VI ANALYSIS OF THE FARMING SITUATION OF MAJOR CROPS OR COMMODITIES IN EACH AES AND THE RESEARCH & EXTENSION GAPS EMERGED AND THE STRATEGIES TO BRIDGE THE GAPS

The following farming situations are identified in the district for different crops and animals :

Sl. No.	Crop / Animal	Situation	
		FS-1	FS-2
1	Paddy	Upland direct seeded	Medium land transplanted
2	Wheat	Normal sown Irrigated	Late sown irrigated
3	Maize	Early sown rainfed	Normal sown rainfed
4	Arhar	Upland rainfed	Late rainfed
5	Brinjal	Upland rainfed kharif	Upland normal sown irrigated
6	Tomato	Upland rainfed kharif	Normal sown rainfed
7	Potato	Upland normal sown irrigated	Upland irrigated Rabi
8	Pig	Rainfed local breed land less	Rainfed Improved breed loand owner
9	Poultry	Local backyard poultry land less	Improved backyard poultry land owner
10	Cow	Irrigated + rainfed local breed	Irrigated Improved breed
11	Goat	Land less local breed	Black Bengal rainfed
12	Buffaloes	Rainfed local breed	Irrigated Improved breed
13	Fishery	Rainfed seasonal pond	Rainfed perinial pond

Chapter VI Table 1
No. and percentage of different farming situation of a crop in district

Agriculture **District: Chatra**

Crop	AES 1 20210ha (No. & Percentage)				AES 2 21210 ha (No. & Percentage)				AES 3 38125 ha (No. & Percentage)				AES 4 8003 ha (No. & Percentage)			
	FS 1		FS 2		FS 1		FS 2		FS 1		FS 2		FS 1		FS 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Paddy	12126	60	8084	40	11666	55	9545	45	3813	10	34313	90	5602	70	2401	30
Crop	AES 1 1810 ha (No. & Percentage)				AES 2 6712 ha (No. & Percentage)				AES 3 12634 ha (No. & Percentage)				AES 4 1774 ha (No. & Percentage)			
	FS 1		FS 2		FS 1		FS 2		FS 1		FS 2		FS 1		FS 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Wheat	181	10	1629	90	2282	35	4430	65	2779	22	9855	78	177	10	1597	90
Crop	AES 1 4610 ha (No. & Percentage)				AES 2 3222 ha (No. & Percentage)				AES 3 4372 ha (No. & Percentage)				AES 4 1277 ha (No. & Percentage)			
	FS 1		FS 2		FS 1		FS 2		FS 1		FS 2		FS 1		FS 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Maize	1383	30	3227	70	1353	42	1869	48	2623	60	1749	40	792	62	485	38
Crop	AES 1 1226 ha (No. & Percentage)				AES 2 712 ha (No. & Percentage)				AES 3 816 ha (No. & Percentage)				AES 4 2184 ha (No. & Percentage)			
	FS 1		FS 2		FS 1		FS 2		FS 1		FS 2		FS 1		FS 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arhar	858	70	368	30	320	45	392	55	359	44	457	56	655	30	1529	70

Horticulutre/Vegetable **District: Chatra**

Crop	AES 1 700 ha (No. & Percentage)				AES 2 650 ha (No. & Percentage)				AES 3 400 ha (No. & Percentage)				AES 4 350 ha (No. & Percentage)			
	FS 1		FS 2		FS 1		FS 2		FS 1		FS 2		FS 1		FS 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Tomato	245	35	455	65	260	40	390	60	180	45	220	55	140	40	210	60
Crop	AES 1 4500 ha (No. & Percentage)				AES 2 3600 ha (No. & Percentage)				AES 3 2200 ha (No. & Percentage)				AES 4 1500 ha (No. & Percentage)			
	FS 1		FS 2		FS 1		FS 2		FS 1		FS 2		FS 1		FS 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Potato	2475	55	2025	45	1260	35	2340	65	1100	50	1100	50	450	30	1050	70
Crop	AES 1 1202 ha (No. & Percentage)				AES 2 961 ha (No. & Percentage)				AES 3 240 ha (No. & Percentage)				AES 4 300 ha (No. & Percentage)			
	FS 1		FS 2		FS 1		FS 2		FS 1		FS 2		FS 1		FS 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Brinjal	240	20	962	80	192	20	769	80	-	-	240	100	-	-	300	100

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Table 1

No. and percentage of different farming situation of a crop in district

Livestock **District: Hazaribag**

Animal	**AES 1 215991No. (No. & Percentage)**				**AES 2 199192 No. (No. & Percentage)**				**AES 3 71997 No. (No. & Percentage)**				**AES 4 60000 No. (No. & Percentage)**			
	FS 1		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Cow	215991	100	-	-	191992	100	-	-	71997	-	-	-	24000	40	36000	60
Animal	**AES 1 86492 No. (No. & Percentage)**				**AES 2 111204 No. (No. & Percentage)**				**AES 3 49424 No. (No. & Percentage)**				**AES 4 40250 No. (No. & Percentage)**			
	FS 1		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Buffalo	86492	100	-	-	111204	100	-	-	49424	100	-	-	36225	90	-	4025
Animal	**AES 1 212125 No. (No. & Percentage)**				**AES 2 127275 No. (No. & Percentage)**				**AES 3 84850 No. (No. & Percentage)**				**AES 4 75000 No. (No. & Percentage)**			
	FS 1		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Goat	212125	100	-	-	127275	100	-	-	84850	100	-	-	52500	70	22500	30
Animal	**AES 1 28481 No. (No. & Percentage)**				**AES 2 21360 No. (No. & Percentage)**				**AES 3 21360 No. (No. & Percentage)**				**AES 4 15000 No. (No. & Percentage)**			
	FS 1		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Pig	28481	100	-	-	21360	100	-	-	12816	60	8544	40	9000	60	6000	40
Bird	**AES 1 367492 No. (No. & Percentage)**				**AES 2 275619 No. (No. & Percentage)**				**AES 3 2756619 No. (No. & Percentage)**				**AES 4 280000 No. (No. & Percentage)**			
	FS 1		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Poultry	367492	100	-	-	275619	100	-	-	275619	100	-	-	280000	100	-	-
Fishery	**AES 1 393 ha (ha & Percentage)**				**AES 2 235 ha (ha & Percentage)**				**AES 3 157 ha (ha & Percentage)**				**AES 4 150 ha (ha & Percentage)**			
	FS 1		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**		**FS 1**		**FS 2**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Fish	314	80	78	20	211	90	23	10	125	80	31	20	120	80	30	20

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - I **Crop: Paddy** **Resource Rich**

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	June-July	N			June-July	June-July	N		
Method	Broadcasting	Line sowing	P	1,4,9	1,2,5	Broadcasting	Transplanting	P	1,4,7,9	1,2,6
Variety	Local Gora	Birsa gora 1 Birsa gora 2 Anjali	F	1,2,3,7,8,9	1,2,5,7	IR-36, IR-64, Lalat	IR. 36, 64 and Seeta, Rajendra Dhan 202 Birsha Dhan 201 Pusa Basmati, Basmati-370	N	-	-
Seed Rate	40-60	40-50 kg/ha	P	1,9	1,2,5	80-100	40-50 kg/ha	P	1,7,9	1,2
Seed Treatment	-	Thiram 2g/kg seed	F	1,9	1,2,5	-	Thiram 2g/kg seed	F	1,9	1,2,5
Organic Manure	2 Ton/ha	10 Ton/ ha	P	1,5,8,9	1,2,6	2 Ton/ha	10 Ton/ ha	P	1,5,7,8	1,2,3
Fertilizer (Nutrient kg/ha	40:20:00	80:40:20			1,2,3,5,6		80:40:20			
Basal (N+P+K)	20:20:00	40:40:20	P	1,5,7,8	1,2,3,5,6	20:20:00	40:40:20	P	1,5,7,9	1,2,3,5,6
Top Dressing (N)	20	20+20		1,5,7,8	1,2,3,5,6	20	20+20			
Total	40:20:00	80:40:20		1,5,7,8	1,2,3,5,6	40:20:00	80:40:20			
Pest Management										
Stem Borer	Monocrotophos	Monocroptophos (0.05%)	N	-	-	Monocrotophos	Monocroptophos (0.05%)	N	-	-
Gandhi Bug	Quinalphos	Quinalphes 1.5 % 10kg/ha	N	-	-	Quinalphos	Quinalphes 1.5 % 10kg/ha	N	-	-

Disease Management										
Blast	Indofil-M-4.5	Indofil M – 45 2.5kg/ha	N	-	-	Indofil-M-45	Indofil M – 45 2.5kg/ha	N	-	-
Bacterial Blight	Indofil-M-4.5	Bavistin Dithne Z-78 1ml/liter	N	-	-	Indofil-M-45	Bavistin Dithne 2-78 Z-78 1ml/liter	N	-	-
Weed Management										
Mechanical	Hand weeding	Hand reding	P			Hand weeding	Hand reding	N	-	-
Herbicide	-	DXY Florfen 200gm/ha	F	1,3, 5,9	1,2,6	-	DXY Florfen 200gm/ha	F	1,3,4,5	1,2,5,6
Water Management	Rain fed	_	F	1,4,5,8	1,2,6	Rain fed	_	F	1,4,5	1,2,5
No. of Irrigation	-	As per Required		1,4,5,8	1,2,5		6-7		1,4,5	1,2, 6
Method		Flooding		1,4,5	1,2,5,6		Flooding, Basin		1,4,5	1,2, 6
Land Management										
Acidity		Lime, Gypsum	F	1,5,9	1,2,6	-	Lime, Gypsum	F	1,5	2,6
Water Logging	Open Bund	Open Bund	N	-	-	Open Bund	Open Bund	N	-	-
Method of Harvesting	Sickle	Sickle, Harvester				Sickle	Sickle, Harvester	N	-	-
Any Other/Threshing	Bullock	Tractor	P	5	4,5	Bullock	Tractor		1,5,6	1,2,4,5,6
Average Yield						20-25 q/ha	45-50 q/ha	P	1, 2, 3,5,8	1, 2, 3
Grain	6 q/ha	12 q/ha	P	1, 2, 3,5,8	1, 2, 3 & 4					
Straw										
Storage Pest Control	-	Aluminium phosphide 1 tablet/matric ton	F	1,9	,2,5		Aluminium phosphide 1 tablet/matric ton		1, 9	2

(*) F=Full **P=Partial** **N=Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - I

Crop: Paddy
Resource Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15th June – 30th June	N			June-July	15th June – 30th June	N		
Method	Broadcasting	Line sowing	P	1,4,9	1,2	Broadcasting	Line sowing	P	1,4,9	1
Variety	IR-36, IR-64 Local	IR-36, Sita, Birsa Dhan 201, 202 Kalinga, Rajendra Dhan – 202, birsamati, IR-64	P	1,2,5, 8,9	1,2, 7	IR-36, IR-64 Local	IR-36, Sita, Birsa Dhan 201, 202 Kalinga, Rajendra Dhan – 202, birsamati, IR-64	P	1,2,5,9	1,2,5,7
Seed Rate	120 kg/ ha	100 kg/ha (Direct Sown) 40-50 kg/ha Transplanting (Line sowing)	P	1,9	1,2	120 kg/ ha	100 kg/ha (Direct Sown) 40-50 kg/ha Transplanting (Line sowing)	P	1,9	1,2,5
Seed Treatment	-	Captan or Thiram @ 2 kg seed	F	1	2	-	Captan or Thiram @ 2 kg seed	F	1	2
Organic Manure	3 ton/ha	10 ton	P	1,5,9	1,2,6	3 ton/ha	10 ton	P	1,5	1,2
Fertilizer (Nutrient kg/ha	-	80:40:20	-		1,2,3,5,6	-	80:40:20	-		1,2,3,5,6
Basal (N+P+K)	80:60:30	40:20:20	P	1,5	1,2,6	80:60:30	40:20:20	P	1,5	1,2,3,6
Top Dressing (N)	50	20+20				50	20+20			
Total	130:60:30	175:250:34	P			130:60:30	175:250:34			
Pest Management		IPM					IPM			
Gall Midge	Endosulphan 2ml/lt	Endosulphan 35 EC 0.03%)	N	-	-	Endosulphan 2ml/lt	Endosulphan 35 EC 0.03%)	N	-	-
Stem Borer	-	Fuoradon 3 G @ 15 kg/ha	F	1	2	-	Fuoradon 3 G @ 15 kg/ha	F	1	1
Gandhi Bug	-	Lindan Dust @ 25 kg/ha	F	1	2	-	Lindan Dust @ 25 kg/ha	F	1	1

Disease Management										
Blast	-	Hinsoan @ 1 liter/ha, Dithane M-45 (2-5 kg/ha) Blastarbendium 1 gm/lt of water	F	1	2	-	Hinsoan @ 1 liter/ha, Dithane M-45 (2-5 kg/ha) Blastarbendium 1 gm/lt of water	F	1	1
Bacterial Blight	-	Streptocyaline 200 mg/liter	F	1	2	-	Streptocyaline 200 mg/liter	F	1	1
Weed Management										
Mechanical	One hand weeding	Twice	P	1,5	6	One	Twice	P	1, 5	6
Herbicide	-	Butachlor 1 kg ai/ha	N	1,4,5	1,2,5,6	-	Butachlor 1 kg ai/ha	N	-	-
Water Management										
No. of Irrigation	Rainfed	As per required 6-9	P	1,8	1,2,6	Rainfed	As per required 6-9	P	1,8	1, 6
Method	Flooding	Control flooding as required	N	-	-	Flooding	Control flooding as required	N	-	-
Land Management										
Acidity	-	Liming/Gypsum @2.5 q/ha	F	1,5	1,2,6	-	Liming/Gypsum @2.5 q/ha	F	1, 5	2,6
Water Logging	Open bunding	Drainage	N	-	-	Open bunding	Drainage	N	-	-
Method of Harvesting		80-90% ripening	N	-	-		80-90% ripening	N	-	-
Any Other/Threshing	Beating, bullock	Beating Tracter thresher	N	-	-	Beating, bullock	Beating Tracter thresher	N	-	-
Average Yield	25-30 Qt/ha	40-45 q/ha	P	1, 2, 5,8	1, 2, 3 & 4	25-30 Qt/ha	40-45 q/ha	P	1, 2, 3,5,8	1, 2, 3 & 4
Storage Pest Control	-	Metal Bean Aluminum phosphate	F	1, 2, 3,5,8	1, 2, 3 & 4	-	Metal Bean Aluminum phosphate	F	1, 2, 3,5,8	1, 2, 4

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - II

Crop: Rice

Resource Rich & Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	June-July	N	-	-	June-July	June-July	N	-	-
Method	Broadcasting	Transplanting and line sowing	P	1,4,9	1,6	Broadcasting	Transplanting Rajendra Dhan 202	P	1,4,5	1, 2 & 6
Variety	IR- 36 IR- 64	IR. 36, 64 and Seeta Birsha Dhan 201 Pusa Basmati, Basmati-370	P	1,2,5,7,8,9	1,7	IR- 36 IR- 64	IR. 36, 64 and Seeta, Rajendra Dhan 202 Birsha Dhan 201 Pusa Basmati, Basmati-370	P	1, 2 & 9	5,7
Seed Rate	80-100	40-50 kg/ha	P	1,9	1, 5	80-100	40-50 kg/ha	P	1, 2	1, 2,7
Seed Treatment	-	Thiram 2g/kg seed	F	1	1	-	Thiram 2g/kg seed	F	1	1 & 5
Organic Manure	2 ton/ha	10 ton/ ha	P	1,5	1,2,6	2 Ton/ha	10 Ton/ ha	F	1 & 5	2,3,6
Fertilizer (Nutrient kg/ha		80:40:20			1,2,3,5,6		80:40:20			
Basal (N+P+K)	20:20:00	40:40:20	P	1,5, 8	1,3,6	20:20:00	40:40:20	P	5	3,6
Top Dressing (N)	20	20+20				20	20+20		-	-
Total	40:20:00	80:40:20				40:20:00	80:40:20		-	-
Pest Management										
Stem Borer	Monocrotophos	Monocroptophos (0.05%)	N	-	-	Monocrotophos	Monocroptophos (0.05%)	N	-	-
Gandhi Bug	Quinalphos	Quinalphes 1.5 % @10kg/ha	N	-	-	Quinalphos	Quinalphes 1.5 % 10kg/ha	N	-	-

Disease Management										
Blast	Indofil-M-4.5	Indofil M – 45 2.5kg/ha	N			Indofil-M-4.5	Indofil M – 45 2.5kg/ha	N	-	-
Bacterial Blight	Indofil-M-4.5	Bavistin Dithne 2-78 Z-78 1ml/liter	N	-	-	Indofil-M-4.5	Bavistin Dithne 2-78 Z-78 1ml/liter	N	-	-
Weed Management										
Mechanical	Hand weeding	Hand two weeding	N			Hand weeding	Hand two weeding	N	-	-
Herbicide	-	OXY Florfen 200gm/ha	F	1,3,5	1,2,6	-	OXY florfen 200gm/ha	F	1, 2 & 3	1, 2 & 4
Water Management										
No. of Irrigation	Rain fed	6-7	F	1, 5	2, 6	Rain fed	6-7	F	1, 4,5	2,6
Method		Flooding, Basin		-	-		Flooding, Basin			
Land Management				-	-					
Acidity	-	Lime, Gypsum	F	1,5	1,2,6		Lime, Gypsum	F	1, 5	1, 3,6
Water Logging	Open Bund	Open Bund	N	-	-	Open Bund	Open Bund	N	-	-
Method of Harvesting	Sickle	Sickle, Harvester	N	-	-	Sickle	Sickle, Harvester	N	-	-
Any Other/Threshing		Tractor	F	1,5,6	1,2,4, 6		Tractor	F	1, 5	1, 2, 4, 6
Average Yield	30-35 q/ha	45-50 q/ha	P	1,2,5,8	1,3	30-35 q/ha	45-50 q/ha	P	1, 2 & 3	1, 3 & 6
Grain										
Straw										
Storage Pest Control	-	Aluminium phosphide 1 tablet/matric ton	F	1	1, 2	-	Aluminium phosphide 1 tablet/matric ton	F	1,	1, 2, 5

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 3
Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/ Commodity in the AES

Agriculture **Crop: Paddy**
AES - II **Resource Rich & Poor**

Production Practices (items)	**Gap in adoption in the different situations in which the crop/commodity in grown**		**Reasons for gap in adoption as perceived by the farmers**	**Strategies proposed as perceived by the farmers**	**Strategies proposed to overcome the gap**
	FS-1	**FS-II**			
Sowing Time	√	√	1,4,9	1,2,5	1, 2
Method	√	√	1,4,8,9	1,2,5	1, 2
Variety	√	√	1,2,5, 8,9	1,2,5,7	1, 2, & 9
Seed Rate	√	√	1,2,9	1,2,5	1, 2, 3, 5 & 9
Seed Treatment	-		1,9	1,2	1, 2, 7
Organic Manure	√	√	1,5,7,8	1,2,6	1, 2, 3, 5,6 & 10
Fertilizer (Nutrient kg/ha					
Basal (N+P+K)	√	√	1,5, 8	1,2,3, 6	1, 2, 3, 6 & 10
Top Dressing (N)					
Total					
Pest Management					
Gall Midge	-	-	-	-	-
Stem Borer	√	√	1,3,5,8	1,2, 6	1, 2, 3, 6,7
Gandhi Bug	-	-			
Disease Management					
Blast	√	√	1,3,5	1,2, 5,6	1, 2, 3,5,6,7
Bacterial Blight	-	-	-	-	-
Weed Management					-
Mechanical	-	-	-	-	-
Herbicide	√	√	1,4,5	1,2, 6	1,2,3 & 9
Water Management					
No. of Irrigation	√	√	1,4,5,8	1,2, 6	1, 2, 3 & 10
Method	-	-	-	-	-
Land Management					-
Acidity	√	√	1,5,6	1,2,3, 6	1, 2, 3 & 6
Water Logging	-	-	-	-	-
Method of Harvesting					-
Any Other/Threshing	√	√	1,5,6	1,2,4, 6	1, 2, 3 & 4
Average Yield	-	-	-	-	-
Storage Pest Control	√	√	1,5	1,2,6	1, 2

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers
1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

Strategies as perceived by the farmers
1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap
1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water

Chapter VI Table- 2

Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture
AES - III

Crop: Rice
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	June-July	-			June-July	June-July	-		
Method	Broadcasting	Transplanting	N	-	-	Broadcasting	Transplanting	N	-	-
Variety	IR- 36 IR- 64	IR. 36, 64 and Seeta, Rajendra Dhan 202 Birsha Dhan 201 Pusa Basmati, Basmati-370	N	-	-	IR- 36 IR- 64	IR. 36, 64 and Seeta, Rajendra Dhan 202 Birsha Dhan 201 Pusa Basmati, Basmati-370	N	-	-
Seed Rate	80-100	40-50 kg/ha	P	1,9	1,2	80-100	40-50 kg/ha	P	1,9	1,2
Seed Treatment	-	Thiram 2g/kg seed	F	1	1,2,7	-	Thiram 2g/kg seed	F	1	1,2,5
Organic Manure	2 Ton/ha	10 Ton/ ha	P	1,5,	1,2,6	2 Ton/ha	10 Ton/ ha	F	1,5,9	1,2,6
Fertilizer (Nutrient kg/ha		80:40:20					80:40:20			1,2,3,5,6
Basal (N+P+K)	20:20:00	40:40:20	P	1,5,9	1,2,3, 6	20:20:00	40:40:20	P	1,5, 8	1,2,3, 6
Top Dressing (N)	20	20+20				20	20+20			
Total	40:20:00	80:40:20				40:20:00	80:40:20			
Pest Management										
Stem Borer	Monocrotophos	Monocroptophos (0.05%)	N	-	-	Monocrotophos	Monocroptophos (0.05%)	N	-	-
Gandhi Bug	Quinalphos	Quinalphos 1.5 % 10kg/ha	N	-	-	Quinalphos	Quinalphos 1.5 % 10kg/ha	N	-	-

