



APPENDIX

**APPENDIX -I**

**Economics of Cash Crops Production and Marketing: An Empirical Study of Potato, Onion and Garlic in Malwa Plateau**

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**Name of Supervisor: Dr. Gyan Prakash (Professor)**

**Name of Investigator: Shrichand Jat**

Name of respondent:

Date:

Name of village:

Block

District

**1. Family size :**

Category	Number	Occupation				Total income (Rs)
		Studying	Farming	Agril. labour	Govt. service	
Male						
Female						
Children						
Total						

**2. Land holding information (in hectares):**

Class	Owned	Leased in	Leased out	Share cropped	Total	Current fallow	Permanent fallow
Total							
Irrigated							
Un irrigated							
Rental value							
Fallow land							

**Total operated area ( hectares ) :**

**In kharif ----- In rabi-----**

**In summer-----**

**Rent ( share) in case of**

**Leased in per ha  
Share in per ha**

**Leased out per ha  
Share out per ha**

**Source of irrigation:**

S.N.	Source of irrigation	Partial irrigation (ha)	Complete irrigation (ha)
1	Canal		
2	Open well		
3	Tube well		
4	Tank		
5	Farm pond		
6	River		
7	Other ( specify)		

**Problems in adequate irrigation:**

S.N.	Problems	Agreed	Not agreed
1	Lack of water resources		
2	In adequate availability of ground water		
3	Problems in power supply		
4	Others ( specify)		

**Farm buildings, machinery and implements :**

S.N.	Type of asset	Number	Year of purchase /construction	Remaining life (years)	Present value (Rs)
1	Cattle shed				
2	Storage shed				
3	Pump house				
4	Tractor shed				
5	Other farm buildings				
6	Tractor				
7	Power sprayer				
8	Thresher				
9	Truck				
10	Jeep				
11	Motor cycle				
12	Potato planter				
13	Grader				
14	Iron plough				
15	Wooden plough				
16	Oil engine				
17	Electric motor				
18	Irrigation implements				
19	Animal cart				
20	Other tools Hoe , sickle, axe, scythe etc				

**Cropping pattern :**

S.N.	Kharif			Rabi			Summer		
	Crop	Area	Production	Crop	Area	Production	Crop	Area	Production
1									
2									
3									
4									

**Cropping systems :**

S. N.	System intercropping / strip crop	Area	Ratio	Yield Q/ha Main product		Yield Q/ha By product		
				Main	Other	Type	Quantity	Rate (Rs)
1								
2								
3								
4								

**Preparatory tillage :**

S. N.	Operation	Frequency		Bullock pair		Tractor plough	
		Once in year	Once in two year	Number	Rate (Rs)	Hours	Rate (Rs)
1	Deep ploughing						
2	Stubble removal						
3	Ploughing						
4	Harrowing						

**Seed and sowing :**

S. N.	Variety	Area (ha)	Date of sowing	Spacing	Seed rate	Male labour hrs.	Female labour hrs.
1							
2							
3							

**Fertilizer and Manures application: ( per hectare basis)**

S. N.	Methods of application	Type	Qty. (Kg)	Value (Rs)	Bullock	Tractor	Male labour	Female labour
1								
2								
3								

**Value of male labour:**

**Value of female labour:**

**Value of material used:**

**Total cost of fertilizer application (Rs):**

**Availability of seed and other inputs:**

S. N.	Facility	Sources of inputs						
		Owned	Private dealers	Cooperatives	Agril. Dept.	Seed corpo.	Friend farmer	Money lenders
1	Timely supply							
2	Sufficient quantity							
3	Good quality input items							
4	Low price							
5	Easy approach							
6	Credit facilities							
7	No alternatives							

**Interculture operation on the farm:**

S. N.	Operation	Stage of crop (das)	Human labour		Machine/ Bullock power	
			Days	Value (Rs)	Hours	Value (Rs)
1	Interculture (Machine or Bullock)					
		I				
		II				
		III				
2	Weeding (Human labour)					
		I				
		II				
		III				
3	Earthing (Human labour)					
		I				
		II				
		III				
4	Topping (Human labour)					
		I				
		II				
6	Total					

**Plant protection measures:**

S. N.	Name of disease/insect	Period of occurrence (das)	Chemical used	Quantity Kg/Lit.	Type of sprayer	Cost incl. of labour (Rs)
1						
2						
3						

Plant protection : scheduled / need based.

Source of chemicals / plant protection material: private / institutional

Who advice to use plant protection measure:

**Cost of cultivation of potato/onion / garlic crop: (per hectare)**

Operations	Labour used						Input used		
	Human		Bullock		Machine		Name	Qunt.	Value (Rs)
	Day	Value (Rs)	Day	Value (Rs)	Day	Value (Rs)			
Land preparation									
Manuring									
Seed treatment									
Sowing and planting									
Fertilizer application									
Micro nutrient application									
Inter culture									
Plant protection									
Irrigation									
Watching									
Harvesting/ digging									
Transportation of farm									
Cleaning, Grading, etc.,									
Miscellaneous									
Int. on working capital									
Rental value and taxes									
Total									

Human L (RS).....Bullock L s).....Machine(Rs).....

Input material cost (Rs)..... Total cost (Rs).....

