

CONCLUSION

Regarding the study of variations in the structure of cultivation of different crops in different states, the evidences are at variance. But there are some similarities across crops and across states where these crops are cultivated. The study reveals that except few states and crops, the relative share of variable cost is less than fixed cost. The exceptions are in the cultivation of Urad in which case the share of variable cost is greater than that of fixed cost in the states of Madhya Pradesh and Orissa. In the cultivation of Bajra where relative share of variable cost is greater than that of fixed cost in the states of Haryana but, In case of Maharashtra and Rajasthan in case of U.P, and Karnataka fixed cost is greater than variable cost. Similarly in the case of cultivation of Maize where relative share of variable cost is greater than fixed cost. In the states namely, Bihar, H.P, M.P, U.P and Rajasthan, only in A.P fixed cost is greater than fixed cost. In case of Gram only in Haryana share of variable cost is greater than fixed cost but in rest of the states namely Bihar, M.P, U.P, Rajasthan fixed cost is greater than variable cost. In case of Moong share of variable cost is greater than fixed cost in the state of A.P, M.P, Orissa, U.P, M.P, Assam, Bihar, Haryana, Punjab and W.B. In the case of Punjab relative share of fixed cost is greater than variable cost in Paddy cultivation. In case of wheat relative share of fixed cost is greater than variable cost in many states namely Bihar, Gujarat, Haryana, H.P, M.P, Rajasthan and U.P but only in Punjab relative share of variable cost is greater than fixed cost.

Estimation of state wise growth rate and variations in productivity (yield) for different crops show different productivity level of different states. The value of coefficient of variation (C.V.) of paddy varies from a minimum value of 31 percent in 1990-00 to a maximum of 43 percent in 2004-05. The state of Andhra Pradesh has the highest 50.10 mean productivity level of quintal per hectare while Madhya Pradesh has the lowest 17.96 mean level of productivity i.e., quintal per hectare. The value of coefficient of variation (C.V.) of Jowar varies from a minimum value of 7 percent in 1996-97 to a maximum of 56 percent in 2005-06. The state of Maharashtra has the highest mean productivity level of 13.14 quintal per

hectare while Rajasthan has the lowest mean level of productivities, 4.93 quintal per hectare. The value of coefficient of variation (C.V.) of Bajra varies from a minimum value of 19 percent in 1998-99 to a maximum of 44 percent in 2008-09. The state of Gujarat has the highest 17.28 mean productivity level of 32 quintal per hectare while Karnataka has the lowest mean level of productivity i.e. 7.21 quintal per hectare.

The value of coefficient of variation (C.V.) Maize varies from a minimum value of 4 percent in 1996-97 to a maximum of 60 percent in 2008-09. The state of Andhra Pradesh has the highest 30.11 mean productivity level of 46 quintal per hectare while Chhattisgarh has the lowest mean level of productivity i.e. 9.84 quintal per hectare. The value of coefficient of variation (C.V.) of Wheat varies from a minimum value of four percent in 2006-07 to a maximum of 49 percent in 1999-00. The state of Punjab has the highest mean productivity level of 43.20 quintal per hectare while Chhattisgarh has the lowest mean level of productivity i.e., 12.80 quintal per hectare. The value of coefficient of variation (C.V.) of Urad varies from a minimum value of 12 percent in 1997-98 to a maximum of 59 percent in 2005-06. The state of Andhra Pradesh has the highest 7.07 mean productivity level of quintal per hectare while Rajasthan has the lowest 3.65 mean level of productivity i.e., quintal per hectare. While the value of coefficient of variation (C.V.) of gram varies from a minimum value of 17 percent in 1997-998 to a maximum of 40 percent in 2007-08. The state of Uttar Pradesh has the highest 10.68 mean productivity level of quintal per hectare while Jharkhand has the lowest 5.75 mean level of productivity i.e., quintal per hectare. Another value of coefficient of variation (C.V.) of Moong varies from a minimum value of 15 percent in 2006-07 to a maximum of 56 percent in 2002-03. The state of Andhra Pradesh has the highest mean productivity level of 5.07 quintal per hectare while Rajasthan has the lowest mean level of productivity i.e., 2.85 quintal per hectare.