Disease Management										
Blast	Indofil-M-4.5	Indofil M – 45 2.5kg/ha	N	-	-	Indofil-M-4.5	Indofil M – 45 2.5kg/ha	N	-	-
Bacterial Blight	Indofil-M-4.5	Bavistin Dithne 2-78 Z-78 1ml/liter	N	-	-	Indofil-M-4.5	Bavistin Dithne 2-78 Z-78 1ml/liter	N	-	-
Weed Management										
Mechanical	Hand weeding	Hand weeding	N	-	-	Hand weeding	Hand weeding	N	-	-
Herbicide	-	DXY florfen 200gm/ha	F	1,3,4,5	1,2,5,6	-	DXY florfen 200gm/ha	F	1,3,4,5	1,2,5,6
Water Management										
No. of Irrigation	Rain fed	6-7	P	1,4,5	1,2,6	Rain fed	6-7	P	1, 5	1,2,5,6
Method	Flooding	Flooding, Basin	N	-	-	Flooding	Flooding, Basin	N	-	-
Land Management				-	-					
Acidity		Lime, Gypsum	F	1,5	1,2, 6		Lime, Gypsum	F	1,5	1,2, 6
Water Logging	Open Bund	Open Bund	N	-	-	Open Bund	Open Bund	N	-	-
Method of Harvesting	Sickle	Sickle, Harvester	N	-	-	Sickle	Sickle, Harvester	N	-	-
Any Other/Threshing		Tractor	F	1,5,6	1,2,4, 6		Tractor	P	1,5,6	1,2,4,5,6
Average Yield	30-35 q/ha	45-50 q/ha	P	1,2,8	1,2,3	30-35 q/ha	45-50 q/ha	P	1,2,5,8,	1,2,3,7
Grain										
Straw										
Storage Pest Control	-	Aluminium phosphide 1 tablet/matric ton	P	1, 9	1, 2,	-	Aluminium phosphide 1 tablet/matric ton	P	1	1, 2, 3

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption***

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension***

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 3
Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/Commodity in the

Agriculture **Crop: Paddy**
AES - III **Resource Rich & Poor**

Production Practices (items)	Gap in adoption in the different situations in which the crop/commodity in grown		Reasons for gap in adoption as perceived by the farmers	Strategies proposed as perceived by the farmers	Strategies proposed to overcome the gap
	FS-1	FS-II			
Sowing					
Time	-	-	-	-	-
Method	-	-	-	-	-
Variety	-	-	-	-	-
Seed Rate	√	√	1,9	1,2	1, 2, 3, 5 & 9
Seed Treatment	√	√	1,5	1,2	1, 2, 3
Organic Manure	√	√	1,5,9	1,2,6	1, 2, 3, 6
Fertilizer (Nutrient kg/ha	√	√			
Basal (N+P+K)	√	√	1,5,7,8	1,2,3,5,6	1, 2, 3, 6
Top Dressing (N)					
Total					
Pest Management					
Gall Midge	-	-	-	-	-
Stem Borer	-	-	-	-	-
Gandhi Bug	-	-	-	-	-
Disease Management				-	-
Blast	√	√	1,3,5	1,2,3,6	1, 2, 3, 6,7
Bacterial Blight	-	-	-	-	-
Weed Management					-
Mechanical	√	√	1,3,4,5	1,2, 6	1,2,3
Herbicide	√	√	1,4,5	1,2,5,6	1,2,3,7
Water Management					
No. of Irrigation	√	√	1,4,5,8	1,2,6	1, 2, 3 & 10
Method	-	-	-	-	-
Land Management					
Acidity	√	√	1,3,4,5	1,2,5,6	1, 2, 3
Water Logging	-	-	-	-	-
Method of Harvesting					
Any Other/Threshing	√	√	1,5,6	1,2, 5,6 ,9	1, 2, 3 & 4
Average Yield	-	-	-	-	-
Storage Pest Control	√	√	1,5,6	1,2,4, 6	1, 2

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

Strategies as perceived by the farmers

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture
AES - IV

Crop: Rice
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	June-July	-	-	-	June-July	June-July	-	-	-
Method	Broadcasting	Transplanting	P	1,4,9	1,2,5	Broadcasting	Transplanting	P	1,4,9	1,2,5
Variety	IR- 36 IR- 64	IR. 36, 64 and Seeta, Rajendra Dhan 202 Birsha Dhan 201 Pusa Basmati, Basmati-370	N	-	-	IR- 36 IR- 64	IR. 36, 64 and Seeta, Rajendra Dhan 202 Birsha Dhan 201 Pusa Basmati, Basmati-370	N	-	-
Seed Rate	80-100	40-50 kg/ha	P	1,9	1,2	80-100	40-50 kg/ha	P	1	1
Seed Treatment	-	Thiram 2g/kg seed	F	1	2	-	Thiram 2g/kg seed	F	1	2
Organic Manure	2 Ton/ha	10 Ton/ ha	P	1,5, 8	1,2,6	2 Ton/ha	10 Ton/ ha	F	1,5,7,8	1,2,3,6
Fertilizer (Nutrient kg/ha		80:40:20					80:40:20			
Basal (N+P+K)	20:20:00	40:40:20	P	1,5	1,2,6	20:20:00	40:40:20	P	1,5,7	1,2,3, 6
Top Dressing (N)	20	20+20				20	20+20			
Total	40:20:00	80:40:20				40:20:00	80:40:20			
Pest Management										
Stem Borer	Monocrotophos	Monocroptophos (0.05%)	N	-	-	Monocrotophos	Monocroptophos (0.05%)	N	-	-
Gandhi Bug	Quinalphos	Quinalphes 1.5 % 10kg/ha	N	-	-	Quinalphos	Quinalphes 1.5 % 10kg/ha	N	-	-

Disease Management										
Blast	Indofil-M-45	Indofil M – 45 2.5kg/ha	N	-	-	Indofil-M-45	Indofil M – 45 2.5kg/ha	N	-	-
Bacterial Blight	Indofil-M-45	Bavistin Dithne Z-78 @ 1ml/liter	N	-	-	Indofil-M-45	Bavistin Dithne Z-78 @ 1ml/liter	N	-	-
Weed Management										
Mechanical	Hand weeding	Hand weeding	P	1,3,5,7	1,2,4,6	Hand weeding	Hand weeding	N	-	-
Herbicide	-	DXY Florfen 200gm/ha	F	1,3,4,5	1,2,5,6	-	DXY Florfen 200gm/ha	F	1,3, 5	1,2,5,6
Water Management		–								
No. of Irrigation	Rain fed	6-7	P	1,4,5	1,2,5,6	Rain fed	6-7	P	1, 5	1,2,,6
Method	Flooding	Flooding, Basin	N			Flooding	Flooding, Basin	N		
Land Management										
Acidity		Lime, Gypsum	P	1, 5	1,2, 6		Lime, Gypsum	P	1,4,5	1,2,5,6
Water Logging	Open Bund	Open Bund	N	-	-	Open Bund	Open Bund	N	-	-
Method of Harvesting	Sickle	Sickle, Harvester	N	-	-	Sickle	Sickle, Harvester	N	-	-
Any Other/Threshing		Tractor	P	1,5	1,6		Tractor	F	1,5,6	1,2,4,5,6
Average Yield	30-35 q/ha	45-50 q/ha	P	1, 2, 3,5,8	1, 2, 3 & 4	30-35 q/ha	45-50 q/ha	P	1, 2, 3,5,7	1, 2, 3 & 4
Grain										
Straw										
Storage Pest Control		Aluminium phosphide 1 tablet/matric ton	P	1, 9	1,2		Aluminium phosphide 1 tablet/matric ton	P	1	1,2,5

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 3
Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/Commodity in the

Agriculture **Crop: Paddy**
AES - IV **Resource Rich & Poor**

Production Practices (items)	Gap in adoption in the different situations in which the crop/commodity in grown		Reasons for gap in adoption as perceived by the farmers	Strategies proposed as perceived by the farmers	Strategies proposed to overcome the gap
	FS-1	FS-II			
Sowing					
Time	-	-			-
Method	√	√	1,4,5,8	1,2,5	1, 2, 3, 5
Variety	-	-	-	-	-
Seed Rate	√	√	1,9	1,2,5	1, 2, 5
Seed Treatment	√	√	1	1,2,5	1, 2
Organic Manure	√	√	1,5	1,2,6	1, 2, 3, 6
Fertilizer (Nutrient kg/ha					
Basal (N+P+K)	√	√	1,5,7	1,2,3, 6	1, 2, 3, 6, 8
Top Dressing (N)	√	√	-	-	-
Total	√	√	-	-	-
Pest Management					
Gall Midge	-	-	-	-	-
Stem Borer	-	-	-	-	-
Gandhi Bug	-	-			-
Disease Management					
Blast	-	-	-	-	-
Bacterial Blight	-	-	-	-	-
Weed Management					
Mechanical	√	√	1,3,4,5	1,2,5,6	1,2,3 & 9
Herbicide	√	√	1,4,5	1,2,5,6	1,2,3 & 9
Water Management					
No. of Irrigation	√	√	1,4,5	1,2,5,6	1, 2, 3 & 10
Method	-	-	-	-	-
Land Management					
Acidity	√	√	1, 5	1,2,5,6	1, 2, 3
Water Logging	-	-			-
Method of Harvesting					
Any Other/Threshing	√	√	1, 3,5	1, 2, & 4	1, 2, 3
Average Yield	-	-			-
Storage Pest Control	√	√	1, 3,5,9	1, 2, 3	1, 2

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

Strategies as perceived by the farmers

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water

Chapter VI Table No. 4

Consolidated Gaps in Production Practices of a Crop/Commodity and Proposed Strategies for the District Chatra

Agriculture ***Crop: Rice***

Item	AES I		AES II		AES III		AES IV	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Sowing								
Time	-	-	-	-	-	-	-	-
Method	P	1, 2, 3,	P	1, 2, 3, & 9	P	1, 2,	P	1, 2, 3
Variety	N	-	N	-	N	-	N	-
Seed Rate	P	1, 2, 3, 5	P	1, 2, 3, 5 & 9	P	1, 2, 3, 5 & 9	P	1, 2, 3, 5 & 9
Seed Treatment	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3
Organic Manure	F	1, 2, 3, 5,6 & 10	F	1, 2, 3, 5,6 & 10	F	1, 2, 3, 5,6 & 10	F	1, 2, 3, 5,6 & 10
Fertilizer (Nutrient kg/ha								
Basal (N+P+K)	P	1, 2, 3, 5,6 & 10	P	1, 2, 3, 5,6 & 10	P	1, 2, 3, 5,6 & 10	P	1, 2, 3, 5,6 & 10
Top Dressing (N)		1, 2, 3, 5,6 & 10		1, 2, 3, 5,6 & 10		1, 2, 3, 5,6 & 10		1, 2, 3, 5,6 & 10
Total		1, 2, 3, 5,6 & 10		1, 2, 3, 5,6 & 10		1, 2, 3, 5,6 & 10		1, 2, 3, 5,6 & 10
Pest Management								
Stem Borer	N	-	N	-	N	-	N	-
Gandhi Bug	N	-	N	-	N	-	N	-
Disease Management		-		-		-		-
Blast	F	1,2,3 & 9	F	1,2,3 & 9	F	1,2,3 & 9	F	1,2,3 & 9
Bacterial Blight	P	1,2,3 & 9	P	1,2,3 & 9	P	1,2,3 & 9	P	1,2,3 & 9
Weed Management								
Mechanical	P		P		P		P	
Herbicide	F	1,2,3 & 9	F	1,2,3 & 9	F	1,2,3 & 9	F	1,2,3 & 9
Water Management	F	1,2,3 & 9	F	1,2,3 & 9	F	1,2,3 & 9	F	1,2,3 & 9
No. of Irrigation								
Method		1, 2, 3 & 10		1, 2, 3 & 10		1, 2, 3 & 10		1, 2, 3 & 10
Land Management		-		-		-		-
Acidity	P	1, 2, 3 & 10	P	1, 2, 3 & 10	P	1, 2, 3 & 10	P	1, 2, 3 & 10
Water Logging	P	1, 2, 3 & 10	P	1, 2, 3 & 10	P	1, 2, 3 & 10	P	1, 2, 3 & 10
Method of Harvesting								
Any Other/Threshing	P		P		P		P	
Average Yield	P	1, 2, 3 & 4	P	1, 2, 3 & 4	P	1, 2, 3 & 4	P	1, 2, 3 & 4
Grain	-	-	-	-	-	-	-	-
Straw	-	-	-	-	-	-	-	-
Storage Pest Control	P	1, 2	P	1, 2	P	1, 2	P	1, 2

***** Strategies proposed to overcome the gap :**

1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops, 8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water

Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - I **Crop: Maize**
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15 June – 15 July	P	1,4,5	1,2	June-July	15 June – 15 July	P	1,4,5	1
Method	Behind plugh	Line: 50 x 20 cm	F	1,4,5	1	Behind plugh	Line: 50 x 20 cm	F	1,4,5	1
Variety	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	P	1, 8	1,2,7	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	P	1,7	1,2,7
Seed Rate	10-15 kg/ha	18 kg/ha	P	1,2	1,2,7	10-15 kg/ha	18 kg/ha	P	1,2,5	1,2, 6
Seed Treatment	-	Captan 29/kg seed	P	1	2		Captan 29/kg seed	P	1,	1,2,
Organic Manure	2 ton/ha	10-15 ton/ha	P	1,5	1,2,3,6	2 ton/ha	10-15 ton/ha	P	1,5	1,2, 6
Fertilizer (Nutrient kg/ha		100+60+40					100+60+40			
Basal (N+P+K)	30+10+0	30+60+40	P	1,5	1,2, 6	30+10+0	30+60+40	P	1,5	1,2,3,6
Top Dressing (N)	10+10	40+30				10+10	40+30			
Total	40+20+0	70+90+40				40+20+0	200 kg/ha			
Pest Management										
Borer stem	Thimet 10 G	Thimet 10 G @15 kg/ha	N	-	-	Thimet 10G	Thimet 10 G @15 kg/ha	N	-	-
Disease Management										
Bacterial Stalk rot	-	Bleaching powder @ 20-25 kg/ha	F	1,5	1,6		Bleaching powder @ 20-25 kg/ha	F	1	1,6
Pythium			-	-	-					
Weed Management Stalk			F	1,3,5	1,2,4,6			F	1,3,5	1,2,4,6
Mechanical	HOe	Khurpi/HOe	-	-	-	HOe	Khurpi/HOe	N	-	-
Herbicide	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1,8	1, 6	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1,8	1,2

Water Management			N	-	-			N	-	-
No. of Irrigation	Rain fed	2-3	-	-	-	Rain fed	2-3	-	-	-
Method		Furrow	F	1,5	1,2,6		Furrow	F	1,5	1,6
Land Management			N	-	-			N	-	-
Acidity		Line 2-5-4 Q/ha	F	1, 5	6		Line 2-5 q/ha	F	1, 3, 5	1, 6
Water Logging	Open Bunding	Open Bunding	N	-	-	Open Bunding	Open Bunding	N	-	-
Method of Harvesting	Plucking	Plucking	N	-	-	Plucking	Plucking	N	-	-
Any Other/Threshing	-	Maize Seller machine	F	1, 5	1,6	-	Maize Seller machine	F	1, 4,5	1,2,6
Average Yield	35-40 q/ha	40-50 q/h	P	1,2,4,5	1,2,5	35-40	40-50 q/h	P	1, 2,4,5	1,2
Storage Pest Control		Steel Bean Aluminum Phosphide	F	1, 3,9	1,2		Steel Bean Aluminum Phosphide	F	1, 3	1,2,5,6

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** Code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2

Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture
AES - II

Crop: Maize
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15 June – 15 July	F	1,4,5	1	June-July	15 June – 15 July	N	1,4	1,2
Method	Behind plugh	Line: 50 x 20 cm	F	1,2,3,4	1,2,6,7	Behind plugh	Line: 50 x 20 cm	F	1,2,3,4	1,2,6,7
Variety	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	F	1,5	1,6	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	P	1,7	1,2,5
Seed Rate	10-15 kg/ha	18 kg/ha	P	1,2,5	1,2,7	10-15 kg/ha	18 kg/ha	P	1, 5	1,2,5,6
Seed Treatment		Captan 29/kg seed	F	1	1		Captan 29/ kg seed	F	1,5	1,2,3,6
Organic Manure	2 ton/ha	10-15 ton/ha	P	1,5	1, 3,6	2 ton/ha	10-15 ton/ha	P	1,5	1,2,3,6
Fertilizer (Nutrient kg/ha	30+10+0	100+60+40				30+10+0	100+60+40	-	-	-
Basal (N+P+K)	10+10+0	30+60+40	P	1,5	1, 3,6	10+10+0	30+60+40	P	1,5,9	1,2,3,6
Top Dressing (N)	40+20+0	40+30				40+20+0	40+30	-	-	-
Total		200 kg/ha					200 kg/ha			
Pest Management			F	1,3,5	1,2,3,4,6				1,3,5	1,2,3,4,6
Borer stem	Thimet 10 G	Thimet 10 G @15 kg/ha	N	-	-	Thimet 10 G	Thimet 10 G 15 kg/ha	N	-	-
Disease Management								-	-	-
Bacterial Stalk rot	-	Bleaching powder @ 20-25 kg/ha	F	1,5	1,6	-	Bleaching powder @ 20-25 kg/ha	F	1,2,3,5	1,2,3,6
Pythium			-	-	-			-	-	-

Weed Management										
Mechanical	HOe/Khurpi	Khurpi/HOe	N	-	-	HOe	Khurpi/HOe	N	-	-
Herbicide	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1,5	1	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1,5	1, 4,6
Water Management			N	-	-			N	-	-
No. of Irrigation	Rain fed	2-3	-	-	-	Rain fed	2-3	-	-	-
Method	Furrow	Furrow	N	-	-	Furrow	Furrow	N	-	-
Land Management			N	-	-			N	-	-
Acidity		Line 2-5 q/ha	F	1, 3, 5,6	1,2,6	-	Line 2-5 q/ha	F	1, 3,4,5,6	1,6
Water Logging	open Bunding	open Bunding	N	-	-	open Bunding	open Bunding	N	-	-
Method of Harvesting	Plucking	Plucking	N	-	-	Plucking	Plucking	N	-	-
Any Other/Threshing	-	Maize Seller machine	P	1, 5	1,6	-	Maize Seller machine	P	1	1,6
Average Yield	35-40 q/ha	40-50 q/h	P	1,4,5	1,2	35-40 q/ha	40-50 q/h	F	1,3,4,5	1,6
Storage Pest Control		Steel Bean Aluminum Phosphide	F	1, 3	1,2		Steel Bean Aluminum Phosphide	F	1	2

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2

Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture
AES - III

Crop: Maize
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15 June – 15 July	N			June-July	15 June – 15 July	N	-	-
Method	Behind plugh	Line: 50 x 20 cm	F	1,4,5	1,2	Behind plugh	Line: 50 x 20 cm	F	1,4	1
Variety	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	P	1,2	1,2,5	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	P	1,2	1,2,7
Seed Rate	10-15 kg/ha	18 kg/ha	P	1	2	10-15 kg/ha	18 kg/ha	F	1	1,2
Seed Treatment		Captan 29 m/kg seed	P	1	2		Captan 29 m/kg seed	P	1	1,2
Organic Manure	2 ton/ha	10-15 ton/ha	P	1,5	1, 6	2 ton/ha	10-15 ton/ha	P	1	3,6
Fertilizer (Nutrient kg/ha		100+60+40					100+60+40			
Basal (N+P+K)	30+10+0	30+60+40	P	1,5	1, 6	30+10+0	30+60+40	P	1,5	1, 3,6
Top Dressing (N)	10+10	40+30				10+10	40+30			
Total	40+20+0	200 kg/ha				40+20+0	200 kg/ha			
Pest Management										
Borer stem	Thimet 10G	Thimet 10 G @15 kg/ha	F	1,3	2,3, 6	Thimet 10g	Thimet 10 G @15 kg/ha	F	1,3	1,2,3, 6
Disease Management										
Bacterial Stalk rot	-	Bleaching powder @ 20-25 kg/ha	F	1,3,5,6	1,2,3, 6	-	Bleaching powder @ 20-25 kg/ha	F	1,3, 6	1,2,3
Pythium			-	-	-			-	-	-

Weed Management										
Mechanical	HOe	Khurpi/HOe	N	-	-	HOe	Khurpi/HOe	N		
Herbicide	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1,5	1, 6	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1,5	2, 6
Water Management										
No. of Irrigation	Rain fed	2-3	-	-	-	Rain fed	2-3	-	-	-
Method	Furrow	Furrow	N	-	-	Furrow	Furrow	N	-	-
Land Management										
Acidity		Line 2-5 q/ha	F	1, 5,6	1,6		Line 2-5 q/ha	F	1,5	1,5,6
Water Logging	open Bunding	open Bunding	N	-	-	open Bunding	open Bunding	N	-	-
Method of Harvesting	Plucking	Plucking	N	-	-	Plucking	Plucking	N	-	-
Any Other/Threshing	-	Maize Seller machine	F	1,5,6	1	-	Maize Seller machine	P	1,6	1
Average Yield	35-40 q/ha	40-50 q/h	P	1,4,5	1,2	35-40 q/ha	40-50 q/h	P	1, 5	1,6
Storage Pest Control		Steel Bean Aluminum Phosphide	F	1	2		Steel Bean Aluminum Phosphide	F	1	2