**Harvesting of the crop :**

S. N.	Operations	Human labour days	Value (Rs)	Machine / Bullock power (Hrs.)	Value (Rs)	Total cost (Rs)
1	Digging					
2	Collection of farm					
3	Transportation on farm					
4	Total					

Main product:.....Q @ Rs/q ..... = Rs. ....  
 By product:.....Q @ Rs/q ..... = Rs. ....  
 Gross income Rs. .... Net profit: Rs. ....  
 Cost benefit ratio :

**Disposition of crops:**

S.N.	Particulars	Potato	Onion	Garlic
1	Seeds			
2	Cattle feed			
3	Kind payment			
4	Others			
5	Post harvest losses			
6	Quantity sold (q)			
7	Period of sale			
8	Rate ( Rs/q)			
9	Type of market			
10	Reason for selling			
11	Prices			
12	Distance (kms)			
13	Transport mode			
14	Other expenses			

**Period of sale** : immediately , 15 days , 1 month, 2 month ,3 month after harvest

**Type of market** : Local market, village merchant , cooperative society , regulated market, commission agent ,others(specify)

**Reason for selling** : fair price, less exploitation, distress sale, pre-harvest contract , lack of transport , better marketing facilities, other (specify)

**prices** : not fair , satisfactory , good.

**Transport mode** : cart, tractor, bus , truck head load other ( specify)

Name of Traders/ Dealers:

Place:

**Marketing cost of producer/traders / dealers**

S.No.	Particulars	Amount (Rs)
1	Bagging charge	
2	Loading charge	
3	Cost of bag	
4	Transportation charge	
5	Market fees	
6	Unloading charge	
7	Octroi	
8	Darmada	
9	Karda	
10	Losses	
11	Mandi tax (@ 2%)	
12	Other charges	
13	Total (P <sub>2</sub> )	
14	Amount paid by different channels	
15	Net price received by farmers/traders/ dealers (P <sub>3</sub> )	

**Procurement of Potato /Onion/ Garlic :**

Month	Procurement from Farmers/mediators/ Mandi	Value Rs.	Transportation charges Rs.	Mandi taxes Rs.	Total marketing cost Rs.	Remark
June						
July						
August						
Sep						
Oct						
Nov						
Dec						
Jan						
Feb						
March						
April						
May						

**Disposal of Potato /Onion/ Garlic:**

Month	Disposal for the purpose of Export/Market/ Processing	Value Rs.	Transportation charges Rs.	Mandi taxes Rs.	Total marketing cost Rs.	Remark
June						
July						



August						
Sep						
Oct						
Nov						
Dec						
Jan						
Feb						
March						
April						
May						

### CONSTRAINTS IN PRODUCTION AND MARKETING

S. No.	Constraints	Response
<b>Production constraints</b>		
1	Non availability of good quality cloves for sowing purpose (HYV)	Agree / not agree
2	High price of seed, fertilizers, pesticides and fungicides	Agree / not agree
3	High wage rate of labour	Agree / not agree
4	Ignorance of severe infestation of insect-pest disease control	Agree / not agree
5	Technological problem in farm production (low productivity)	Agree / not agree
6	Non-availability of funds from institutional sources	Agree / not agree
<b>Marketing constraints</b>		
1	Monopoly and forced marketing in vegetable market	Agree / not agree
2	Late and inadequate returns in market	Agree / not agree
3	Market located at a distant place	Agree / not agree
4	Unauthorized charges	Agree / not agree
5	Large number of middlemen	Agree / not agree
6	Small and scattered holding	Agree / not agree
7	Technological development problem in farm production	Agree / not agree
8	Poor handling and packing	Agree / not agree
9	Lack of standardization and grading	Agree / not agree
10	Inadequate storage capacity	Agree / not agree
11	Malpractices in markets	Agree / not agree
12	Multiplicity of market charges	Agree / not agree
13	lack of market information	Agree / not agree
14	Lack of farmers organization	Agree / not agree
15	Inadequate means of transport	Agree / not agree
16	Communication problems	Agree / not agree
17	Lack of information about quality parameters	Agree / not agree
18	Lack of marketing intelligence	Agree / not agree
19	Lack of fund at the time of marketing	Agree / not agree
20	Social and religious restrictions	Agree / not agree

**Suggestions to improve Agricultural marketing :**

<b>S.N.</b>	<b>Particulars /Constraints</b>	<b>Response</b>
1	Establishment of regulated markets	Agree / not agree
2	Standardization and grading facilities	Agree / not agree
3	Standard weight and measures	Agree / not agree
4	Improvement in handling and packing	Agree / not agree
5	Provision of storage facilities	Agree / not agree
6	Improving transport facilities	Agree / not agree
7	Market information	Agree / not agree
8	Market research	Agree / not agree
9	Market extension	Agree / not agree
10	Provision of Agricultural marketing training to the farmers	Agree / not agree
11	Co-operative marketing	Agree / not agree
12	Provision of cold storage facilities	Agree / not agree
13	Reduction in post harvest losses	Agree / not agree
14	Development of physical market	Agree / not agree
15	Refrigerated transport	Agree / not agree
16	Credit facility	Agree / not agree
17	Insurance at different level	Agree / not agree
18	E – marketing facility	Agree / not agree
19	Government participation in marketing (Export)	Agree / not agree
20	Reduction in taxes, market charges etc.	Agree / not agree