GVO ratio (gross value output) and alternative cost and margin of GVO over alternative cost are shows two different type cost in agriculture. The coefficient variation value shows disparity of state wise. In the first, shows the ratio of cost A_2 (Paid out cost), second shows ratio of A_2+FL (Paid

out cost+ Family Labour) and last point show the ratio of C_2 (Total cost) of nineteen states are show the different cost ratio of two time period in 2002-03 and 2008-09. Ratio of cost A_2 maximum in Himachal Pradesh and Rajasthan has 2.72 in 2002-03 and Haryana has maximum value 3.19 in 2008-09. Cost $A_2 + FL$ ratio is maximum in Bihar has 1.44 in 2002-03 and Uttarakhand has maximum in cost ratio in 2008-09. In the last cost C_2 maximum ratio in Andhra Pradesh in 2002-03 and Rajasthan has maximum ratio in 2008-09. Coefficient of variation of different years shows different values. Maximum coefficient of variation value is 0.27 in the year 2008-09 and minimum is 0.19 in the year 2002-03. But the margin of GVO over alternative cost shows absolute value of cost. Punjab has maximum margin of A_2 16504.21 in the year 2002-03 and maximum margin value 26033.47 in Haryana. Margin of A_2+FL maximum value 33318.71 in Uttarakhand in the year 2002-03 and 27461.96 in the year 2008-09. Margine value of cost C_2 Rajasthan has maximum 4555.37 in 2002-03 and margin value in 2008-09 maximum in Maharashtra. Coefficient Variation value maximum is 0.44 cost A_2 in 2008-09 and minimum is -23.42 costs C_2 in 2008-09.

An important conclusion that holds across crops and most of the states is that human labour cost is a dominant cost in the total cost. Another important conclusion is that in case of almost every state that there is a trend of replacing bullock labour by machine labour.

Appendix Table
Gross Value Output and Different Costs

(Rs./Hect)

State	Paid out Cost		Non Paid out Cost		Paid out Cost Plus Family Labour		Total Cost		Gross Value Output	
	<u>2002-03</u>	<u>2008-09</u>	<u>2002-03</u>	<u>2008-09</u>	<u>2002-03</u>	<u>2008-09</u>	<u>2002-03</u>	<u>2008-09</u>	<u>2002-03</u>	<u>2008-09</u>
	A. Pradesh	8212.88	14005.54	6996.44	13363.48	13604.3	25331.38	15209.33	27369.02	15177.85
Assam	5350.08	8890.14	7756.81	11822.86	10868.22	17542.95	13106.89	20713	12301.09	20537.76
Bihar	7166.09	10348.86	7065.9	9755.63	10583.48	15138.44	14231.99	20104.49	15351.68	29874.16
Haryana	9196.85	11807.75	9066.59	16684.25	14395.04	19719.93	18263.44	28492	19489.34	37841.21
Kerala	18945.57	24352.08	7252.75	12415.56	32907.3	40197.76	26198.32	36767.64	27651.71	48965.13
M. Pradesh	4981.76	9301.53	4818.28	8695.56	7569.35	13794.9	9800.04	17997.09	8603.05	19734.48
Karnataka	8888.25	10650.24	6295.63	9217.09	13002.52	16317.47	15183.88	19867.33	14400.54	17920.99
Orissa	5055.96	6713.67	5166.45	7869.45	8787.16	12085.29	10222.41	14583.12	8035.27	16134.01
Punjab	14968.77	19459.99	11405.93	21034.3	18809.86	25662.255	26374.7	40494.29	31472.98	27413.16
Tamil Nadu	9390.45	11730.54	9669.47	8571.42	15492.42	19953.24	19059.92	20301.96	16259.64	23940.45
Uttar Pradesh	4885.12	8648.84	6924.13	11867.13	8678.75	14550.13	11809.25	20515.97	10487.03	19865.53
West Bengal	13027.96	17838.23	11275.74	15207.89	22418.76	31872.87	24303.7	33046.12	18764.79	32621.11
Jharkhand	4462.25	9013.12	5912.25	7244.96	8099.18	13852.21	10374.5	16258.08	10145.89	16414.36
Chhattisgarh	4420.05	6898.14	5338.59	7354.25	6730.22	10404.7	9758.64	14252.39	9073.55	16371.32
Uttarakhand	7158.97	11691.93	9616.77	16405.23	13668.53	17548.68	16775.74	28097.16	13971.61	45010.64
Rajasthan	4505.7	6145.08	3220.50	4386.69	10689.69	14331.98	7726.2	10531.77	12281.58	18714.54
Maharashtra	6834.79	11373.21	3775.32	6981.22	9451.54	15999.11	10610.11	18354.43	10028.53	30648.58
H. Pradesh	3950.92	5443.24	7541.98	9683.07	7580.14	9444.48	11492.9	15126.31	10791.18	12605.08
Gujrat	9489.79	12726.59	6277.15	9125.87	13946.39	17918.65	15766.94	21852.46	18280.31	31146.24