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2

Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - IV **Crop: Maize**

Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15 June – 15 July	P	1,4,5	1,2	June-July	15 June – 15 July	P	1,4,5	1,2
Method	Behind plugh	Line: 50 x 20 cm	F	1,4,5	1,2	Behind plugh	Line: 50 x 20 cm	F	1,4,5	1,2,6,7
Variety	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	P	1,2	1,7	Suwan Hybrid	Ganga safed 2, Ganga 5, kisan, vijay, vikram	P	1,3,7	1,2,5
Seed Rate	10-15 kg/ha	18 kg/ha	P	1, 5	1,2, 6	10-15 kg/ha	18 kg/ha	P	1	1,2,5,6
Seed Treatment		Captan 29 m/kg seed	F	1	1,2		Captan 29 m/kg seed	P	1,2	1,2,3,6
Organic Manure	2 ton/ha	10-15 ton/ha	P	1,5,6	1,2,3,6	2 ton/ha	10-15 ton/ha	P	1,5,6	-
Fertilizer (Nutrient kg/ha	30+10+0	100+60+40				30+10+0	100+60+40			
Basal (N+P+K)	10+10	30+60+40	P	1,5,8	1,2,3,6	10+10	30+60+40	P	1,5,8	1,2,3,6
Top Dressing (N)	40+20+0	40+30				40+20+0	40+30			
Total		70+90+40					200 kg/ha			
Pest Management										
Borer stem	Thimet 10 G	Thimet 10 G @15 kg/ha	N	-	-	Thimet 10g	Thimet 10 G 15 kg/ha	N	-	-
Disease Management										
Bacterial Stalk rot	-	Bleaching powder @ 20-25 kg/ha	F	1,3,5	2,3	-	Bleaching powder @ 20-25 kg/ha	-	1,3	2,3
Pythium			N	-	-					

Weed Management										
Mechanical	HOe	Khurpi/HOe	N			HOe	Khurpi/HOe	N	-	-
Herbicide	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1,8	1,2,4,6	-	Simazine and Atrazine 1.0-1.25 kg/ha	F	1	2
Water Management										
No. of Irrigation	Rain fed	2-3	-	-	-	Rain fed	2-3	-	-	-
Method	Furrow	Furrow	N	1,5	1,2,6	Furrow	Furrow	N	-	-
Land Management										
Acidity		Line 2-5-4 Q/ha	-	-	-		Line 2-5-4 Q/ha	-	-	-
Water Logging	Open Bunding	Open Bunding	N	-	-	Open Bunding	Open Bunding	-	-	-
Method of Harvesting	Plucking	Plucking	N	-	-	Plucking	Plucking	N	-	-
Any Other/Threshing	-	Maize Seller machine	F	1, 5	1,2,6	-	Maize Seller machine	P	1, 5	1,2,4
Average Yield	35-40 q/ha	40-50 q/h	P	1,4,5	1,2,3	35-40 q/ha	40-50 q/h	P	1,4,5,8	1,2,6
Storage Pest Control	-	Steel Bean Aluminum Phosphide	F	1	2		Steel Bean Aluminum Phosphide	F	1	2

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** Code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 3

Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/Commodity in the

Agriculture **Crop: Maize**

AES - I & IV **Resource Rich**

Production Practices (items)	Gap in adoption in the different situations in which the crop/commodity in grown		Reasons for gap in adoption as perceived by the farmers	Strategies proposed as perceived by the farmers	Strategies proposed to overcome the gap
	FS-1	FS-II			
Sowing					
Time	√	√	1,4,5,8	1,2,7	1,2,9
Method	√	√	1, 4,5	1,2,6	1,2,3,5
Variety	√	√	1,2,5	1,2,7	1,2,9
Seed Rate	√	√	1,3,5	1,2,6	1,2
Seed Treatment	√	√	1,3	1,2,3	1,2
Organic Manure	√	√	1,5,8	1,2,3,6	1,2,3
Fertilizer (Nutrient kg/ha					
Basal (N+P+K)	√	√	1,5,8	1,2,3,6	1,2,3, 10
Top Dressing (N)	√	√	1,5	1, 3,6	1,2,3
Total	√	√	1,5,8	1,2,3,6	1,2,3,5,10
Pest Management					
Borer stem	√	√	1,3,5	1,2,3, 6	1,2,3,7
Disease Management					
Bacterial Stalk rot	√	√	1,3,5	1,2,3, 6	1,2,3,5,7
Pythium	-	-	-	-	-
Weed Management Stalk					
Mechanical	-	-	-	-	-
Herbicide	√	√	1,6	1,2,3,6	1,2,3,10
Water Management					
No. of Irrigation	-	-	-	-	-
Method	√	√	1,5	1,2,6	1,2,3
Land Management					
Acidity	√	√	1, 3, 5,6, 8	1,2,3, 6	1,2,3,11
Water Logging	√	√	1,8	1,2,5	1,2,3
Method of Harvesting					
Any Other/Threshing	√	√	1,4,5	1,2,6	1,2,3
Average Yield	√	√	1,2,5	1,2,7	1,2,6,7
Storage Pest Control	√	√	1, 3	1,2,5	1,2,9

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

Strategies as perceived by the farmers

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Use of locally available materials for nutrient management & plant protection
7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility
9. Farmers scientist intraction
10. More emphasis on judicious use of soil and water
11. Popularisation of lime application

Chapter VI Table- 4
Consolidated Gaps in Production Practices of a Crop/Commodity and Proposed Strategies for the District Chatra

Agriculture ***Crop: Maize***

Item	AES I		AES II		AES III		AES IV	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Sowing								
Time	P	1,2,9	P	1,2,9	P	1,2,9	P	1,2,9
Method	N	-	N	-	N	-	N	-
Variety	P	1,2,9	P	1,2,9	P	1,2,9	P	1,2,9
Seed Rate	P	1,2,9	P	1,2,9	P	1,2,9	P	1,2,9
Seed Treatment	F	1,2,6,8	F	1,2,6,8	F	1,2,6,8	F	1,2,6,8
Organic Manure	P		P		P		P	
Fertilizer (Nutrient kg/ha								
Basal (N+P+K)	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Top Dressing (N)	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Total	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Pest Management								
Borer stem	N		N		N		N	
Disease Management	-		-		-		-	
Bacterial Stalk rot	F	1,2,3,5,6,7,9	F	1,2,3,5,6,7,9	F	1,2,3,5,6,7,9	F	1,2,3,5,6,7,9
Pythium		-		-		-		-
Weed Management Stalk								
Mechanical	N	-	N	-	N	-	N	-
Herbicide	F	1,2,3,10	F	1,2,3,10	F	1,2,3,10	F	1,2,3,10
Water Management								
No. of Irrigation	F	1,2,3,11	F	1,2,3,11	F	1,2,3,11	F	1,2,3,11
Method	N	-	N	-	N	-	N	-
Land Management								
Acidity	F	1,2,3,4	F	1,2,3,4	F	1,2,3,4	F	1,2,3,4
Water Logging	N	-	N	-	N	-	N	-
Method of Harvesting								
Any Other/Threshing	F	1,2,5,6,7,8	F	1,2,5,6,7,8	F	1,2,5,6,7,8	F	1,2,5,6,7,8
Average Yield	P	1,2,6,7	P	1,2,6,7	P	1,2,6,7	P	1,2,6,7
Storage Pest Control	F	1,2,9	F	1,2,9	F	1,2,9	F	1,2,9

(*) F=Full **P = Partial** **N = Nil**

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops, 8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - II

Crop: Wheat

Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Nov-Dec	15 Nov. – 15 Dec.	N	-	-	Nov-Dec	15 Nov. – 15 Dec.	N	-	-
Method	Line sowing	Line Sowing	N	-	-	Line sowing	Line Sowing	N	-	-
Variety	Sonalica C-306 HD 2402	HD-2733, HUW-468, HD 2402, PBW 343, K 8804	P	1,2,5,8	1,2,6	Sonalica C-306 HD 2402	HD-2733, HUW-468, HD 2402, PBW 343, K 8804	P	1,2,6	1,2,5,6
Seed Rate	120-130 kg	125 kg/ha	P	1,6	1,2	120-130 kg	125 kg/ha	P	1,6	1,2,5
Seed Treatment	-	Bavistin 2gm/kg seed	F	1	2	-	Bavistin 2gm/kg seed	F	1	2
Organic Manure	2 ton/ha	5-10 ton/ha	P	1,5,6	1,2,3,6	2 ton/ha	5-10 ton/ha	P	1,5,6	1,2,3,6
Fertilizer (Nutrient kg/ha							100:50:25			
Basal (N+P+K)	30+20+0	50+50+25	P	1,5	1,2, 6	30+20+0	50+50+25	P	1,5	1,2,6
Top Dressing (N)	10	50				10	50			
Total	40+20+0	100+50+25				40+20+0	100+50+25			
Micro Nutrient	-	25 kg zinc sulphate by broadasting	F	1,5,6	1,2,6	-	25 kg zinc sulphate by broadasting	F	1,5,6	1,2,6
Pest Management										
Termite	-	Lindane dust @ 25 kg/ha	F	1,3,5	1,2	-	Lindane dust @ 25 kg/ha	F	1,3,5,6	1,2
Disease Management										
Rust	-	Dithane M-45	F	1,3,5	1,2,3, 6	-	Dithane M-45	F	1,3,5,6	1,2,3, 6
Alternation Blight	-	Vitavax 2.5 g/kg seed	F	1,3	1,2,3	-	Vitavax 2.5 g/kg seed	F	1	1,2,3,6

Weed Management										
Mechanical	Hand weeding	Hand weeding	N	-	-	Hand weeding	Hand weeding	N	-	-
Herbicide & Earthing	-	Isopruton 75EC @ 1.5, Kg/ha	F	1,5	1,2,3,6	-	Isopruton 75EC @ 1.5, Kg/ha	F	1,5	1,2,3
Water Management										
No. of Irrigation	6-7	6 times	N	-	-	6-7	6 times	N	-	-
Method	Flooding	Flooding	N	-	-	Flooding	Flooding	N	-	-
Land Management										
Acidity/Salinity	-	Liming, Fallow Practiced	F	1,5,9	1,2,6	-	Liming, Fallow Practiced	F	1,5	1,2,6
Method of Harvesting	Sickle	Mechanical Manual	N	-	-	Sickle	Mechanical Manual	N	-	-
Marketing	Unorganised	Organised	F	1,6	1,2,6	Unorganised	Organised	F	1	1,2,5
Farm Level Processing				-	-				-	-
Grading	-	Grading-grain size	F	1,5,8	2,6	-	Grading-grain size	F	1,5,8	2,6
Packing	Gunny Bags	Gunny Bags	N	-	-	Gunny Bags	Gunny Bags	N	-	-
Processing	-	Floor mill	F	1,5,8	2,4,6	-	Floor mill	F	1,5	1,4,6
Storage Pest Control	-	Steel Bean, Godown	F	-	-	-	Steel Bean, Godown	F	-	-
Average Yield	30-35 q/ha	40-50 q/ha	P	1,5,10	1,2,5	30-35 q/ha	40-50 q/ha	P	1,5,8,10	1,2,7

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction
10. Non availability of high yielding short duration paddy variety in paddy wheat systems

***** code for farmer proposed extension**

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Chapter VI Table- 2

Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - II **Crop: Wheat**
Resource Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Nov-Dec	15 Nov. – 15 Dec.	N	-	-	Nov-Dec	15 Nov. – 15 Dec.	N	-	-
Method	Line sowing	Line Sowing	N	-	-	Line sowing	Line Sowing	N	-	-
Variety	Sonalica C-306 HD 2402	HD-2733, HUW-468, HD 2402, PBW 343, K 8804	P	1,2, 5,7	1,2,6	Sonalica C-306 HD 2402	HD-2733, HUW-468, HD 2402, PBW 343, K 8804	P	1,2,5,9	1,2,6
Seed Rate	120-130 kg/ha	125 kg/ha	P	1	2	120-130 kg/ha	125 kg/ha	P	1	1,2
Seed Treatment	-	Bavistin 2gm/kg seed	F	1	2	-	Bavistin 2gm/kg seed	F	1	1
Organic Manure	2 ton/ha	5-10 ton/ha	P	1,5,6	2,3,6	2 ton/ha	5-10 ton/ha	P	1,5	1,2,3,6
Fertilizer (Nutrient kg/ha										
Basal (N+P+K)	30+20+0	50+50+25	P	1,5,9	1,2,3,6	30+20+0	50+50+25	P	1,5, 8	1,2,3,5,6
Top Dressing (N)	10	50				10	50			
Total	40+20+0	100+50+25				40+20+0	100+50+25			
Micro Nutrient	-	25 kg zinc sulphate by broadasting	F	1,5,7	1,2,3,6	-	25 kg zinc sulphate by broadasting	F	1,5,7	2,3,6
Pest Management										
Termite	-	Lindane dust @ 25 kg/ha	F	1,3,5	1,2,3	-	Lindane dust @ 25 kg/ha	F	1,3,5	2,3,6
Disease Management										
Rust	-	Dithane M-45	F	1,3,5	1,2,3, 6	-	Dithane M-45	F	1,3,5	1,2,3
Alternation Blight	-	Vitavax 2.5 g/kg seed	F	1,3	1,2	-	Vitavax 2.5 g/kg seed	F	1,3	2

Weed Management										
Mechanical	Hand weeding	Hand weeding	N	-	-	Hand weeding	Hand weeding	N	-	-
Herbicide & Earthing	-	Isopruton 75EC @ 1.5, Kg/ha	F	1,5	1,2,6	-	Isopruton 75EC @ 1.5, Kg/ha	F	1,5	1,2,5
Water Management										
No. of Irrigation	6-7	6 times	N	-	-	6-7	6 times	N	-	-
Method	Flooding	Flooding	N	-	-	Flooding	Flooding	N	-	-
Land Management										
Acidity/Salinity	-	Liming, Fallow Practiced	F	1,5,9	1,2,6	-	Liming, Fallow Practiced	F	1,5,9	1,2,6
Method of Harvesting	Sickle	Mechanical, Manual	N	-	-	Sickle	Mechanical Manual	N	-	-
Marketing	-	Organised	F	1,5	1,2,6	-	Organised	F	1,5,8	1,2,6
Farm Level Processing				-	-				-	-
Grading	-	Grading-grain size	F	1,5,9	1,2,6	-	Grading-grain size	F	1,5,6	1,2,6
Packing	Gunny Bags	Gunny Bags	N	-	-	Gunny Bags	Gunny Bags	N	-	-
Processing	-	Floor mill	F	1, 4,5	1,2,6	-	Floor mill	F	1,4,5	1,2, 6
Storage Pest Control	-	Steel Bean, Godown	F	1,6	1,6	-	Steel Bean, Godown	F	1,6	1,6
Average Yield	30-35	40-50 q/ha	P	1,5,10	1,2	30-35	40-50 q/ha	P	1,5,10	1,2,5

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction
10. Non availability of high yielding short duration paddy variety in paddy wheat systems

***** code for farmer proposed extension**

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - III **Crop: Wheat**
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Nov-Dec	15 Nov. – 15 Dec.	N	-	-	Nov-Dec	15 Nov. – 15 Dec.	N	-	-
Method	Line sowing	Line Sowing	N	-	-	Line sowing	Line Sowing	N	-	-
Variety	Sonalica C-306 HD 2402	HD-2733, HUW-468, HD 2402, PBW 343, K 8804	P	1,2,5, 8	1,2,6	Sonalica C-306 HD 2402	HD-2733, HUW-468, HD 2402, PBW 343, K 8804	P	1,2,5	1,2,7
Seed Rate	120-130 kg/ha	125 kg/ha	P	1	1,2	120-130 kg/ha	125 kg/ha	P	1	1,2
Seed Treatment	-	Bavistin 2gm/kg seed	F	1	2	-	Bavistin 2gm/kg seed	F	1	2
Organic Manure	2 ton/ha	5-10 ton/ha	P	1,5	1,2,3,6	2 ton/ha	5-10 ton/ha	P	1,5	3,6
Fertilizer (Nutrient kg/ha										
Basal (N+P+K)	30+20+0	50+50+25	P	1,5, 8	1,2,3,6	30+20+0	50+50+25	P	1,5,7,9	1,2, 6
Top Dressing (N)	10	50				10	50			
Total	40+20+0	100+50+25				40+20+0	100+50+25			
Micro Nutrient	-	25 kg/ha zinc sulphate by broadasting	F	1,5	1,2,3,6	-	25 kg/ha zinc sulphate by broadasting	F	1,5	1,2, 6
Pest Management										
Termite	-	Lindane dust @ 25 kg/ha	F	1,3,5	2,3	-	Lindane dust @ 25 kg/ha	F	1,3,5	2,3
Disease Management										
Rust	-	Dithane M-45	F	1,3,5, 8	1,2,3, 6	-	Dithane M-45	F	1,3,5, 8	1,2,3, 6
Alternation Blight	-	Vitavax 2.5 g/kg seed	F	1	2	-	Vitavax 2.5 g/kg seed	F	1	2

Weed Management										
Mechanical	Hand weeding	Hand weeding	N	-	-	Hand weeding	Hand weeding	N	-	-
Herbicide & Earthing	-	Isopruton 75EC @ 1.5, Kg/ha	F	1,5,9	1,2,4,6	-	Isopruton 75EC @ 1.5, Kg/ha	F	1,5	1,2, 6
Water Management										
No. of Irrigation	6-7	6 times	N	-	-	6-7	6 times	N	-	-
Method	Flooding	Flooding	N	-	-	Flooding	Flooding	N	-	-
Land Management										
Acidity/Salinity	-	Liming, Fallow Practiced	F	1,5,9	1,2,6	-	Liming, Fallow Practiced	F	1,5	1,2,6
Method of Harvesting	Sickle	Mechanical Manual	N	-	-	Sickle	Mechanical Manual	N	-	-
Marketing	-	Organised	F	1,5	1,2,6	-	Organised	F	1,5	1, 6
Farm Level Processing				-	-				-	-
Grading	-	Grading-grain size	F	1,5,9	2	-	Grading-grain size	F	1,5,9	1,2
Packing	Gunny Bags	Gunny Bags	N	-	-	Gunny Bags	Gunny Bags	N	-	-
Processing	-	Floor mill	F	1, 4,5	1,6	-	Floor mill	F	1	1,6
Storage Pest Control	-	Steel Bean, Godown	F	1,6,9	1,5	-	Steel Bean, Godown	F	1,6	1,5
Average Yield	30-35	40-50 q/ha	P	1,5,10	1,2,3,5	30-35 q/ha	40-50 q/ha	P	1,5,8	1,2,5,6

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction
10. Non availability of high yielding short duration paddy variety in paddy wheat systems

***** code for farmer proposed extension**

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Chapter VI Table- 3

Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/Commodity in the

Agriculture **Crop: Wheat**

AES - I, II, III & IV **Resource Rich/Poor**

Production Practices (items)	Gap in adoption in the different situations in which the crop/commodity in grown		Reasons for gap in adoption as perceived by the farmers	Strategies proposed as perceived by the farmers	Strategies proposed to overcome the gap
	FS-1	FS-II			
Sowing					
Time	-	-	-	-	-
Method	-	-	-	-	-
Variety	√	√	1,2,45,6,8	1,2,6	1,2,3,5,9
Seed Rate	√	√	1,5	1,2,6	1,2
Seed Treatment	√	√	1	1,2,3	1,2,9
Organic Manure	√	√	1,5,7,8	1,2,3,6	1,2,3,8,10
Fertilizer (Nutrient kg/ha					
Basal (N+P+K)	√	√	1,5,7,8	1,2,3,6	1,2,3,6,10
Top Dressing (N)	√	√	1,5, 8	1,2,3,6	1,2,3,6
Total	√	√	1,5,7,8	1,2,3,6	1,2,3,6,10
Micro Nutrient	√	√	1,5	1,2,3,6	1,2,3,6
Pest Management					
Termite	√	√	1,3,5,8	1,2,3,6	1,2,6,7
Disease Management					
Rust	√	√	1,3,5,6	1,2,3	1,2,6,7
Alternation Blight	√	√	1,3,5,6	1,2,3	1,2,6,7
Weed Management					
Mechanical	√	√	1,4,5,8	1,2,3,4,6	1,2
Herbicide & Earthing	√	√	1,5	1,2, 6	1,2
Water Management					
No. of Irrigation	√	√	1,5,8	1,2, 6	1,2,9,1
Method	√	√	1,5,8	1,2,4,6	1,2,10
Land Management					
Acidity/Salinity	√	√	1,5,9	1,2,6	1,2,3
Method of Harvesting					
Marketing	√	√	1,5	1,2,6	1,2,3,4
Farm Level Processing	-	-	-	-	-
Grading	√	√	1,5,9	1,2,6	1,2,3,4
Packing	√	√	1,5	1,2	1,2,3, 9
Processing	√	√	1, 4,5	1,2, 4, 6	1,2,3,6
Storage Pest Control	√	√	-	-	-
Average Yield	√	√	1,5,10	1,2,6	1,2,5,6,7,8

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction
10. Non availability of high yielding short duration paddy variety in paddy wheat systems

Strategies as perceived by the farmers

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Use of locally available materials for nutrient management & plant protection
7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility
9. Farmers scientist intraction
10. More emphasis on judicious use of soil and water

Chapter VI Table- 4
Consolidated Gaps in Production Practices of a Crop/Commodity and Proposed Strategies for the District Chatra

Agriculture ***Crop: Wheat***

Item	AES I		AES II		AES III		AES IV	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Sowing								
Time	N	-	N	-	N	-	N	-
Method	N	-	N	-	N	-	N	-
Variety	P	1,2,3,5,9	P	1,2,3,5	P	1,2,3,5,9	P	1,2,3,5,9
Seed Rate	P	1,2	P	1,2	P	1,2	P	1,2
Seed Treatment	F	1,2,9	F	1,2,9	F	1,2,9	F	1,2,9
Organic Manure	P	1,2,3,8,10	P	1,2,3,8,10	P	1,2,3,8,10	P	1,2,3,8,10
Fertilizer (Nutrient kg/ha								
Basal (N+P+K)	F	1,2,3,6,10	F	1,2,3,6,10	F	1,2,3,6,10	F	1,2,3,6,10
Top Dressing (N)	F	1,2,3,6,10	F	1,2,3,6,10	F	1,2,3,6,10	F	1,2,3,6,10
Micro Nutrient	F	1,2,3,6,10	F	1,2,3,6,10	F	1,2,3,6,10	F	1,2,3,6,10
Pest Management								
Termite	F	1,2,6,7,9	F	1,2,6,7,9	F	1,2,6,7,9	F	1,2,6,7,9
Disease Management								
Rust	F	1,2,6,7,9	F	1,2,6,7,9	F	1,2,6,7,9	F	1,2,6,7,9
Alternation Blight	F	1,2,6,7,9	F	1,2,6,7,9	F	1,2,6,7,9	F	1,2,6,7,9
Weed Management								
Mechanical	N	-	N	-	N	-	N	-
Herbicide & Earthing	F	1,2,9	F	1,2,9	F	1,2,9	F	1,2,9
Water Management								
No. of Irrigation	P	1,2,9	P	1,2,9	P	1,2,9	P	1,2,9
Method	N	-	N	-	N	-	N	-
Land Management								
Acidity/Salinity	F	1,2,9,1	F	1,2,9,1	F	1,2,9,1	F	1,2,9,1
Method of Harvesting								
Marketing	P	1,2,3,4	P	1,2,3,4	P	1,2,3,4	P	1,2,3,4
Farm Level Processing	F	1,2,3,4	F	1,2,3,4	F	1,2,3,4	F	1,2,3,4
Grading	F	1,2,3,4	F	1,2,3,4	F	1,2,3,4	F	1,2,3,4
Packing	N	-	N	-	N	-	N	-
Processing	F	1,2,3,4,9	F	1,2,3,4,9	F	1,2,3,4,9	F	1,2,3,4,9
Storage Pest Control	F	1,2,3,6,7	F	1,2,3,6,7	F	1,2,3,6,7	F	1,2,3,6,7
Average Yield	P	1,2,3,6,7	P	1,2,3,6,7	P	1,2,3,6,7	P	1,2,3,6,7

