panchayat level. Only then we may provide proper prices of their produce to the farming community. Hence, only considering the cost A_2 the cultivators may be provided 1.5 times cost of their produces. Providing cost of produce 1.5 times on cost C_2 is not feasible it would be only a dream not reality.

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