(*) F=Full **P = Partial** **N = Nil**

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops, 8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture
AES - I

Crop: Arhar
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15th June – 15th July	N			June-July	15th June – 15th July	N		
Method	Broad casting	Line sowing	P	1,5,9	1,2,4,5	Broad casting	Line sowing	P	1,5,9	1,2,4
Variety	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	1,2	1,2,5,6,7	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	1,2	1,2, 6,7
Seed Rate	30 kg/ha	20 kg/ha	P	1	1,2,5	30 kg/ha	20 kg/ha	P	1	1,2,5
Seed Treatment	-	Bavistin 2g/kg seed	F	1,3	1,2,5,6	-	Bavistin 2g/kg seed	F	1,3	1,2
Organic Manure	1 ton/ha	5 ton/ha	F	1,5	1,2,3,6	1 ton/ha	5 ton/ha	F	1,5	1,2,3
Fertilizer (Nutrient kg/ha	-	20+40+20	-	-	-	-	20+40+20	-	-	-
Basal (N+P+K)	5+1+0	10+40+20	P	1,5,7,8	1,2,3,6	5+1+0	10+40+20	P	1,5,7	1,2,3
Top Dressing (N)	5	10				5	10			
Total	10+1	20+40+20 kg/ha				10+10+10	20+40+20 kg/ha			
Pest Management										
Pod Borer	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-
		First spray at 50% flowering second & third spray at 15 days interval					First spray at 50% flowering second & third spray at 15 days interval			
Disease Management										
Wilt	Crop with rotation	Crop rotation/Resistant variety/seed treatment	F	1,3	1,2, 6	Crop with rotation	Crop rotation/Resistant variety/seed treatment	F	1,3	2,5,6
	-	Bavision @ 2 gm /kg seed	P	1,3	1,2	-	Bavision @ 2 gm /kg seed	P	1,3	1,2

Weed Management										
Mechanical	Hand weeding	Hand weeding within 1 month of sowing	N			Hand weeding	Hand weeding within 1 month of sowing	N		
Herbicide	-	Fluchlorine 45 Ec @ 2 liter/ha	F	1,3,5,6	1,2, 6	-	Fluchlorine 45 Ec @ 2 liter/ha	F	1,3	1,2,5
Water Management										
No. of Irrigation	-	Avoid water logging	N	-		-	Avoid water logging	N	-	
Method	-	Irrigate in case of dry spell	F	1,3,5	1,2,6	-	Irrigate in case of dry spell	F	1,3,8	1,2,6
Land Management										
Acidity	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,9	1,2,5,6	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,9	1,2,5,6
Water Logging	Open bunding	Drainage	N	-	-	Open bunding	Drainage	N	-	-
Method of Harvesting	Hand catting	Hand picking or stem cutting	N	-	-	Hand catting	Hand picking or stem cutting	N	-	-
Any Other/Threshing	Beating	Beating	N			Beating	Beating	N		
Average Yield	8-10	18-20 q/ha	P	1,2,3	1,2,5	8-10	18-20 q/ha	P	1,2,3,4	1,2,5,6
Storage Pest Control	-	Steel bean aluminum phosphate	F	1, 3	1,2	-	Steel bean aluminum phosphate	F	1, 3	1,2,5

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture
AES - I

Crop: Arhar
Resource Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15th June – 15th July	N			June-July	15th June – 15th July	N	-	-
Method	Broad casting	Line sowing	P	1,2,6	1,2,4	Broad casting	Line sowing	P	1,2,6,9	1,2,4,5
Variety	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	-	-	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	-	-
Seed Rate	30 kg/ha	20 kg/ha	P	1	1,2	30 kg/ha	20 kg/ha	P	1,9	1,2,5
Seed Treatment	-	Bavistin 2g/kg seed	F	1,3	1,2	-	Bavistin 2g/kg seed	F	1,3	1,2,5
Organic Manure	1 ton/ha	5 ton/ha	F	1,5,6	1,2,3,6	1 ton/ha	5 ton/ha	F	1,5,8	1,2,3,6
Fertilizer (Nutrient kg/ha	-	20+40+20	-	-	-	-	20+40+20	-	-	-
Basal (N+P+K) 10+40+20	5+1+0	10+40+20	P	1,5	1,2,3,6	5+1+0	10+40+20	P	1,5,7,8	1,2,3,6
Top Dressing (N)	5	10				5	10+40+20			
Total	10+1+0	20+40+20 kg/ha				10	20+40+20 kg/ha			
Pest Management										
Pod Borer	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-
		First spray at 50% flowering second & third spray at 15 days interval					First spray at 50% flowering second & third spray at 15 days interval			
Disease Management										
Wilt	Crop with rotation	Crop rotation/Resistant variety/seed treatment	P	1,3	1,2	Crop with rotation	Crop rotation/Resistant variety/seed treatment	P	1,3	1,2,5
	-	Bavision @ 2 gm /kg seed				-	Bavision @ 2 gm /kg seed			

Weed Management										
Mechanical	Hand weeding	Hand weeding within 1 month of sowing	N	-	-	Hand weeding	Hand weeding within 1 month of sowing	N	-	-
Herbicide	-	Fluchlorine 45 Ec @ 2 liter/ha	F	1,3,5	1,2,5,6	-	Fluchlorine 45 Ec @ 2 liter/ha	F	1,3,5	1,2,5,6
Water Management										
No. of Irrigation	-	Avoid water logging	N	-		-	Avoid water logging	N	-	
Method	-	Irrigate in case of dry spell	F	1,3,5	1,2,5,6	-	Irrigate in case of dry spell	F	1,3,5	1,2,5,6
Land Management										
Acidity	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,8	1,2,5,6	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,8	1,2, 6
Water Logging	Open bunding	Drainage	N	-	-	Open bunding	Drainage	N	-	-
Method of Harvesting	Hand picking	Hand picking or stem cutting	N	-	-	Hand picking	Hand picking or stem cutting	N	-	-
Any Other/Threshing	Beating	Beating	N			Beating	Beating	N		
Average Yield	8-10	18-20 q/ha	P	1,2,3,5	1,2,5,6	8-10	18-20 q/ha	P	1,2,3,5	1,2,6
Storage Pest Control	-	Steel bean aluminum phosphate	F	1, 3	1,2,5,6	-	Steel bean aluminum phosphate	F	1, 3,4	1,2,5,6

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture

AES - II **Crop: Arhar**
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15th June – 15th July	N	-	-	June-July	15th June – 15th July	N	-	-
Method	Broad casting	Line sowing	P	1,2, 9	1,2,4,5	Broad casting	Line sowing	P	1,2, 9	1,2, 5
Variety	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	-	-	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	-	-
Seed Rate	30 kg/ha	20 kg/ha	P	1,9	1,2,5	30 kg/ha	20 kg/ha	P	1	1,2
Seed Treatment	-	Bavistin 2g/kg seed	F	1,3	1,2,3	-	Bavistin 2g/kg seed	F	1,3	1,2
Organic Manure	1 ton/ha	5 ton/ha	F	1,5,8	1,2,3,6	1 ton/ha	5 ton/ha	F	1,5	1,2,3,6
Fertilizer (Nutrient kg/ha	-	20+40+20	-	-	-	-	20+40+20	-	-	-
Basal (N+P+K) 10+40+20	5+1+0	10+40+20	P	1,5,8,9	1,2,3,6	5+1+0	10+40+20	P	1,5,7,8	1,2,3,6
Top Dressing (N)	5	10				5	10			
Total	10+10+10	20+40+20 kg/ha				10+10+10	20+40+20 kg/ha			
Pest Management										
Pod Borer	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-
		First spray at 50% flowering second & third spray at 15 days interval					First spray at 50% flowering second & third spray at 15 days interval			
Disease Management										
Wilt	Crop with rotation	Crop rotation/Resistant variety/seed treatment	F	1,3	1,2,6	Crop with rotation	Crop rotation/Resistant variety/seed treatment	F	1,3	1,2, 6
	-	Bavision @ 2 gm /kg seed				-	Bavision @ 2 gm /kg seed			

Weed Management										
Mechanical	Hand weeding	Hand weeding within 1 month of sowing	N			Hand weeding	Hand weeding within 1 month of sowing	N		
Herbicide	-	Fluchlorine 45 Ec @ 2 liter/ha	F	8,9	1,2,5,6	-	Fluchlorine 45 Ec @ 2 liter/ha	F	1,3,5	1,2,6
Water Management										
No. of Irrigation	-	Avoid water logging	N	-		-	Avoid water logging	N	-	
Method	-	Irrigate in case of dry spell	F	1,3,5	1,2,5,6	-	Irrigate in case of dry spell	F	1,3,8	1,2, 6
Land Management										
Acidity	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,9	1,2,5,6	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,9	1,2, 6
Water Logging	Open bunding	Drainage	N	-	-	Open bunding	Drainage	N	-	-
Method of Harvesting	Hand picking	Hand picking or stem cutting	N	-	-	Hand picking	Hand picking or stem cutting	N	-	-
Any Other/Threshing	Beating	Beating	N			Beating	Beating	N		
Average Yield	8-10	18-20 q/ha	P	1,2,3	1,2, 6	8-10	18-20 q/ha	P	1,2,3	1,2, 6
Storage Pest Control	-	Steel bean aluminum phosphate	F	1, 3,4	1,2, 6	-	Steel bean aluminum phosphate	F	1, 4	1,2,5,6

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Agriculture
AES - II

Crop: Arhar
Resource Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	15th June – 15th July	N	-	-	June-July	15th June – 15th July	N	-	-
Method	Broad casting	Line sowing	P	1,2	1,2,4,5	Broad casting	Line sowing	P	1,2	1,2,4,5
Variety	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	-	-	Laxmi Birsa Arhar	BR-65, Birsa Arhar, Laxmi T-21	N	-	-
Seed Rate	30 kg/ha	20 kg/ha	P	1	1,2	30 kg/ha	20 kg/ha	P	1	1,2
Seed Treatment	-	Bavistin 2g/kg seed	F	1,3,5	1,2,5,6	-	Bavistin 2g/kg seed	F	1,3,5	1,2,5,6
Organic Manure	1 ton/ha	5 ton/ha	F	1,5,8	1,2,3,6	1 ton/ha	5 ton/ha	F	1,5,8	1,2,3,6
Fertilizer (Nutrient kg/ha	-	20+40+20	-	-	-	-	20+40+20	-	-	-
Basal (N+P+K) 10+40+20	5+1+0	10+40+20	P	1,5,6	1,2,3,6	5+1+0	10+40+20	P	1,5	1,2,3,6
Top Dressing (N)	5	10				5	10			
Total	10+10+10	20+40+20 kg/ha				10+10+10	20+40+20 kg/ha			
Pest Management										
Pod Borer	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-	Roger Monohit	Endosulphan 35 EC @ 1.5-2 ml/liter water	N	-	-
		First spray at 50% flowering second & third spray at 15 days interval					First spray at 50% flowering second & third spray at 15 days interval			
Disease Management										
Wilt	Crop with rotation	Crop rotation/Resistant variety/seed treatment	P	1,3,5	1,2, 6	Crop with rotation	Crop rotation/Resistant variety/seed treatment	P	1,3,5	1,2, 6
	-	Bavision @ 2 gm /kg seed				-	Bavision @ 2 gm /kg seed	P	1	1

Weed Management										
Mechanical	Hand weeding	Hand weeding within 1 month of sowing	N	-	-	Hand weeding	Hand weeding within 1 month of sowing	N		
Herbicide	-	Fluchlorine 45 Ec @ 2 liter/ha	F	1,3,5	1,2,5,6	-	Fluchlorine 45 Ec @ 2 liter/ha	F	1,3,5	1,2,5,6
Water Management										
No. of Irrigation	-	Avoid water logging	N	-		-	Avoid water logging	N	-	
Method	-	Irrigate in case of dry spell	F	1,3,5	1,2,5,6	-	Irrigate in case of dry spell	F	1,3,5	1,2,5,6
Land Management										
Acidity	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,9	1,2,5,6	-	Lime @ 3 q/ha in furrow at the time of sowing	F	1,5,9	1,2,5,6
Water Logging	Open bunding	Drainage	N	-	-	Open bunding	Drainage	N	-	-
Method of Harvesting	Hand picking	Hand picking or stem cutting	N	-	-	Hand picking	Hand picking or stem cutting	N	-	-
Any Other/Threshing	Beating	Beating	N			Beating	Beating	N		
Average Yield	8-10	18-20 q/ha	P	1,2,3	1,2,5,6	8-10	18-20 q/ha	P	1,2,3	1,2,5,6
Storage Pest Control	-	Steel bean aluminum phosphate	F	1, 3	2,5,6	-	Steel bean aluminum phosphate	F	1, 3	2,5

(*) F=Full P=Partial N=Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour
5. Lack of resource, 6. Non-profitability and Non availability
7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration, 2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements, 5. Farmers scientist intraction
6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 3
Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/Commodity in the AES

Agriculture **Crop: Arhar**

AES - I & IV **Resource Rich**

Production Practices (items)	Gap in adoption in the different situations in which the crop/commodity in grown		Reasons for gap in adoption as perceived by the farmers	Strategies proposed as perceived by the farmers	Strategies proposed to overcome the gap
	FS-1	FS-II			
Sowing	-	-	-	-	-
Time	-	-	-	-	-
Method	√	√	1,2,6,9	1,2,4,5	1, 2, 9
Variety	√	√	1,2	1,2, 6,7	1, 2, 3, 5
Seed Rate	√	√	1,9	1,2	1,2,9
Seed Treatment	√	√	1,3	1,2,5	1,2,3,5
Organic Manure	√	√	1,5,8	1,2,3,6	1,2,3, 6,8
Fertilizer (Nutrient kg/ha					
Basal (N+P+K) 10+40+20	√	√	1,5,7,8	1,2,3,6	1,2,3, 10
Top Dressing (N)	√	√	1,5,8	1,2,3,6	1,2,3,5,10
Total	√	√	1,5,7,8	1,2,3,6	1,2,3,5,10
Pest Management					
Pod Borer	√	√	1,3,5	1,2, 6	1,2,3, 7
Disease Management					
Wilt	√	√	1,3,5	1,2, 6	1,2,3, 7
Weed Management					
Mechanical	√	√	1,3,5	1,2,5,6	1,2,3,5
Herbicide	-	-	-	-	-
Water Management					
No. of Irrigation	√	√	1,3,5,8	1,2, 6	1,2,3,5,9
Method	-	-	-	-	-
Land Management					
Acidity	√	√	1,3,5,6	1,2,6	1,2,3,5,6,11
Water Logging	-	-	-	-	-
Method of Harvesting	√	√	1,5	1,2,5,6	1,2,3,5,6,7
Any Other/Threshing	√	√	1, 3,4	1,2,5,6	1,2,3,5,6,7
Average Yield	√	√	1,2,3,4	1,2,5,6	1,2,3,5,6,7
Storage Pest Control	√	√	1,2,3,4	1,2,5,6	1,2,6,9

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

Strategies as perceived by the farmers

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Use of locally available materials for nutrient management & plant protection
7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility
9. Farmers scientist intraction
10. More emphasis on judicious use of soil and water
11. Popularisation of lime application

Chapter VI Table- 4
Consolidated Gaps in Production Practices of a Crop/Commodity and Proposed Strategies for the District Chatra

Agriculture ***Crop: Arhar***

Item	AES I		AES II		AES III		AES IV	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Sowing		-		-		-		-
Time	N	-	N	-	N	-	N	-
Method	P	1, 2, 9	P	1, 2, 9	P	1, 2, 9	P	1, 2, 9
Variety	N	1, 2, 3, 5	N	1, 2, 3, 5	N	1, 2, 3, 5	N	1, 2, 3, 5
Seed Rate	P	1,2,9	P	1,2,9	P	1,2,9	P	1,2,9
Seed Treatment	F	1,2,3,5	F	1,2,3,5	F	1,2,3,5	F	1,2,3,5
Organic Manure	F	1,2,3,5,6,8	F	1,2,3,5,6,8	F	1,2,3,5,6,8	F	1,2,3,5,6,8
Fertilizer (Nutrient kg/ha	-		-		-		-	
Basal (N+P+K) 10+40+20	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Top Dressing (N)	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Total	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Pest Management								
Pod Borer	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9
Disease Management								
Wilt	P	1,2,3,6,7,9	P	1,2,3,6,7,9	P	1,2,3,6,7,9	P	1,2,3,6,7,9
Weed Management								
Mechanical	N		N		N		N	
Herbicide	F	1,2,3,5,9	F	1,2,3,5,9	F	1,2,3,5,9	F	1,2,3,5,9
Water Management								
No. of Irrigation	N		N		N		N	
Method	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9
Land Management								
Acidity	F	1,2,3,5,6,11	F	1,2,3,5,6,11	F	1,2,3,5,6,11	F	1,2,3,5,6,11
Water Logging	N	-	N	-	N	-	N	-
Method of Harvesting	N	-	N	-	N	-	N	-
Any Other/Threshing	N	1,2,3,5,6,7	N	1,2,3,5,6,7	N	1,2,3,5,6,7	N	1,2,3,5,6,7
Average Yield	P	1,2,3,5,6,7	P	1,2,3,5,6,7	P	1,2,3,5,6,7	P	1,2,3,5,6,7
Storage Pest Control	F	1,2,6,9	F	1,2,6,9	F	1,2,6,9	F	1,2,6,9

(*) F=Full **P = Partial** **N = Nil**

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops, 8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - I

Crop: Tomato
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Through out the year transplanting	July, August, September	N	-	-	Through out the year transplanting	July, August, September	N	-	-
Method	Transplanting	Transplanting 60x45 cm	N	-	-	Transplanting	Transplanting 60x45 cm	N	-	-
Variety	Nandhari Rohit-2 Hybrid	Pusa Ruby, Pusa Sudabahar kka, Abha, hybrid	N	-	-	Nandhari Rohit-2 Hybrid	Pusa Ruby, Pusa Sudabahar kka, Abha, hybrid	N	-	-
Seed Rate	800 g/ha	500-600 q/ha	P	1,7,8	1,2	800 g/ha	500-600 g/ha	P	1,7,8	1,2
Seed Treatment	-	Bavistin @ 2 g/ha	P	1,3,9	1,2, 6	-	Bavistin @ 2 g/ha	P	1,3,5	1,2,4,6
Organic Manure	125 q/ha	200-250 q/ha	P	1,5,8	1,2,3,6	125 Q/ha	200-250 q/kg seed	P	1,5,7	1,2,3,6
Fertilizer (Nutrient kg/ha		120:60:50					120:60:50			1,2,3,6
Basal (N+P+K)	50:40+30	60+60+50 kg/ha	P	1,5,7	1,2,3,6	50:40+30	60+60+50 kg/ha	F	1,5,7	1,2,3,6
Top Dressing (N)	60	60 kg/ha	N	-	-	60	60 kg/ha	N	-	-
Total		120+60+50 kg/ha	F	1,5,7	1,2,6		120+60+50 kg/ha	F	1,5,7	1,2,6
Micro Nutrient kg/ha	-	-	-	-	-	_	Borax @ 20-25 kg/ha	-	-	-
Pest Management		Borax @ 20-25 kg/ha	F	1,5,7	1,2,6			F	1,5,7	1,2,6
Fruit, Borer	Endosulphan	Endosulphan (10.07%)	N	-	-	Endosulpha	Endosulphan (10.07%)	N	-	-
	Monocrosophos 2ml/lit	Monocrosophos/Monocil (0.05%)	-	-	-	Monocrosophos 2ml/lit	Monocrosophos/Monocil (0.05%)	-	-	-
Disease Management										
Leaf curl of tomato	-	Dimethoate (0.05%) 1 monocrolophos (0.05%)	F	1,3,5,6	1,2,3,5,6	-	Dimethoate (0.05%) 1 monocrolophos (0.05%)	F	1,3,5,9	1,2,3,6
Tomato mosaic		- do -	G	1,3,5,6	1,2,3,6		- do -	G	1,3,5,6	1,2,3,6

Weed Management										
Mechanical	2	2-3 weeding	N	-	-	2	2-3 weeding	N	-	-
Herbicide	-	Pendi metholin @ 1 kg ai/ha	N	-	-	-	Pendi metholin @ 1 kg ai/ha	N	-	-
Water Management	As per required	7-10 days interval	P	1,4,5,6	1,2,4,6	As per required	7-10 days interval	P	1,4,5,6	1,2,4,6
No. of Irrigation	6-8	15-18 irrigations	P	1,4,5,6	1,2,4,6	6-8	15-18 irrigations	P	1,4,5,6	1,2,4,6
Method	Flooding	Flood/drip	N	-	-	Flooding	Flood/drip	N	-	-
Land Management										
Acidity	-	Lime application @ 20-25 kg/ha	F	1,5,9	1,2,6	-	Lime application @ 20-25 kg/ha	F	1,5,7	1,2,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	un Organized	Organized	F	1,5,9	1,2,5,6	un Organized	Organized	F	1,5,9	1,2,5,6
Farm Level Processing	-	Ketup, souce, Quary, chatni powder	F	1,4,5,6	1,2,5,6	-	Ketup, souce, Quary, chatni powder	F	1,4,5,6	1,2,5,6
Grading	-	Grade wise	F	1,4,5,6	1,2,6	-	Grade wise	F	1,4,5,6	1,2,6
Packing	Basket	Basket (Bamboo)	N	-	-	Basket	Basket (Bamboo)	N	-	-
Processing	-	Souce, ketchup, puric, Pickle	F	1,4,5,6	1,2,6	-	Souce, ketchup, puric, Pickle	F	1,4,5,6	1,2,6
Storage	-	Zero energy cold storage	F	1,4,5,6	1,2,6	-	Zero energy cold storage	F	1,4,5,6	1,2,6
Average Yield	120-150 Q/ha	200-250 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6 ,7	120-150 Q/ha	200-250 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6 ,7

(*) F=Full	**P=Partial**	**N=Nil**

**** Code for specific reasons for gap in adoption**	***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction	1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - I **Crop: Tomato**
Resource Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Through out the year transplanting	July, August, September	N	-	-	Through out the year transplanting	July, August, September	N	-	-
Method	Transplanting	Transplanting 60x45 cm	N	-	-	Transplanting	Transplanting 60x45 cm	N	-	-
Variety	Nandhari Rohit-2 Hybrid	Pusa Ruby, Arka, Pusa Sudabahar, Abha, hybrid	N	-	-	Nandhari Rohit-2 Hybrid	Pusa Ruby, Pusa Sudabahar Arka, Abha, hybrid	N	-	-
Seed Rate	800 g/ha	500-600 q/ha	P	1	1,2	800 g/ha	500-600 g/ha	P	1	1,2
Seed Treatment	-	Bavistin @ 2 g/kg seed	F	1	1,2	-	Bavistin @ 2 g/kg seed	P	1	1,2
Organic Manure	125 q/ha	200-250 q/kg seed	P	1,3,5	1,2, 6	125 q/ha	200-250 q/kg seed	P	1,5,7	1,2,3,6
Fertilizer (Nutrient kg/ha		120:60:50					120:60:50			
Basal (N+P+K)	50:40+30	60+60+50 kg/ha	P	1,5,7	1,2,3,6	50+40+30	60+60+50 kg/ha	P	1,5,7,8	1,2,3,6
Top Dressing (N)	60	60 kg/ha				60	60 kg/ha			
Total		120+60+50 kg/ha		-	-		120+60+50 kg/ha			
Micro Nutrient kg/ha	_	Borax @ 20-25 kg/ha	F	1,5	1,2,6	_	Borax @ 20-25 kg/ha	F	1,5	1,2,3,6
Pest Management			-	-	-					
Fruit, Borer	Endosulpha	Endosulphan (0.07%)	N	-	-	Endosulphan	Endosulphan (0.07%)	N	-	-
	Monocrosophos 2ml/lit	Monocrosophos/Monocil (0.05%)	N	-	-	Monocrosophos 2ml/lit	Monocrosophos/Monocil (0.05%)	-	-	-
Disease Management										
Leaf curl of tomato	-	Dimethoate (0.05%) 1 monocrolophos (0.05%)	F	1,3,5,6	1,2,6	-	Dimethoate (0.05%) 1 monocrolophos (0.05%)	F	1,3,5	1,2,3,5,6
Tomato mosaic		- do -	F	1,3,5,6	1,2,3,5,6		- do -	F	1,3,5,6	1,2,3,6

Weed Management										
Mechanical	2	2-3 weeding	N	-	-	2	2-3 weeding	N	-	-
Herbicide	-	Pendi metholin @ 1 kg ai/ha	F	1,3,5	1,2,3,6	-	Pendi metholin @ 1 kg ai/ha	F	1,3,5	1,2,3
Water Management										
No. of Irrigation	6-8	7-10 irrigations	P	1,4,5	1,2, 6	6-8	7-10 irrigations	P	1,4,5	1,2, 6
Method	Flooding	Flood/drip	P	1,4,5,6	1,2,4,6	Flooding	Flood/drip	N	-	-
Land Management			N	-	-					
Acidity	-	Lime application @ 20-25 g/ha	F	1,3,5	1,2,6	-	Lime application @ 20-25 g/ha	F	1,5,9	1,2,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	Un Organized	Organized	P	1,5,6	2,5,6	Un Organized	Organized	P	1,5,9	1,2,5,6
Farm Level Processing	-	Ketup, souce, Quary, chatni powder	F	1,5,9	1,2,5,6	-	Ketup, souce, Quary, chatni powder	F	1,4,5,6	1,2,5,6
Grading	-	Grade wise	F	1,4,5,6	1,2,6	-	Grade wise	F	1,4,5,6	1,2,6
Packing	Basket	Basket (Bamboo)	N	-	-	Basket	Basket (Bamboo)	N	-	-
Processing	-	Souce, ketchup, puric, Pickle	F	1,3,5,6	2,4,6	-	Souce, ketchup, puric, Pickle	F	1,4,5,6	1,2,6
Storage	-	Zero energy cold storage	F	1,4,5,6	1,2,6	-	Zero energy cold storage	F	1,4,5,6	1,2,6
Average Yield	120-150 Q/ha	200-250 q/ha	P	1,4,5,6	1,2,6	120-150 Q/ha	200-250 q/ha	P	1,2,3,5,8,9	1,2,3,5,6 ,7

(*) F=Full	**P=Partial**	**N=Nil**
**** Code for specific reasons for gap in adoption**		***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction		1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - II **Crop: Tomato**
Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Through out the year transplanting	July, August, September	N	-	-	Through out the year transplanting	July, August, September	N	-	-
Method	Transplanting	Transplanting 60x45 cm	N	-	-	Transplanting	Transplanting 60x45 cm	N	-	-
Variety	Nandhari Rohit-2 Hybrid	Pusa Ruby, Arka, Pusa Sudabahar kka, Abha, hybrid	N	-	-	Nandhari Rohit-2 Hybrid	Pusa Ruby, Arka, Pusa Sudabahar kka, Abha, hybrid	N	-	-
Seed Rate	800 Q/ha	500-600 g/ha	P	1,7,8	1,2	800 q/ha	500-600 g/ha	P	1,7,8	1,2
Seed Treatment	-	Bavistin @ 2 g/kg seed	P	1,3,5	1,2,6	-	Bavistin @ 2 g/kg seed	P	1,3,5	1,2, 6
Organic Manure	125 Q/ha	200-250 q/ha	P	1,5,7	1, 3,6	125 Q/ha	200-250 q/ha	P	1,5,7	1,2,3,6
Fertilizer (Nutrient kg/ha		120:60:50					120:60:50			
Basal (N+P+K)	50:40+30	60+60+50 kg/ha	P	1,5,7	1,2,3,6	50:40+30	60+60+50 kg/ha	F	1,5,7,9	1,2,3,6
Top Dressing (N)	60	60 kg/ha				60	60 kg/ha			
Total		120+60+50 kg/ha					120+60+50 kg/ha			
Micro Nutrient kg/ha	_	Borax @ 20-25 kg/ha	F	1,3,5	1,2,3,6	_	Borax @ 20-25 kg/ha	F	1,3,5,9	1,2,6
Pest Management										
Fruit, Borer	Endosulphan	Endosulphan (0.07%)	N	-	-	Endosulphan	Endosulphan (0.07%)	N	-	-
	Monocrotophos @ 2ml/lit	Monocrosophos/Monocil (0.05%)	-	-	-	Monocrotophos @ 2ml/lit	Monocrotophos/Monocil (0.05%)	-	-	-
Disease Management										
Leaf curl of tomato	-	Dimethoate (0.05%) 1 monocrolophos (0.05%)	F	1,3,5,9	1,2,3,5,6	-	Dimethoate (0.05%) 1 monocrolophos (0.05%)	F	1,3,5,6	1,2,3,5,6
Tomato mosaic		- do -	P	1,3,5	1,2,3,6		- do -	P	1,3,5	1,2,3,6

Weed Management										
Mechanical	2	2-3 weeding	N	-	-	2	2-3 weeding	N	-	-
Herbicide	-	Pendi metholin @ 1 kg ai/ha	F	1,3,5	1,2,6	-	Pendi metholin @ 1 kg ai/ha	F	1,3,5,9	1,2,6
Water Management										
No. of Irrigation	6-8	15-18 irrigations	P	1,4,5,6,8	1,2,4,6	6-8	15-18 irrigations	P	1,4,5,6	1,2,4,5,6
Method	Flooding	Flood/drip	N	-	-	Flooding	Flood/drip	N	-	-
Land Management										
Acidity	-	Lime application @ 20-25 g/ha	F	1,5,9	1,2,6	-	Lime application @ 20-25 g/ha	F	1,5,9	1,2,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	un Organized	Organized	P	1,5,9	1,2,5,6	un Organized	Organized	F	1,5,9	1,2, 6
Farm Level Processing	-	Ketup, souce, Quary, chatni powder	F	1,4,5,6	1,2,5,6	-	Ketup, souce, Quary, chatni powder	F	1,4,5,6,9	1,2,5,6
Grading	-	Grade wise	F	1,4,5,6	1,2,6	-	Grade wise	F	1,4,5,6	1,2,6
Packing	Basket	Basket (Bamboo)	N	-	-	Basket	Basket (Bamboo)	N	-	-
Processing	-	Souce, ketchup, puric, Pickle	F	1,4,5,6,9	1,2,6	-	Souce, ketchup, puric, Pickle	F	1,4,5,6	1,2,6
Storage	-	Zero energy cold storage	F	1,4,5,6,7	1,2,4,6	-	Zero energy cold storage	F	1,4,5,6	1,2,6
Average Yield	120-150 Q/ha	200-250 q/ha	P	1,2,3, 5,8,9	1,2,3,5,6 ,7	120-150 q/ha	200-250 q/ha	P	1,2,3, 5,8,9	1,2,3,5,6 ,7

(*) F=Full	**P=Partial**	**N=Nil**
**** Code for specific reasons for gap in adoption**		***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction		1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - II

Crop: Tomato

Resource Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Through out the year transplanting	July, August, September	N	-	-	Through out the year transplanting	July, August, September	N	-	-
Method	Transplanting	Transplanting 60x45 cm	N	-	-	Transplanting	Transplanting 60x45 cm	N	-	-
Variety	Nandhari Rohit-2 Hybrid	Pusa Ruby, Arka, Pusa Sudabahar Abha, hybrid	N	-	-	Nandhari Rohit-2 Hybrid	Pusa Ruby, Arka, Pusa Sudabahar Abha, hybrid	N	-	-
Seed Rate	800 g/ha	500-600 g/ha	P	1,7,8	1,2	800 g/ha	500-600 g/ha	P	1,7,8,9	1,2
Seed Treatment	-	Bavistin @ 2 g/ha	P	1,3	1,2, 6	-	Bavistin @ 2 g/ha	P	1,3	1,2, 6
Organic Manure	125 Q/ha	200-250 q/ha	P	1,5,7	1,2,3,6	125 Q/ha	200-250 q/ha	P	1,5,7,9	1,2,3,6
Fertilizer (Nutrient kg/ha		120:60:50					120:60:50			
Basal (N+P+K)	50:40+30	60+60+50 kg/ha	P	1,5,7	1,2,3,6	50:40+30	60+60+50 kg/ha	P	1,5,7,9	1,2,3,6
Top Dressing (N)	60	60 kg/ha				60	60 kg/ha			
Total		120+60+50 kg/ha					120+60+50 kg/ha			
Micro Nutrient kg/ha	_	Borax @ 20-25 kg/ha	F	1,3,5	1,2,6	_	Borax @ 20-25 kg/ha	F	1,5,7	1,2,6
Pest Management										
Fruit, Borer	Endosulphan	Endosulphan (0.07%)	N	-	-	Endosulphan	Endosulphan (0.07%)	N	-	-
	Monocrotophos @ 2ml/lit	Monocrosophos/Monocil (0.05%)	-	-	-	Monocrotophos @ 2ml/lit	Monocrosophos/Monocil (0.05%)	-	-	-
Disease Management										
Leaf curl of tomato	-	Dimethoate (0.05%) 1 monoctolophos (0.05%)	F	1,3,5,6	1,2,3,5,6	-	Dimethoate (0.05%) 1 monocrolophos (0.05%)	F	1,3,5,6	1,2,3,5,6
Tomato mosaic		- do -	F	1,3,5,6	1,2,3,6		- do -	F	1,3,5,6,9	1,2,3,6

Weed Management										
Mechanical	2	2-3 weeding	N	-	-	2	2-3 weeding	N	-	-
Herbicide	-	Pendi metholin @ 1 kg ai/ha	F	1,3,5	1,2,6	-	Pendi metholin @ 1 kg ai/ha	F	1,3,5,9	1,2,6
Water Management										
No. of Irrigation	6-8	15-18 irrigations	P	1,4,5,6	1,2, 6	6-8	15-18 irrigations	P	1,4,5,6	1,2,4,6
Method	Flooding	Flood/drip	N	-	-	Flooding	Flood/drip	N	-	-
Land Management										
Acidity	-	Lime application @ 20-25 kg/ha	F	1,5,9	1,2,6	-	Lime application @ 20-25 g/ha	F	1,5,9	1,2,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	un Organized	Organized	F	1,5,9	1,2,5,6	un Organized	Organized	F	1,5,9	1,2,5,6
Farm Level Processing	-	Ketup, souce, Quary, chatni powder	F	1,4,5,6	1,2, 6	-	Ketup, souce, Quary, chatni powder	F	1,4,5,6	1,2, 6
Grading	-	Grade wise	F	1,4,5,6	1,2,6	-	Grade wise	F	1,4,5,6	1,2,6
Packing	Basket	Basket (Bamboo)	N	-	-	Basket	Basket (Bamboo)	N	-	-
Processing	-	Souce, ketchup, puric, Pickle	F	1,4,5,6	1,2,6	-	Souce, ketchup, puric, Pickle	F	1,4,5,6	1,2,6
Storage	-	Zero energy cold storage	F	1,4,5,6	1,2,6	-	Zero energy cold storage	F	1,4,5,6,9	1,2,6
Average Yield	120-150 Q/ha	200-250 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6 ,7	120-150 Q/ha	200-250 q/ha	P	1,2,3,5,8,9	1,2,3,5,6 ,7

(*) F=Full	**P=Partial**	**N=Nil**

**** Code for specific reasons for gap in adoption**	***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction	1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - III **Crop: Tomato**

Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	June-July	Third week of May-June	N	-	-	June-July	Third week of May-June	N	-	-
Method	Transplanting	Transplanting 60x45 cm	N	-	-	Transplanting	Transplanting 60x45 cm	N	-	-
Variety	Nidhi, Namdhari, Suraksha	Nidhi, Godhia, Suraksha	N	-	-	Nidhi, Namdhari, Suraksha	Nidhi, Godhia, Suraksha	N	-	-
Seed Rate	700-800 g/kg seed	600-700 g/ha, 150 g/ha (hy.)	P	1,7,8,9	1,2	700-800 g/kg seed	600-700 g/ha, 150 g/kg seed (hy.)	P	1,7,8	1,2
Seed Treatment	-	Bavistin 2 g/ha	P	1,3	1,2,4,6	-	Bavistin 2 g/ha	P	1,3	1,2
Organic Manure	10 q/ha	200-250 q/ha	P	1,5,7	1,2,3,6	10 q/ha	200-250 q/ha	P	1,5,7	1,2,3,6
Fertilizer (Nutrient kg/ha					1,2,3,6					
Basal (N+P+K)		60+60+25	P	1,5,7	1,2,3,6		60+60+25	P	1,5,7	1,2,3,6
Top Dressing (N)	60	45				60	45			
Total										
Micro Nutrient kg/ha	-	Borax @ 20-25 kg/ha	F	1,3,5	-	-	Borax @ 20-25 kg/ha	P	1,3,5	1,2
Pest Management										
Fruit Bore	Roger, Endosulphan	Roger, Monocrotophos.5m/lt	N	-	-	Roger, Endosulphan	Roger, Monocrotophos.5m/lt, Endosuphn 1.5m/lt	N	-	-
		Spray at 10-15 dsys interval	-	-	-		Spray at 10-15 dsys interval	-	-	-

Disease Management										
Wilt	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 @1.25 kg/lit, resistant variety	P	1,3,5,6	1,2,3,5,6	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 @1.25 kg/lit, resistant variety	P	1,3,5	1,2,3,5
Bacterial Blight	-	Streptomyein 200 g/ha	F	1,3,5	1,2,3,6	-	Streptomyein 200 g/ha	F	1,3,5,6	1,2,3,6
Weed Management										
Mechanical	2	2-3 hand weeding	N	-	-	2	2-3 hand weeding	N	-	-
Herbicide	-	Pendimethalin 1-3 ppm ai/liter	F	-	-	-	Pendimethalin 1-3 ppm ai/liter	F	1,4,5,6	1,2,4,6
Water Management										
No. of Irrigation	Rainfed	Inigation it required	P	1,4,5	1,2, 6	Rainfed	Inigation it required	P	1,4,5,6	1,2, 6
Method	-	Furrow	N	-	-	-	Furrow	N	-	-
Land Management										
Acidity	-	Limeappt if required	F	1,5,9	1,2,6	-	Limeappt if required	F	1,5,9	1,2,5,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	Local	Organised	p	1,5,9	1,2,5,6	Local	Organised	p	1,5,9	1,2,5,6
Farm Level Processing	-	Souce, Ketchup	F	1,4,5,6	1,2,5,6	-	Souce, Ketchup	F	1,4,5,6	1,2,5,6
Grading	-	Size wise	F	1,4,5,6	1,2,6	-	Size wise	F	1,4,5,6	1,2,6
Packing	Basket	Bamboo basket	N	-	-	Basket	Bamboo basket	P	1,4,5,6	1,2
Processing	-	Souce, Ketchup, Puric, Picle	F	1,4,5,6	1,2,6	-	Souce, Ketchup, Puric, Picle	F	1,4,5,6	1,2,6
Storage	-	Zero energy cool chamber	F	1,4,5	1,2,6	-	Zero energy cool chamber	F	1,4,5	1,2,6
Average Yield	130-140 q/ha	175-200 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6, 7	130-140 q/ha	175-200 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6,7

(*) F=Full	**P=Partial**	**N=Nil**
**** Code for specific reasons for gap in adoption**		***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction		1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - III **Crop: Tomato**

Farming Situation: Rabi- Up Land **Resource Poor**

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Sept.-Oct.	Aug., Sept., Oct.	N	-	-	Sept.-Oct.	Aug., Sept., Oct.	N	-	-
Method	Transplanting	Transplanting	N	-	-	Transplanting	Transplanting	N	-	-
Variety	Nidhi, Namdhari, Suraksha	Nidhi, Swarn Naween, Swarn Lalima, Panjab Keshri, Pusa Sadabahar, Suraksha	N	-	-	Nidhi, Namdhari, Suraksha	Nidhi, Swarn Naween, Swarn Lalima, Panjab Keshri, Pusa Sadabahar, Suraksha	N	-	-
Seed Rate	700-800 g/ha	600-700 g/ha, 150 g/ha (hy.)	P	1,7,8	1,2	700-800 g/ha	600-700 g/ha, 150 g/ha (hy.)	P	1,7,8	1,2
Seed Treatment	-	Bavistin 2 g/kg seed	F	1,3,9	1,2,4,6	-	Bavistin 2 g/kg seed	F	1,3	1,2,4,6
Organic Manure	10 q/ha	200-250 q/ha	P	1,5	1,2,3,6	10 q/ha	200-250 q/ha	P	1,5	1,2,3,6
Fertilizer (Nutrient kg/ha										
Basal (N+P+K)		60+60+25	P	1,5,7	1,2,3,6		60+60+25	P	1,5,7	1,2,3,6
Top Dressing (N)	60	45				60	45			
Total										
Micro Nutrient kg/ha	-	Borax @ 20-25 kg/ha	-	-	-	-	Borax @ 20-25 kg/ha	-	-	-
Pest Management										
Fruit Bore	Roger, Endosulphan	Roger, Monocrotophos, Endosulphan 1.5m/lt	N	-	-	Roger, Endosulphan	Roger, Monocrotophos, Endosulphan 1.5m/lt	N	-	-
		Spray at 10-15 dsys interval	-	-	-		Spray at 10-15 dsys interval	-	-	-

Disease Management										
Wilt	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 1.25 g/lit, Grow resistant variety	F	1,3,5,6	1,2,3,5,6	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 1.25 g/lit, Grow resistant variety	F	1,3,5,6	1,2,3,5,6
Bacterial Blight	-	Streptomyein 200 g/ha	F	1,3,5	1,2,3	-	Streptomyein 200 g/ha	F	1,3,5	1,2,3
Weed Management										
Mechanical	2	2-3	N	-	-	2	2-3	N	-	-
Herbicide	-	Pendimethalin 1.5 lit. in 500 lit. Water/ha	F	1,3,5	1,2,6	-	Pendimethalin 1.5 lit. in 500 lit. Water/ha	F	1,5,9	1,2,5,6
Water Management										
No. of Irrigation	Rainfed	Inigation it required	P	1,4,5,6,8	1,2, 6	Rainfed	Inigation it required	P	1,4,5,6,8	1,2,6
Method	-	Furrow	N	-	-	-	Furrow	N	-	-
Land Management										
Acidity	-	Limeappt if irequired	F	1,5,9	1,2,6	-	Limeappt if irequired	F	1,5,9	1,2,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	Local	Organised	F	1,5,9	1,2,5,6	Local	Organised	F	1,5,9	1,2,5,6
Farm Level Processing		Souce, Ketchup	F	1,4,5,6	1,2,5,6		Souce, Ketchup	F	1,4,5,6	1,2,5,6
Grading	-	Size wise	F	1, 5,6	1,2,6	-	Size wise	F	1, 5,6	1,2,6
Packing	Basket	Bamboo basket	N	-	-	Basket	Bamboo basket	N	-	-
Processing	-	Souce, Ketchup, Puric, Picle	F	1,4,5,6	1,2,6	-	Souce, Ketchup, Puric, Picle	F	1,4,5,6	1,2,6
Storage	-	Zero energy cool chamber	F	1,4,5,6	1,2,6	-	Zero energy cool chamber	F	1,4,5,6	1,2,6
Average Yield	130-140 q/ha	175-200 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6 ,7	130-140 q/ha	175-200 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6 ,7

(*) F=Full	**P=Partial**	**N=Nil**

**** Code for specific reasons for gap in adoption**	***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction	1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - IV **Crop: Tomato**

Resource Rich

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Sept.-Oct.	Aug., Sept., Oct.	N	-	-	Sept.-Oct.	Aug., Sept., Oct.	N	-	-
Method	Transplanting	Transplanting	N	-	-	Transplanting	Transplanting	N	-	-
Variety	Nidhi, Namdhari, Suraksha	Nidhi, Swarn Naween, Swarn Lalima, Panjab Keshri, Pusa Sadabahar, Suraksha	N	-	-	Nidhi, Namdhari, Suraksha	Nidhi, Swarn Naween, Swarn Lalima, Panjab Keshri, Pusa Sadabahar, Suraksha	N	-	-
Seed Rate	700-800 g/ha	600-700 g/ha, 150 g/ha (hy.)	P	1,7,8	1,2	700-800 g/ha	600-700 g/ha, 150 g/ha (hy.)	P	1,7,8	1,2
Seed Treatment	-	Bavistin 2 g/kg seed	F	1,3,5	1,2, 6	-	Bavistin 2 g/kg seed	F	1,3,5	1,2,4,6
Organic Manure	10 q/ha	200-250 q/ha	P	1,5,7	1,2,3,6	10 q/ha	200-250 q/ha	P	1,5,7,9	1,2,3,6
Fertilizer (Nutrient kg/ha										
Basal (N+P+K)		60+60+25	F	1,5,7,9	1,2,3,6		60+60+25	F	1,5,7	1,2,3,6
Top Dressing (N)	60	45				60	45			
Total										
Micro Nutrient kg/ha	-	Borax @ 20-25 kg/ha	F	1,3,5	1,2,6	-	Borax @ 20-25 kg/ha	F	1,3,5	1,2,5,6
Pest Management										
Fruit Bore	Roger, Endosulphan	Roger, Monocrotophos,Endosulphan 1.5m/lt Spray at 10-15 dsys interval	N	-	-	Roger, Endosulphan	Roger, Monocrotophos, Endosulphan 1.5m/lt Spray at 10-15 dsys interval	N	-	-

Disease Management										
Wilt	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 1.25 g/lit, Grow resistant variety	N	-	-	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 1.25 g/lit, Grow resistant variety	N	-	-
Bacterial Blight	-	Streptomyein 200 g/ha	F	1,3,5,6	1,2,3,6	-	Streptomyein 200 g/ha	F	1,3, 6	1,2,3,6
Weed Management										
Mechanical	2	2-3	N	-	-	2	2-3	N	-	-
Herbicide	-	Pendimethalin 1.5 lit. in 500 lit. Water/ha	N	-	-	-	Pendimethalin 1.5 lit. in 500 lit. Water/ha	N	-	-
Water Management										
No. of Irrigation	Rainfed	Inigation it required	P	1,4,5,6	1,2,4,6	Rainfed	Inigation it required	P	1,4,5,6	1,2,4,6
Method	-	Furrow	N	-	-	-	Furrow	N	-	-
Land Management										
Acidity	-	Limeappt if irequired	F	1,5,9	1,2,6	-	Limeappt if irequired	F	1,5,9	1,2,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	Local	Organised	F	1,5,6,9	1,2,5,6	Local	Organised	F	1,5,9	1,2,5,6
Farm Level Processing		Souce, Ketchup	F	1,5,6	1,2,5,6		Souce, Ketchup	F	1,4,5,6	1,2,5,6
Grading	-	Size wise	F	1,4,5,6	1,2,6	-	Size wise	F	1,4,5,6	1,2,6
Packing	Basket	Bamboo basket	N	-	-	Basket	Bamboo basket	N	-	-
Processing	-	Souce, Ketchup, Puric, Picle	F	1,4,5,6	1,2,6	-	Souce, Ketchup, Puric, Picle	F	1,4,5,6	1,2,6
Storage	-	Zero energy cool chamber	F	1,4,5,6	1,2,6	-	Zero energy cool chamber	F	1,4,5,6,9	1,2,6
Average Yield	130-140 q/ha	175-200 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6 ,7	130-140 q/ha	175-200 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6 ,7

(*) F=Full	**P=Partial**	**N=Nil**

**** Code for specific reasons for gap in adoption**	***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction	1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

AES - IV **Crop: Tomato**

Resource Poor

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Sept.-Oct.	Aug., Sept., Oct.	N	-	-	Sept.-Oct.	Aug., Sept., Oct.	N	-	-
Method	Transplanting	Transplanting	N	-	-	Transplanting	Transplanting	N	-	-
Variety	Nidhi, Namdhari, Suraksha	Nidhi, Swarn Lalima, Pusa Sadabahar, Pusa Keshri, Swarn Naween, Suraksha	N	-	-	Nidhi, Namdhari, Suraksha	Nidhi, Swarn Lalima, Pusa Sadabahar, Pusa Keshri, Swarn Naween, Suraksha	N	-	-
Seed Rate	700-800 g/ha	600-700 g/ha, 150 g/ha (hy.)	P	1,7,8	1,2	700-800 g/ha	600-700 g/ha, 150 g/ha (hy.)	P	1,7,8	1,2
Seed Treatment	-	Bavistin 2 g/kg seed	F	1,3	1,2	-	Bavistin 2 g/kg seed	P	1,3	1,2
Organic Manure	10 q/ha	200-250 q/ha	P	1,5,7	1,2,3,6	10 q/ha	200-250 q/ha	P	1,5,7	1,2,3,5,6
Fertilizer (Nutrient kg/ha										
Basal (N+P+K)		60+60+25	F	1,5,7	1,2,3,6		60+60+25	F	1,5,7	1,2,3,5,6
Top Dressing (N)	60	45				60	45			
Total										
Micro Nutrient kg/ha	-	Borax @ 20-25 kg/ha	-	-	-	-	Borax @ 20-25 kg/ha	-	-	-
Pest Management			F	1,5,7	1,2,6			F	1,5,7	1,2,6
Fruit Bore	Roger, Endosulphan	Roger, Monocrotophos, Endosulphan 1.5m/lt Spray at 10-15 dsys interval	N	-	-	Roger, Endosulphan	Roger, Monocrotophos, Endosulphan 1.5m/lt Spray at 10-15 dsys interval	N	-	-

Disease Management										
Wilt	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 1.25 g/lit, Grow resistant variety	N	-	-	Indofil M-45 2ml/lit	(Bavistin (250g) + Indofil M 45 1.25 g/lit, Grow resistant variety	N	-	-
Bacterial Blight	-	Streptomyein 200 g/ha	F	1,3,5,6,9	1,2,3,6	-	Streptomyein 200 g/ha	F	1,3,6	1,2,3,6
Weed Management										
Mechanical	2	2-3	N	-	-	2	2-3	N	-	-
Herbicide	-	Pendimethalin 1.5 lit. in 500 lit. Water/ha	N	-	-	-	Pendimethalin 1.5 lit. in 500 lit. Water/ha	N	-	-
Water Management										
No. of Irrigation	Rainfed	Inigation it required	P	1,4,5,6	1,2,4,6	Rainfed	Inigation it required	P	1,4,5,6	1,2, 6
Method	-	Furrow	N	-	-	-	Furrow	N	-	-
Land Management										
Acidity	-	Limeappt if irequired	F	1,5,9	1,2,6	-	Limeappt if irequired	F	1,5,9	1,2,6
Method of Harvesting	Picking	Picking	N	-	-	Picking	Picking	N	-	-
Marketing	Local	Organised	F	1,5,9	1,2,5,6	Local	Organised	F	1,5,9	1,2,5,6
Farm Level Processing		Souce, Ketchup	F	1,4,5,6	1,2,5,6		Souce, Ketchup	F	1,4,5,6	2,5,6
Grading	-	Size wise	F	1,4,5,6,9	1,2,6	-	Size wise	F	1,4,5,6	1,2,5,6
Packing	Basket	Bamboo basket	N	-	-	Basket	Bamboo basket	N	-	-
Processing	-	Souce, Ketchup, Puric, Picle	F	1,4,5,9	1,2,6	-	Souce, Ketchup, Puric, Picle	F	1,4,5	1,2,6
Storage	-	Zero energy cool chamber	F	1,4,5,6	1,2,6	-	Zero energy cool chamber	F	1,4,5,6	1,2,6
Average Yield	130-140 q/ha	175-200 q/ha	P	1,2,3, 5,8,9	1,2,3,5,6,7	130-140 q/ha	175-200 q/ha	P	1,2,3,4,5,8,9	1,2,3,5,6,7

(*) F=Full	**P=Partial**	**N=Nil**

**** Code for specific reasons for gap in adoption**	***** code for farmer proposed extension**
1. Lack of awareness/knowledge, 2. Non availability of required quantity of quality seed, 3. Plant protection is not economical under rainfed conditions, 4. Non-avaibility of labour, 5. Lack of resource, 6. Non-profitability, 7. Risk of crop failure, 8. Lack of assured irrigation, 9. Lack of conviction	1. On farm trails / Demonstration, 2. Training and exposure visits, 3. Use of locally available materials for nutrient management & plant protection, 4. Improved farm implements, 5. Farmers scientist intraction, 6. Link to financial institutions, 7. Improved variety of crops

Chapter VI Table- 3
Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/Commodity in the AES

Vegetable/Horticulture **Crop: Tomato**

AES - II, III & IV **Resource Rich/Poor**

Production Practices (items)	Gap in adoption in the different situations in which the crop/commodity in grown		Reasons for gap in adoption as perceived by the farmers	Strategies proposed as perceived by the farmers	Strategies proposed to overcome the gap
	FS-1	FS-II			
Sowing					
Time	-	-	-	-	-
Method	-	-	-	-	-
Variety	√	√	1,7,8	1,2	1,2,9
Seed Rate	√	√	1,3,5	1,2,4,6	1,2,9
Seed Treatment	√	√	1,5,7	1,2,3,6	1,2,3,5,7
Organic Manure	√	√	1,5,7	1,2,3,6	1,2,3,5,6,8
Fertilizer (Nutrient kg/ha					
Basal (N+P+K)	√	√	1,5,7	1,2,3,6	1,2,3,5,10
Top Dressing (N)	√	√	1,5,7	1,2,3,6	1,2,3,5,10
Total	√	√	1,5,7	1,2,6	1,2,3,5,10
Micro Nutrient kg/ha	√	√	-	-	-
Pest Management					
Fruit, Borer	√	√	1,5,7	1,2,6	1,2,3,6,7,9
Disease Management					
Leaf curl of tomato	√	√	1,3,5,6	1,2,3,5,6	1,2,3,6,7,9
Tomato mosaic	√	√	1,3,5,6	1,2,3,6	1,2,3,6,7,9
Weed Management					
Mechanical	-	-	-	-	-
Herbicide	-	-	-	-	-
Water Management					
No. of Irrigation	√	√	1,4,5,6	1,2,4,6	1,2,3,5,9
Method	-	-	-	-	-
Land Management					
Acidity	√	√	1,5,9	1,2,6	1,2,5,6,7,
Method of Harvesting					
Marketing	√	√	1,5,9	1,2,5,6	1,2,5,6,7,8
Farm Level Processing	√	√	1,4,5,6	1,2,5,6	1,2,3,4,6
Grading	√	√	1,4,5,6	1,2,6	1,2,3,4,6
Packing	-	-	-	-	-
Processing	√	√	1,4,5,6	1,2,6	1,2,3,4,6
Storage	√	√	1,4,5,6	1,2,6	1, 2, 3, 5
Average Yield	√	√	1,2,3,4,5,8,9	1,2,3,5,6,7	1, 2, 3, 5

If the gap is present in that farming situation then (√) and no gap (-)

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

Strategies as perceived by the farmers

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Use of locally available materials for nutrient management & plant protection
7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility
9. Farmers scientist intraction
10. More emphasis on judicious use of soil and water

Chapter VI Table- 4
Consolidated Gaps in Production Practices of a Crop/Commodity and Proposed Strategies for the District Chatra

Vegetable/Horticultural ***Crop: Tomato***

Item	AES I		AES II		AES III		AES IV	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Sowing								
Time	N	-	N	-	N	-	N	-
Method	N	-	N	-	N	-	N	-
Variety	N	-	N	-	N	-	N	-
Seed Rate	P	1,2,9	P	1,2,9	P	1,2,9	P	1,2,9
Seed Treatment	P	1,2,3,5,7	P	1,2,3,5,7	P	1,2,3,5,7	P	1,2,3,5,7
Organic Manure	P	1,2,3,5,6,8	P	1,2,3,5,6,8	P	1,2,3,5,6,8	P	1,2,3,5,6,8
Fertilizer (Nutrient kg/ha								
Basal (N+P+K)	F	1,2,3,5,10	F	1,2,3,5,10	F	1,2,3,5,10	F	1,2,3,5,10
Top Dressing (N)	N	-	N	-	N	-	N	-
Total	F	1,2,3,5,10	F	1,2,3,5,10	F	1,2,3,5,10	F	1,2,3,5,10
Micro Nutrient kg/ha	F	1,2,3,5,10	F	1,2,3,5,10	F	1,2,3,5,10	F	1,2,3,5,10
Pest Management								
Fruit, Borer	-	-	-	-	-	-	-	-
Disease Management								
Leaf curl of tomato	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9
Tomato mosaic	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9
Weed Management								
Mechanical	N	-	N	-	N	-	N	-
Herbicide	N	-	N	-	N	-	N	-
Water Management								
No. of Irrigation	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9
Method	N	-	N	-	N	-	N	-
Land Management								
Acidity	F	1,2,5,6,7,	F	1,2,5,6,7,	F	1,2,5,6,7,	F	1,2,5,6,7,
Method of Harvesting								
Marketing	F	1,2,5,6,7,8	F	1,2,5,6,7,8	F	1,2,5,6,7,8	F	1,2,5,6,7,8
Farm Level Processing	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6
Grading	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6
Packing	N	-	N	-	N	-	N	-
Processing	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6
Storage	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Average Yield	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5

(*) F=Full **P = Partial** **N = Nil**

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops, 8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water, 11. Popularisation of lime application

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture **Crop: Potato**

Farming Situation-Rabi Upland **Resource Rich/Poor**

ITEMS	AES - I FS-1					AES - II FS-I				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Oct. to Nov.	10 Oct. to 10 Nov.	N	-		Oct. to Nov.	10 Oct. to 10 Nov.	N	-	
Method	Furrow	Furrow	N			Furrow	Furrow	N		
Variety	Local, K. Jyoti, K. Lalima, K. Sinduri, Lal Gulab	K. Lalima, K. Badsah, K. Kuber, K. Chandra mukhi, K. Jyoti, K. Sinduri	P	1,2,5,8,9	1,2,5,6,7	Local, K. Jyoti, K. Lalima, K. Sinduri, Lal Gulab	K. Lalima, K. Badsah, K. Kuber, K. Chandra mukhi, K. Jyoti, K. Sinduri	P	1,2,5,8,9	1,2, 6,7
Seed Rate	30-35 q/ha	25-30 q/ha	P	1,7,8	1,2,4,6	30-35 q/ha	25-30 q/ha	P	1,7,8	1,2,4,6
Seed Treatment	-	Mancozeb 2 gm/lit. water	F	1,3,5	1,2,5,6	-	Mancozeb 2 gm/lit. water	F	1,3,5	1,2, 6
Organic Manure	10 2/ha	200-250 q/ha	P	1,5,8,9	1,2,3,6	10 2/ha	200-250 q/ha	P	1,5,8,9	1,2,3,6
Fertilizer (Nutrient kg/ha)	60:30:10	100:100:90	P	1,5,89,9	1,2,3,6	60:30:10	100:100:90	P	1,5,8,9	1,2,3,6
Basal (N+P+K)	30:30:10	50:100:90				30:30:10	50:100:90			
Top Dressing (N)	30	50				30	50			
Total	60:30:10	100:100:90				60:30:10	100:100:90			
Pest Management										
Aphid	-	Linden dust 25 kg/ha	F	1,3,5, 9	1,2,3, 6	-	Linden dust 25 kg/ha	F	1,3, 9	1,2,3, 6

Disease Management										
Early Blight	Indofil M-45	Indofil M-45, 2 kg/ha	N	-	-	Indofil M-45	Indofil M-45, 2 kg/ha	P	1,3,5,6,9	1,2,3,4,6
Late blight		Ridomil MZ 2 gm/lit. water	F	1,3,5,6,9	1,2,3,4,6		Ridomil MZ 2 gm/lit. water	F	1,3,5	1,2,3,6
Weed Management										
Mechanical	Kudal	Kudal, Khurpi	N	-	-	Kudal	Kudal, Khurpi	N	-	-
Herbicide	-	Atrazine, 50 % 1 kg/ha	F	1,5,6	1,2,5,6	-	Atrazine, 50 % 1 kg/ha	F	1,5,9	1,2,5,6
Water Management										
No. of Irrigation	7	9	P	5,8,9	1,2,4,6	7	9	P	5,8,9	1,2,6
Method	Furrow	Furrow	N	-	-	Furrow	Furrow	N	-	-
Land Management										
Water Logging	Rainfed	Drainage	-	-	-	Rainfed	Drainage	-	-	-
Method of Harvesting	Digging	Digging	N	-	-	Digging	Digging	N	-	-
Any Other/Threshing	-		-	-	-	-		-	-	-
Average Yield	110-120 q/ha	250-300 q/ha	P	1,2,3, 5,8	1,2,3,6,7	110-120 q/ha	250-300 q/ha	P	1,2,3,4,5,8	1,2,3,6,7
Storage Pest Control	-	malathion	F	1,3,5,9	1,2,3,6	-	Malathion	F	1,3,9	1,2,3

(*) F=Full **P=Partial** **N=Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Chapter VI Table- 2
Gap in adoption and Farmer Strategies for improving the production and productivity of the crop

Vegetable/Horticulture

Crop: Potato

Farming Situation-Rabi Upland

Resource Rich/Poor

ITEMS	AES - III FS-1					AES - IV FS-I				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing										
Time	Oct. to Nov.	10 Oct. to 10 Nov.	N	-		Oct. to Nov.	10 Oct. to 10 Nov.	N	-	
Method	Furrow	Furrow	N	-	-	Furrow	Furrow	N	-	-
Variety	Local, K. Jyoti, K. Lalima, K. Sinduri, Lal Gulab	K. Lalima, K. Badsah, K. Kuber, K. Chandra mukhi, K. Jyoti, K. Sinduri	P	1,2,5,8	1,2,5,6,7	Local, K. Jyoti, K. Lalima, K. Sinduri, Lal Gulab	K. Lalima, K. Badsah, K. Kuber, K. Chandra mukhi, K. Jyoti, K. Sinduri	P	1,2,5,8	1,2,5,6,7
Seed Rate	30-35 q/ha	25-30 q/ha	P	1,7,8,9	1,2,4,6	30-35 q/ha	25-30 q/ha	P	1,7,8,9	1,2,4,6
Seed Treatment	-	Mancozeb 2 gm/lit. water	F	1,3,5	1,2,5,6	-	Mancozeb 2 gm/lit. water	F	1,3,5	1,2,6
Organic Manure	10 q/ha	200-250 q/ha	P	1,5,8,9	1,2,3,6	10 q/ha	200-250 q/ha	P	1,5,8	1,2,3,6
Fertilizer (Nutrient kg/ha)	60:30:10	100:100:90	P	1,5,8,7,9	1,2,3,6	60:30:10	100:100:90	P	1,5,8,9	1,2,3,6
Basal (N+P+K)	30:30:10	50:100:90				30:30:10	50:100:90			
Top Dressing (N)	30	50				30	50			
Total	60:30:10	100:100:90				60:30:10	100:100:90			
Pest Management										
Aphid	-	Linden dust 25 kg/ha	F	1,3,5, 9	1,2,3,6	-	Linden dust 25 kg/ha	F	1,3,5, 9	1,2,3, 6

Disease Management										
Early Blight	Indofil M-45	Indofil M-45, 2 kg/ha	N	-	-	Indofil M-45	Indofil M-45, 2 kg/ha	N	-	-
Late blight		Ridomil MZ (2 g/lit/ha)	F	1,3,5,6,9	1,2,3,4,6		Ridomil MZ (2 g/lit/ha)	F	1,3,5,9	1,2,3,4,6
Weed Management										
Mechanical	Kudal	Kudal, Khurpi	N	-	-	Kudal	Kudal, Khurpi	N	-	-
Herbicide	-	Atrazine, 50 % 1 kg/ha	F	1,5,6	1,2,5,6	-	Atrazine, 50 % 1 kg/ha	F	1,5,6	1,2,5,6
Water Management										
No. of Irrigation	7	9	P	5,8,9	1,2,4,6	7	9	P	5,8,9	1,2,4,6
Method	Furrow	Furrow	N	-	-	Furrow	Furrow	N	-	-
Land Management										
Water Logging	Rainfed	Drainage	-	-	-	Rainfed	Drainage	-	-	-
Method of Harvesting	Digging	Digging	N	-	-	Digging	Digging	N	-	-
Any Other/Threshing	-		-	-	-	-		-	-	-
Average Yield	110-120 q/ha	250-300 q/ha	P	1,2,3,5,8	1,2,3,6,7	110-120 q/ha	250-300 q/ha	P	1,2,3,4,5,8	1,2,3,6,7
Storage Pest Control	-	Malathion	F	1,3, 9	1,2,3	-	Malathion	F	1,3, 9	1,2,3

(*) F=Full **P=Partial** **N=Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

***** code for farmer proposed extension**

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Gap in adoption and Proposed strategies for improving the production and productivity of the Crop/ Commodity in different AES

Crop:- Potato **Resource Rich & Poor**

AES - I, II, III, IV

Production Practices (items)	Gap in adoption in the different situations in which the crop/ commodity is grown	Reasons for gap in adoption as perceived by the farmers	Strategies as perceived by the farmers	Strategies proposed to overcome the gap
	Fs-1			
Sowing				
Time	-	-		-
Method	-	-	-	-
Variety	√	1,2,5,8,9	1,2,5,6,7	1, 2, 3, 5
Seed Rate	√	1,7,8	1,2,4,6	1,2,9
Seed Treatment	√	1,3,5	1,2,5,6	1,2,3,5,7
Organic Manure	√	1,5,8,9	1,2,3,6	1,2,3,5,6,8
Fertilizer (Nutrient kg/ha)				
Basal (N+P+K)	√	1,5,8,9	1,2,3,6	1,2,3,5,10
Top Dressing (N)	√	1,5,8,9	1,2,3,6	1,2,3,5,10
Total	√	1,5,8,9	1,2,3,6	1,2,3,5,10
Pest Management				
Aphid	√	1,3,5,6,9	1,2,3,4,6	1,2,3,6,7,9
Disease Management				
Early Blight	√	1,3,5,6,9	1,2,3,4,6	1,2,3,6,7,9
Late blight	√	1,3,5,6,9	1,2,3,4,6	1,2,3,6,7,9
Weed Management				
Mechanical	-	-	-	-
Herbicide	√	1,5,6	1,2,5,6	1,2,3,5,9
Water Management				
No. of Irrigation	√	5,8,9	1,2,4,6	1,2,3,5,9
Method	-	-	-	-
Land Management				
Acidity		-	-	-
Water Logging	-	-	-	-
Method of Harvesting				
Any Other/Threshing	-	-	-	-
Average Yield	√	1,2,3,4,5,8	1,2,3,6,7	1,2,5,6,7,8
Storage Pest Control	√	1,3,5,9	1,2,3	1,2,3,4,6

If the gap is present in that farming situation then (√) and no gap (-)

(*) F=Full P=Partial N=Nil

Reasons for gap in adoption as perceived by the farmers

1. Lack of awareness/knowledge
2. Non availability of required quantity of quality seed
3. Plant protection is not economical under rainfed conditions
4. Non-avaibility of labour
5. Lack of resource
6. Non-profitability and Non availability
7. Risk of crop failure
8. Lack of assured irrigation
9. Lack of conviction

Strategies as perceived by the farmers

1. On farm trails / Demonstration
2. Training and exposure visits
3. Use of locally available materials for nutrient management & plant protection
4. Improved farm implements
5. Farmers scientist intraction
6. Link to financial institutions
7. Improved variety of crops

Strategies proposed to overcome the gap

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Use of locally available materials for nutrient management & plant protection
7. Control of pests and diseases in crops
8. Greater use of vermicompost and other organics to build up soil fertility
9. Farmers scientist intraction
10. More emphasis on judicious use of soil and water

Chapter VI

Table No. 4

CONSOLIDATED GAPS IN PRODUCTION PRACTICES OF A CROP/ COMMODITY AND PROPOSED STRATEGIES FOR THE DISTRICT

Crop :- Potato

Production Practices (items)	AES-1		AES-2		AES-3		AES-4	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Sowing								
Time	N	-	N	-	N	-	N	-
Method	N	-	N	-	N	-	N	-
Variety	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Seed Rate	P	1,2,9	P	1,2,9	P	1,2,9	P	1,2,9
Seed Treatment	F	1,2,3,5,7	F	1,2,3,5,7	F	1,2,3,5,7	F	1,2,3,5,7
Organic Manure	P	1,2,3,5,6,8	P	1,2,3,5,6,8	P	1,2,3,5,6,8	P	1,2,3,5,6,8
Fertilizer (Nutrient kg/ha)								
Basal (N+P+K)	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Top Dressing (N)	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Total	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10	P	1,2,3,5,10
Pest Management								
Aphid	-	-	-	-	-	-	-	-
Disease Management	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9
Early Blight	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9	F	1,2,3,6,7,9
Late blight	-	-	-	-	-	-	-	-
Weed Management								
Mechanical	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9

Herbicide	F	1,2,3,5,9	F	1,2,3,5,9	F	1,2,3,5,9	F	1,2,3,5,9
Water Management								
No. of Irrigation	N	-	N	-	N	-	N	-
Method	F	1,2,3,5,9	F	1,2,3,5,9	F	1,2,3,5,9	F	1,2,3,5,9
Land Management								
Acidity	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9	P	1,2,3,5,9
Water Logging	N	-	N	-	N	-	N	-
Method of Harvesting								
Any Other/Threshing	-	-	-	-	-	-	-	-
Average Yield	P	1,2,5,6,7,8	P	1,2,5,6,7,8	P	1,2,5,6,7,8	P	1,2,5,6,7,8
Storage Pest Control	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6	F	1,2,3,4,6

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Use of locally available materials for nutrient management & plant protection, 7. Control of pests and diseases in crops, 8. Greater use of vermicompost and other organics to build up soil fertility, 9. Farmers scientist intraction, 10. More emphasis on judicious use of soil and water, 11. Popularisation of lime application

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock

AES - I **Resource Rich/Poor**

Animal: Cow ***Farming Situation: Irrigated + Rainfed Local Breed*** ***Farming Situation: Irrigated + Rainfed Improved Breed***

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation	-		-	-	-	-		F	1	1
Artificial Insemination	Facility not available		F	1,2,4	1,2,3	Facility not available		F	1,3,4	1,2,4
Breed	Local	Jercy, C.B., H.F.	F	1,2,3	1,2,3	Jercy, C.B.	Jercy, C.B.	N	1,4,5	1,2,3,5
Location	-	A.I. Centre	F	1,3,4	1,2,3	A.I. Centre	A.I. Centre	F	1,2,4	1, 3
Natural Insemination	Followed		F	1,4	1,2,3	A.I.	A.I.	F	1,4	1,2
Breed	Local	Jercy, C.B.	F	1,4	1,2,3	Jercy, C.B.	Jercy, C.B.	F	1,3,4	1,2,3
Location	-	Bull Centre	P	1,2,3	1,2,3	Bull Centre	Bull Centre	P	1,2,5	1,2
Feed Management (per animal)										1,3,4,5
Green Fodder (kg/day)	Free grazing	25-30 kg	P	1,5	1,3,4,5	20-25 kg	25-30 kg	P	1,3,5	1,3,4,6
Dry Fodder (kg/day)	0-5 kg.	5-8 kg	P	1,3	1,3,4,5	5-6 kg	5-8 kg	P	1,3,5	1,3,4,5,6
Concentrates (cow/day)	500-700 gram	2-2.5 kg for per kg of milk product	P	1,3,5	1,4,5	1-1.5 kg	2-2.5 kg for per kg of milk product	P	1, 5	1,3,4,5
Minerals (g/days)	-	25-30 gm	F	1,3,5	1,3,4,5	-	25-30 gm	F	1,3	1,3,4,5,6
Vitamins (ml/day)	-	10 ml/day	F	1,3,5	1,3,4,5	-	10 ml/day	F	1, 5	1,3,4,5,6

Intercalving Care (per annum)	18-24	12-14 Month	P	1,3	1,3,5	14-20	12-14 Month	P	1,3,5	1,3,4,5
HSBQ (No. of Vaccinations)	One	Twice	P	1,3,5	1,2	One	Twice	P	1,3,5	1,2
FMD	-	Once/ year	F	1,3	1,2	-	Once/ year	F	1,3,4	1,2,3
Rinder Pest	-	1/lifetime	F	1,3,4	1,2	-	1/lifetime	F	1, 4	1,2,4
Mastitis	-	Daily	F	1, 4	1,2	-	Daily	F	1,3,4	1,2,4
Thilarisis	-	On demand	F	1,2,3	1,2	-	On demand	F	1,3,4	1,2,3
Deworming	-	2/ years	F	1, 4	1,2	-	2/ years	F	1,3,4	1,2,5
General Management				1,3,5	1,2,5				1,4,5	1,2,5,6
Washing (times/day)	weekly	Once	F	1,3,5	1,2,5	weekly	Once	F	1,3,5,6	1,2,5,6
Cleaning (times/day)	Once	Once	N	1, 5	1,2,5	Once	Once	N	1,3,5	1,3,5
Housing (Pucca/Kaccha)	Kaccha	pacca	P	1,2,4	1,2,5	Kaccha	pacca	P	1,4,5	1,4,5,6
Drinking Water	30-8-	50-100	P	1,2,4	1,2,5	30-8-	50-100	P	1,3,5,6	1,4,5
Average Yield (Milk)				1,2,4,5	1,2,3,5				1,2,3,4,5	1,2,3,4,5
Exotic		10-15 lit/day	P	1,3,5		6-8 liter/day	10-15 lit/day	P	1,3,5,6	
Deshi	1 lit/day	2-3 lit/day	P	1,3,4			2-3 lit/day	P	1,3,5	

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
2. Lack of availability of fooder
3. Cost Factor
4. Lack of technical persons.
5. Unaware of management practices

***** code for farmer proposed extension**

1. Awareness programme through training & field visit.
2. Health Camp
3. Exposure Visit
4. Credit facilities
5. Management practices
6. Fooder availability

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock

AES - II **Resource Rich/Poor**

Animal: Cow ***Farming Situation: Rainfed Local Breed*** ***Farming Situation: Irrigated + Improved Breed***

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation	-		-	-	-	-		F	1	1
Artificial Insemination	Facility not available		F	1,2,3	1,2,3	Facility not available		F	1,4	1,2,3,4
Breed	Local	Jercy, C.B., HF	P	1,2,4	1,2,3	Jercy, C.B.	Jercy, C.B.	N	1,4	1,2,3,4
Location	-	A.I. Centre	F	1,3	1,2,3	A.I. Centre	A.I. Centre	F	1,4	1,2,3,4
Natural Insemination	Followed		F	1,3	1,2,3	A.I.	A.I.	F	1,4	1,2,3,5
Breed	Local	Jercy, C.B.	F	1,3	1,2,3	Jercy, C.B.	Jercy, C.B.	F	1,4	1,2,3,4
Location	-	Bull Centre	P	1,2,5	1,2,3	Bull Centre	Bull Centre	P	1,2,5	1,2,3,5
Feed Management (per animal)										1,3,4,5,6
Green Fodder (kg/day)	Free grazing	25-30 kg	P	1,3,5	1,3,4	20-25 kg	25-30 kg	P	1,3,4	1,3,4,5
Dry Fodder (kg/day)	0-5 kg.	5-8 kg	P	1,3,5	1,3,,5	5-6 kg	5-8 kg	P	1,3,4	1,3,4,5
Concentrates (cow/day)	500-700 gram	2-2.5 kg for per kg of milk product	P	1,3,5	1,3,4	1-1.5 kg	2-2.5 kg for per kg of milk product	P	1,3,4	1,3,4,5
Minerals (g/days)	-	25-30 gm	F	1,3,5	1,3, 5	-	25-30 gm	F	1,3,4	1,3,4,5
Vitamins (ml/day)	-	10 ml/day	F	1,3,5	1,3,4	-	10 ml/day	F	1,3,4	1,3,4,5
Intercalving Care (per	18-24	12-14 Month	P	1,3,5	1,3,4	14-20	12-14 Month	P	1,3,4	1,3,4,5

annum)										
HSBQ (No. of Vaccinations)	One	Twice	P	1, 5	1,2	One	Twice	P	1,3,5	1,2,4
FMD	-	Once/ year	F	1, 4	1,2	-	Once/ year	F	1,3,4	1,2,5
Rinder Pest	-	1/lifetime	F	1, 4	1,2	-	1/lifetime	F	1,3,4	1,2,5
Mastitis	-	Daily	F	1, 4	1,2	-	Daily	F	1,3,4	1,2,5
Thilarisis	-	On demand	F	1, 4	1,2	-	On demand	F	1,3,4	1,2,5
Deworming	-	2/ years	F	1,4	1,2	-	2/ years	F	1,3,4	1,2,5
General Management				1, 5	1,2,5				1,3,5	1,2,3,5
Washing (times/day)	weekly	Once	F	1, 5	1,2,5	weekly	Once	F	1,3,5	1,2,3,5
Cleaning (times/day)	Once	Once	N	1, 5	1,2,5	Once	Once	N	1,3,5	1,2,3,5
Housing (Pucca/Kaccha)	Kaccha	pacca	P	1, 5	1,2,5	Kaccha	pacca	P	1,3,5	1,2,3,5
Drinking Water	30-8-	50-100	P	1, 5	1,2,5	30-8-	50-100	P	1,3,5	1,2,3,5
Average Yield (Milk)				1,2,3,4,5	1,2,3,4, 5				1, 3,4,5	1,2,3,4,5,6
Exotic		10-15 lit/day	P	1,3,5		6-8 liter/day	10-15 lit/day	P	1,3,4,5	
Deshi	1 lit/day	2-3 lit/day	P	1,3,5			2-3 lit/day	P	1,3,4,5	

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
2. Lack of availability of fooder
3. Cost Factor
4. Lack of technical persons.
5. Unaware of management practices

***** code for farmer proposed extension**

1. Awareness programme through training & field visit.
2. Health Camp
3. Exposure Visit
4. Credit facilities
5. Management practices
6. Fooder availability

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock

AES - III **Resource Rich/Poor**

Animal:

Cow ***Farming Situation: Rainfed Local Breed*** ***Farming Situation: Irrigated + Improved Breed***

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation	-		-	-	-	-		F	1	1
Artificial Insemination	Facility not available		F	1,4	1,2,3	Facility not available		F	1,3,4	1,2,3
Breed	Local	Jercy, C.B., HF	P	1,4	1,2,3	Jercy, C.B.	Jercy, C.B.	N	1,3,4	1,2,3
Location	-	A.I. Centre	F	1,4	1,2,3	A.I. Centre	A.I. Centre	F	1,3,4	1,2,3
Natural Insemination	Followed		F	1,4	1,2,3	A.I.	A.I.	F	1,3,4	1,2,3
Breed	Local	Jercy, C.B.	F	1,4	1,2,3	Jercy, C.B.	Jercy, C.B.	F	1,3,4	1,2,3
Location	-	Bull Centre	P	1,2,5	1,2,3	Bull Centre	Bull Centre	P	1,2,3,5	1,2,3
Feed Management (per animal)										1,3,4,5
Green Fodder (kg/day)	Free grazing	25-30 kg	P	1,3,5	1,3,4,5	20-25 kg	25-30 kg	P	1,3,5,6	1,3,4,5
Dry Fodder (kg/day)	0-5 kg.	5-8 kg	P	1,3,5	1,3,4,5	5-6 kg	5-8 kg	P	1,3,5,6	1,3,4,5
Concentrates (cow/day)	500-700 gram	2-2.5 kg for per kg of milk product	P	1,3,5	1,3,4,5	1-1.5 kg	2-2.5 kg for per kg of milk product	P	1,3,5,6	1,3,4,5
Minerals (g/days)	-	25-30 gm	F	1,3,5	1,3,4,5	-	25-30 gm	F	1,3,5,6	1,3,4,5
Vitamins (ml/day)	-	10 ml/day	F	1,3,5	1,3,4,5	-	10 ml/day	F	1,3,5,6	1,3,4,5

Intercalving Care (per annum)	18-24	12-14 Month	P	1, 5	1,3,4	14-20	12-14 Month	P	1,3,5	1,3,4,5
HSBQ (No. of Vaccinations)	One	Twice	P	1, 5	1,2	One	Twice	P	1,3,5	1,2,3
FMD	-	Once/ year	F	1,3	1,2	-	Once/ year	F	1,3,4	1,2,3
Rinder Pest	-	1/lifetime	F	1,3,4	1,2	-	1/lifetime	F	1, 4	1,2,3
Mastitis	-	Daily	F	1, 4	1,2	-	Daily	F	1,3	1,2,3
Thilarisis	-	On demand	F	1,4	1,2	-	On demand	F	1,3,4	1,2,3
Deworming	-	2/ years	F	1, 4	1,2	-	2/ years	F	1,3,4	1,2,3
General Management				1,3	1, 5				1,3,5	1,2,3,5
Washing (times/day)	weekly	Once	F	1,5	1,2,5	weekly	Once	F	1,3,4,5	1,2,4,5
Cleaning (times/day)	Once	Once	N	1, 5	1,2,5	Once	Once	N	1,3,4,5	1,2,4,5
Housing (Pucca/Kaccha)	Kaccha	pacca	P	1, 5	1,2,5	Kaccha	pacca	P	1,3,4,5	1,2,4,5
Drinking Water	30-8-	50-100	P	1,3,5	1,2,5	30-8-	50-100	P	1,3,4,5	1,2,4,5
Average Yield (Milk)				1, 3,4,5	1,2,3,4,5				1,2,3,4,5	1,2,3,4,5
Exotic		10-15 lit/day	P	1,3,5		6-8 liter/day	10-15 lit/day	P	1,3,4,5	
Deshi	1 lit/day	2-3 lit/day	P	1,3,5			2-3 lit/day	P	1,3,4,5	

P = Partial **N = Nil**

(*) F=Full

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
2. Lack of availability of fooder
3. Cost Factor
4. Lack of technical persons.
5. Unaware of management practices

***** code for farmer proposed extension**

1. Awareness programme through training & field visit.
2. Health Camp
3. Exposure Visit
4. Credit facilities
5. Management practices
6. Fooder availability

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock

AES - IV **Resource Rich/Poor**

Animal:

Cow ***Farming Situation: Rainfed Local Breed*** ***Farming Situation: Irrigated Improved Breed***

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation	-		-	-	-	-		F	1	1
Artificial Insemination	Facility not available		F	1,4	1,2,3	Facility not available		F	1,3,4	1,2,3,5
Breed	Local	Jercy, C.B., HF	P	1,4	1,2,3	Jercy, C.B.	Jercy, C.B.	N	1,3,4	1,2,3,5
Location	-	A.I. Centre	F	1,4	1,2,3	A.I. Centre	A.I. Centre	F	1,3,4	1,2,3,5
Natural Insemination	Followed		F	1,4	1,2,3	A.I.	A.I.	F	1,3,4	1,2,3,5
Breed	Local	Jercy, C.B.	F	1,4	1,2,3	Jercy, C.B.	Jercy, C.B.	F	1,3,4	1,2,3,5
Location	-	Bull Centre	P	1,2,5	1,2,3	Bull Centre	Bull Centre	P	1,2,3,5	1,2,3,5
Feed Management (per animal)										1,3,4,5,6
Green Fodder (kg/day)	Free grazing	25-30 kg	P	1,3,5	1,3,4,5	20-25 kg	25-30 kg	P	1,3,4,5	1,3,4,5,6
Dry Fodder (kg/day)	0-5 kg.	5-8 kg	P	1,3,5	1,3,4,5	5-6 kg	5-8 kg	P	1,3,4,5	1,3,4,5,6
Concentrates (cow/day)	500-700 gram	2-2.5 kg for per kg of milk product	P	1,3,5	1,3,4,5	1-1.5 kg	2-2.5 kg for per kg of milk product	P	1,3,4,5	1,3,4,5,6
Minerals (g/days)	-	25-30 gm	F	1,3,5	1,3,4,5	-	25-30 gm	F	1,3,4,5	1,3,4,5,6
Vitamins (ml/day)	-	10 ml/day	F	1,3,5	1,3,4,5	-	10 ml/day	F	1,3,4,5	1,3,4,56,

Intercalving Care (per annum)	18-24	12-14 Month	P	1,3	1,4,5	14-20	12-14 Month	P	1,3,5	1,3,4,5
HSBQ (No. of Vaccinations)	One	Twice	P	1,3	1,2	One	Twice	P	1,3,5	1,2,3
FMD	-	Once/ year	F	1,3,4	1,2	-	Once/ year	F	1,3,4,5	1,2,5
Rinder Pest	-	1/lifetime	F	1,3,4	1,2	-	1/lifetime	F	1,3,4,5	1,2,5
Mastitis	-	Daily	F	1,3,4	1,2	-	Daily	F	1,3,4,5	1,2,5
Thilarisis	-	On demand	F	1,3,4	1,2	-	On demand	F	1,3,4,5	1,2,5
Deworming	-	2/ years	F	1,3,4	1,2	-	2/ years	F	1,3,4	1,2,5
General Management				1,3,5	1,2,3,5				1,3,5	1,2,5
Washing (times/day)	weekly	Once	F	1,3,5	1,2,3,5	weekly	Once	F	1,2,3,5	1,2,5
Cleaning (times/day)	Once	Once	N	1,3,5	1,2,3,5	Once	Once	N	1,2,3,5	1,2,5
Housing (Pucca/Kaccha)	Kaccha	pacca	P	1,3,5	1,2,3,5	Kaccha	pacca	P	1,2,3,5	1,2,5
Drinking Water	30-8-	50-100	P	1,3,5	1,2,5	30-8-	50-100	P	1,2,3,5	1,2,4,5
Average Yield (Milk)				1,2,4,5	1,2,3,4				1,2,3,4,5	1,2,3,4,5
Exotic		10-15 lit/day	P	1,3,5		6-8 liter/day	10-15 lit/day	P	1,3,4,5	
Deshi	1 lit/day	2-3 lit/day	P	1,3,5			2-3 lit/day	P	1,3,4,5	

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
2. Lack of availability of fooder
3. Cost Factor
4. Lack of technical persons.
5. Unaware of management practices

***** code for farmer proposed extension**

1. Awareness programme through training & field visit.
2. Health Camp, 3. Exposure Visit
4. Credit facilities, 5. Management practices
6. Fooder availability

Gap in adoption and Proposed strategies for improving the production and productivity of the Livestock/ Commodity in different AES

Crop:- Cow **Resource Rich & Poor**

AES – I, II, III, IV

Production Practices (items)	Gap in adoption in the different situations in which the crop/ commodity is grown		Reasons for gap in adoption as perceived by the farmers	Strategies as perceived by the farmers	Strategies proposed to overcome the gap
	Fs-1	Fs-2			
Breed Up gradation	-	–	-	-	-
Artificial Insemination	√	√	1,4	1,2,3	1, 2, 3, 6
Breed	√	√	1,4	1,2,3	1, 2, 3, 6
Location	√	√	1,4	1,2,3	1, 2, 3, 6
Natural Insemination	√	√	1,4	1,2,3	1, 2, 3, 6
Breed	√	√	1,4	1,2,3	1, 2, 3, 6
Location	√	√	1,2,5	1,2,3	1, 2, 3, 6
Feed Management (per animal)					
Green Fodder (kg/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Dry Fodder (kg/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Concentrates (cow/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Minerals (g/days)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Vitamins (ml/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Intercalving Care (per annum)	√	√	1,3,5	1,3,4,5	1, 2, 6, 7 & 8
HSBQ (No. of Vaccinations)	√	√	1,3,5	1,2	1, 2, 3, 5, 7 & 8
FMD	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Rinder Pest	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Mastitis	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Thilarisis	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Deworming	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
General Management					
Washing (times/day)	√	√	1,3,5	1,2,5	1, 2
Cleaning (times/day)	√	√	1,3,5	1,2,5	1, 2
Housing (Pucca/Kaccha)	√	√	1,3,5	1,2,5	1, 2, 3
Drinking Water	√	√	1,3,5	1,2,5	1, 2, 5
Average Yield (Milk)					
Exotic	√	√	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5,6, 7, 8
Deshi	√	√	1,3,5	1,2,5	1,2,3,4, 6, 7, 8

If the gap is present in that farming situation then (√) and no gap (-)

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
2. Lack of availability of fooder
3. Cost Factor
4. Lack of technical persons.
5. Unaware of management practices

***** code for farmer proposed extension**

1. Awareness programme through training & field visit.
2. Health Camp
3. Exposure Visit
4. Credit facilities
5. Management practices
6. Fooder availability

***** Strategies proposed to overcome the gap**

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Breed inprovement through AI/Improved bull
7. Preventive vaccination
8. Control of disease and pest

Chapter VI

Table No. 4

CONSOLIDATED GAPS IN PRODUCTION PRACTICES OF A LIVESTOCK/ COMMODITY AND PROPOSED STRATEGIES FOR THE DISTRICT

Crop :- Cow

Production Practices (items)	AES-1		AES-2		AES-3		AES-4	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption	Proposed Strategy to overcome the gap
Breed Up gradation	-	-	-	-	-	-	-	-
Artificial Insemination	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Breed	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6
Location	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Natural Insemination	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Breed	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Location	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6
Feed Management (per animal)								
Green Fodder (kg/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Dry Fodder (kg/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Concentrates (cow/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Minerals (g/days)	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Vitamins (ml/day)	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Intercalving Care (per annum)	P	1, 2, 6, 7 & 8	P	1, 2, 6, 7 & 8	P	1, 2, 6, 7 & 8	P	1, 2, 6, 7 & 8

HSBQ (No. of Vaccinations)	P	1, 2, 3, 5, 7 & 8	P	1, 2, 3, 5, 7 & 8	P	1, 2, 3, 5, 7 & 8	P	1, 2, 3, 5, 7 & 8
FMD	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Rinder Pest	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Mastitis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Thilarisis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Deworming	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
General Management								
Washing (times/day)	F	1, 2	F	1, 2	F	1, 2	F	1, 2
Cleaning (times/day)	N	-	N	-	N	-	N	-
Housing (Pucca/Kaccha)	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3
Drinking Water	P	1, 2, 5	P	1, 2, 5	P	1, 2, 5	P	1, 2, 5
Average Yield (Milk)								
Exotic	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8
Deshi	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Breed inprovement through AI/Improved bull, 7. Preventive vaccination, 8. Control of disease and pest

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock

AES I,II,III,IV Resource Rich

Animal: Buffalo ***Farming Situation: Landless-Rainfed***

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation										
Artificial Insemination										
Breed	Local	Murrah, Surti	F	1,2	1,2	Murrah, Surti	Murrah, Surti	Nill	1	1
Location		A.I. Centre	F	1,2	1,2	AI Centre district	A.I. Centre	P	1	1
Natural Insemination										
Breed	Local	Murrah, / PVC, MPCS	P	1,2	1,2	Murrah, Surti	Murrah, / PVC, MPCS	P	1	1
Location	Nil	Nil	N	-	-	Nil	Nil	N	-	-
Feed Management (per animal)										
Green Fodder (kg/day)	20 kg	30-35 kg	P	2,3	2,5	25-30 kg/day	30-35 kg	P	2	2
Dry Fodder (kg/day)	5 kg	6-8 kg	P	2,3	2,5	6	6-8 kg	P	2	2
Concentrates (/day)	-	2.5-3.0 kg (1 kg of concentrate for every 2.5 lit. of milk produced)	F	2,3	2,5	1.5-2 kg/day	2.5-3.0 kg (1 kg of concentrate for every 2.5 lit. of milk produced)	F	2	2
Minerals (mix)	-	20-30 gm /day	F	2,3	2,5	-	20-30 gm /day	F	2	2
Vitamins (mix)	-	5-10 g/day	F	2,3	3,5	-	5-10 g/day	F	2	3
Intercalving Care (per annum)	24-30	15-18 month	P	2,3	3,5	20-25	15-18 month	P	2	3
HSBQ (No. of Vaccinations)	-	-	F	3,4	4	-	-	F	3	4
FMD	-	2/year	F	3,4	4	-	2/year	F	3	4

Rinder Pest	-	1/year	F	3,4	4	-	1/year	F	3	4,5
Mastitis	-	1/life time	F	3,4	4	-	1/life time	F	3	2,4
Thilarisis	-	-	N	-	-	-	-	N	-	-
Deworming	1/year	1-2/year	P	3,4	4	1/year	1-2/year	P	3	2,4
General Management										
Washing (times/day)	Nil	1	F	-	-	Nil	1	F	-	-
Cleaning (times/day)	Nil	1	F	3,4	5	Nil	1	F	4	2,5
Housing (Pucca/Kaccha)	Katcha	Pucca	P	-	-	Katcha	Pucca	P	-	-
Drinking Water	Yes	50 Liter	N	-	-	Yes	50 Liter	N	-	-
Average Yield (Milk)										
Exotic/Graded	-	15-20 kg/Animal/day	-	-	-	7-8 kg/animal/day	15-20 kg/Animal/day	-	-	-
Deshi	3-4 kg/animal/day	5-8 kg/Animal/day	-	-	-		5-8 kg/ Animal/day	-	-	-

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
2. Lack of availability of fooder
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4. Lack of technical persons.
5. Unaware of management practices

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2. Health Camp, 3. Exposure Visit
4. Credit facilities, 5. Management practices
6. Fooder availability

Gap in adoption and Proposed strategies for improving the production and productivity of the Livestock/ Commodity in different AES

Crop:- Buffalo **Resource Rich & Poor**

AES – I, II, III, IV

Production Practices (items)	Gap in adoption in the different situations in which the crop/ commodity is grown		Reasons for gap in adoption as perceived by the farmers	Strategies as perceived by the farmers	Strategies proposed to overcome the gap
	Fs-1	Fs-2			
Breed Up gradation	-	–	-	-	-
Artificial Insemination	√	√	1,4	1,2,3	1, 2, 3, 6
Breed	√	√	1,4	1,2,3	1, 2, 3, 6
Location	√	√	1,4	1,2,3	1, 2, 3, 6
Natural Insemination	√	√	1,4	1,2,3	1, 2, 3, 6
Breed	√	√	1,4	1,2,3	1, 2, 3, 6
Location	√	√	1,2,5	1,2,3	1, 2, 3, 6
Feed Management (per animal)					
Green Fodder (kg/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Dry Fodder (kg/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Concentrates (cow/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Minerals (g/days)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Vitamins (ml/day)	√	√	1,3,5	1,3,4,5	1, 2, 3, 5
Intercalving Care (per annum)	√	√	1,3,5	1,3,4,5	1, 2, 6, 7 & 8
HSBQ (No. of Vaccinations)	√	√	1,3,5	1,2	1, 2, 3, 5, 7 & 8
FMD	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Rinder Pest	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Mastitis	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Thilarisis	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
Deworming	√	√	1,3,4	1,2	1, 2, 3, 5, 7 & 8
General Management					
Washing (times/day)	√	√	1,3,5	1,2,5	1, 2
Cleaning (times/day)	√	√	1,3,5	1,2,5	1, 2
Housing (Pucca/Kaccha)	√	√	1,3,5	1,2,5	1, 2, 3
Drinking Water	√	√	1,3,5	1,2,5	1, 2, 5
Average Yield (Milk)					
Exotic	√	√	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5,6, 7, 8
Deshi	√	√	1,3,5	1,2,5	1,2,3,4, 6, 7, 8

If the gap is present in that farming situation then (√) and no gap (-)

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
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4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Breed inprovement through AI/Improved bull
7. Preventive vaccination
8. Control of disease and pest

Chapter VI

Table No. 4

CONSOLIDATED GAPS IN PRODUCTION PRACTICES OF A LIVESTOCK/ COMMODITY AND PROPOSED STRATEGIES FOR THE DISTRICT

Crop :- Buffalo

Production Practices (items)	AES-1		AES-2		AES-3		AES-4	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption	Proposed Strategy to overcome the gap
Breed Up gradation	-	-	-	-	-	-	-	-
Artificial Insemination	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Breed	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6
Location	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Natural Insemination	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Breed	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Location	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6
Feed Management (per animal)								
Green Fodder (kg/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Dry Fodder (kg/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Concentrates (cow/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Minerals (g/days)	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Vitamins (ml/day)	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Intercalving Care (per annum)	P	1, 2, 6, 7 & 8	P	1, 2, 6, 7 & 8	P	1, 2, 6, 7 & 8	P	1, 2, 6, 7 & 8

HSBQ (No. of Vaccinations)	P	1, 2, 3, 5, 7 & 8	P	1, 2, 3, 5, 7 & 8	P	1, 2, 3, 5, 7 & 8	P	1, 2, 3, 5, 7 & 8
FMD	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Rinder Pest	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Mastitis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Thilarisis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Deworming	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
General Management								
Washing (times/day)	F	1, 2	F	1, 2	F	1, 2	F	1, 2
Cleaning (times/day)	N	-	N	-	N	-	N	-
Housing (Pucca/Kaccha)	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3
Drinking Water	P	1, 2, 5	P	1, 2, 5	P	1, 2, 5	P	1, 2, 5
Average Yield (Milk)								
Exotic	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8
Deshi	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Breed inprovement through AI/Improved bull, 7. Preventive vaccination, 8. Control of disease and pest

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock Animal: Goat ***Farming Situation: Landless-Rainfed*** **Resource Rich/Poor**

ITEMS	**AES - I FS-1**					**AES - II FS-1**				
	Existing practice	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation										
Artificial Insemination										
Breed	Local	Black Bengal, Improved	P	1,2,3	1,2,3	Local	Black Bengal, Improved	P	1,2,3	1,2,3
Location		A.I. Centre	F	1,2,3	1,2,3		A.I. Centre	F	1,2,3	1,2,3
Natural Insemination										
Breed	Local	Black Bengal, Improved jamanapuri	P	1,2,3	1,2,4	Local	Black Bengal, Improved jamanapuri	P	1,2,3	1,2,4
Location		Buck Centre	F	1,2,3	1,2,4		Buck Centre	F	1,2,3	1,2,4
Feed Management (per animal)					1,2					1,2
Green Fodder (kg/day)	3 kg	4-6 kg	P	1,4	1,2	3 kg	4-6 kg	P	1,4	1,2
Dry Fodder (kg/day)	-	0.5	F	1,4	1,2	-	0.5	F	1,4	1,2
Concentrates (/day)	30-40	150-250 gm	P	1,2,4	1,2	30-40	150-250 gm	P	1,2,4	1,2
Minerals (mix)	-	10-15gm /day	F	1,2,4	1,2	-	10-15gm /day	F	1,2,4	1,2
Vitamins (mix)	-	10-15 g/day	F	1,2,4	1,2	-	10-15 g/day	F	1,2,4	1,2
Health Care (per annum)				1,2,4	1,2				1,2,4	1,2

HSBQ (No. of Vaccinations)	-	Twice	F	1,2,5	1,2	-	Twice	F	1,2,5	1,2
FMD	-	Once	F	1,2,5	1,2	-	Once	F	1,2,5	1,2
ENT	-	On need	F	1,2,5	1,2	-	On need	F	1,2,5	1,2
Mastitis	-	On need	F	1,2,5	1,2	-	On need	F	1,2,5	1,2
Thilarisis	-	On need	F	1,2,5	1,2	-	On need	F	1,2,5	1,2
Deworming	1	Quarterly once	F	125	1,2	1	Quarterly once	F	125	1,2
General Management					1,2					1,2
Washing (times/day)	Nil	Nil	N		1,2,3	Nil	Nil	N		1,2,3
Cleaning (times/day)	1	Once	F	1,2,6	1,2,3	1	Once	F	1,2,6	1,2,3
Housing (Pucca/Kaccha)	katcha	Pucca/ katcha	p	1,2,6	1,2,3	katcha	Pucca/ katcha	p	1,2,6	1,2,3
Drinking Water	4	5 liter	P	1,2,6	1,2,3	4	5 liter	P	1,2,6	1,2,3
Average milk Yield/ days	0.25-0.50 kg/day	2-3 kg/day	F	1,2,3,4,5,6	1,2,3,4	-	3-Feb	F	1,2,3,4,5,6	1,2,3,4
Exotic/Graded		15-20 kg/Animal	P	1,2,3,4,5,6	1,2,3,4		15-20 kg/Animal	P		
Deshi Meat	7-8 kg/animal	10-15 kg/animal	P	1,2,3,4,5,6	1,2,3,4	8	10-15 kg/Animal	P		

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness about breeding plan
2. Lack of Finance
3. Non availability of improve Breed
4. Lack of availability of fodder concentrates minerals & vitamins
5. Lack of disease awareness
6. Lack of housing and clearing awareness

***** code for farmer proposed extension**

1. Awareness program
2. Training & Demostration
3. Exposure visit
4. Linkage with financial institution & market.

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock

Animal: Goat ***Farming Situation: Landless-Rainfed*** **Resource Rich/Poor**

ITEMS	**AES - III FS-1**					**AES - IV FS-1**				
	Existing practice	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation										
Artificial Insemination										
Breed	Local	Black Bengal, Improved	P	1,2,3	1,2,3	Local	Black Bengal, Improved	P	1,2,3	1,2,3
Location		A.I. Centre	F	1,2,3	1,2,3		A.I. Centre	F	1,2,3	1,2,3
Natural Insemination										
Breed	Local	Black Bengal, Improved jamanapuri	P	1,2,3	1,2,4	Local	Black Bengal, Improved jamanapuri	P	1,2,3	1,2,4
Location		Buck Centre	F	1,2,3	1,2,4		Buck Centre	F	1,2,3	1,2,4
Feed Management (per animal)					1,2					1,2
Green Fodder (kg/day)	3 kg	4-6 kg	P	1,4	1,2	3 kg	4-6 kg	P	1,4	1,2
Dry Fodder (kg/day)	-	0.5	F	1,4	1,2	-	0.5	F	1,4	1,2
Concentrates (/day)	30-40	150-250 gm	P	1,2,4	1,2	30-40	150-250 gm	P	1,2,4	1,2
Minerals (mix)	-	10-15gm /day	F	1,2,4	1,2	-	10-15gm /day	F	1,2,4	1,2
Vitamins (mix)	-	10-15 g/day	F	1,2,4	1,2	-	10-15 g/day	F	1,2,4	1,2
Health Care (per annum)				1,2,4	1,2				1,2,4	1,2
HSBQ (No. of Vaccinations)	-	Twice	F	1,2,5	1,2	-	Twice	F	1,2,5	1,2
FMD	-	Once	F	1,2,5	1,2	-	Once	F	1,2,5	1,2
ENT	-	On need	F	1,2,5	1,2	-	On need	F	1,2,5	1,2
Mastitis	-	On need	F	1,2,5	1,2	-	On need	F	1,2,5	1,2

Thilarisis	-	On need	F	1,2,5	1,2	-	On need	F	1,2,5	1,2
Deworming	1	Quarterly once	F	125	1,2	1	Quarterly once	F	125	1,2
General Management					1,2					1,2
Washing (times/day)	Nil	Nil	N		1,2,3	Nil	Nil	N		1,2,3
Cleaning (times/day)	1	Once	F	1,2,6	1,2,3	1	Once	F	1,2,6	1,2,3
Housing (Pucca/Kaccha)	katcha	Pucca/ katcha	p	1,2,6	1,2,3	katcha	Pucca/ katcha	P	1,2,6	1,2,3
Drinking Water	4	5 liter	P	1,2,6	1,2,3	4	5 liter	P	1,2,6	1,2,3
Average milk Yield/ days	0.25-0.50 kg/day	2-3 kg/day	F	1,2,3,4,5,6	1,2,3,4	-	3-Feb	F	1,2,3,4,5,6	1,2,3,4
Exotic/Graded		15-20 kg/Animal	P	1,2,3,4,5,6	1,2,3,4		15-20 kg/Animal	P		
Deshi Meat	7-8 kg/animal	10-15 kg/animal	P	1,2,3,4,5,6	1,2,3,4	8	10-15 kg/Animal	P		

(*) F=Full P = Partial N = Nil

**** Code for specific reasons for gap in adoption**

1. Lack of awareness about breeding plan
2. Lack of Finance
3. Non availability of improve Breed
4. Lack of availability of fodder concentrates minerals & vitamins
5. Lack of disease awareness
6. Lack of housing and clearing awareness

***** code for farmer proposed extension**

1. Awareness program
2. Training & Demostration
3. Exposure visit
4. Linkage with financial institution & market.

Gap in adoption and Proposed strategies for improving the production and productivity of the Livestock/ Commodity in different AES

Crop:- Goat **Resource Rich & Poor**

AES - I, II, III, IV

Production Practices (items)	Gap in adoption in the different situations in which the crop/ commodity is grown Fs-1	Reasons for gap in adoption as perceived by the farmers	Strategies as perceived by the farmers	Strategies proposed to overcome the gap
Breed Up gradation	-	-	-	-
Artificial Insemination	-	-	-	-
Breed	√	1,2,3	1,2,3	1, 2, 3, 6
Location	√	1,2,3	1,2,3	1, 2, 3, 6
Natural Insemination	-	-	-	1, 2, 3, 6
Breed	√	1,2,3	1,2,4	1, 2, 3, 6
Location	√	1,2,3	1,2,4	1, 2, 3, 6
Feed Management (per animal)				
Green Fodder (kg/day)	√	1,4	1,2	1, 2, 3, 5
Dry Fodder (kg/day)	√	1,4	1,2	1, 2, 3, 5
Concentrates (/day)	√	1,2,4	1,2	1, 2, 3, 5
Minerals (mix)	√	1,2,4	1,2	1, 2, 3, 5
Vitamins (mix)	√	1,2,4	1,2	1, 2, 3, 5
Health Care (per annum)		1,2,4	1,2	1, 2, 6, 7 & 8
HSBQ (No. of Vaccinations)	√	1,2,5	1,2	1, 2, 3, 5, 7 & 8
FMD	√	1,2,5	1,2	1, 2, 3, 5, 7 & 8
ENT	√	1,2,5	1,2	1, 2, 3, 5, 7 & 8
Mastitis	√	1,2,5	1,2	1, 2, 3, 5, 7 & 8
Thilarisis	√	1,2,5	1,2	1, 2, 3, 5, 7 & 8
Deworming	√	125	1,2	1, 2, 3, 5, 7 & 8
General Management				
Washing (times/day)	-	-	-	-
Cleaning (times/day)	√	1,2,6	1,2,3	1, 2
Housing (Pucca/Kaccha)	√	1,2,6	1,2,3	1, 2, 3
Drinking Water	√	1,2,6	1,2,3	1, 2, 5
Average milk Yield/ days				
Exotic/Graded	√	1,2,3,4,5,6	1,2,3,4	1,2,3,4,5,6, 7, 8
Deshi Meat	√	1,2,3,4,5,6	1,2,3,4	1,2,3,4, 6, 7, 8

If the gap is present in that farming situation then (√) and no gap (-)

**** Code for specific reasons for gap in adoption**

1. Lack of awareness about breeding plan
2. Lack of Finance
3. Non availability of improve Breed
4. Lack of availability of fodder concentrates minerals & vitamins
5. Lack of disease awareness
6. Lack of housing and clearing awareness

***** code for farmer proposed extension**

1. Awareness program
2. Training & Demostration
3. Exposure visit
4. Linkage with financial institution & market.

***** Strategies proposed to overcome the gap**

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Breed inprovement through AI/Improved bull
7. Preventive vaccination
8. Control of disease and pest

Chapter VI

Table No. 4

CONSOLIDATED GAPS IN PRODUCTION PRACTICES OF A LIVESTOCK/ COMMODITY AND PROPOSED STRATEGIES FOR THE DISTRICT

Crop :- Goat

Production Practices (items)	AES-1		AES-2		AES-3		AES-4	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Breed Up gradation		-		-		-		-
Artificial Insemination		-		-		-		-
Breed	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6
Location	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Natural Insemination								
Breed	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6	P	1, 2, 3, 6
Location	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6	F	1, 2, 3, 6
Feed Management (per animal)								
Green Fodder (kg/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Dry Fodder (kg/day)	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Concentrates (/day)	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5	P	1, 2, 3, 5
Minerals (mix)	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Vitamins (mix)	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5	F	1, 2, 3, 5
Health Care (per annum)								
HSBQ (No. of Vaccinations)	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
FMD	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8

ENT	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Mastitis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Thilarisis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Deworming	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
General Management								
Washing (times/day)	N	-	N	-	N	-	N	-
Cleaning (times/day)	F	1, 2	F	1, 2	F	1, 2	F	1, 2
Housing (Pucca/Kaccha)	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3
Drinking Water	P	1, 2, 5	P	1, 2, 5	P	1, 2, 5	P	1, 2, 5
Average milk Yield/ days	F	1, 2, 5	F	1, 2, 5	F	1, 2, 5	F	1, 2, 5
Exotic/Graded	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8
Deshi Meat	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8	P	1,2,3,4, 6, 7, 8

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Breed inprovement through AI/Improved bull, 7. Preventive vaccination, 8. Control of disease and pest

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock **Resource Rich/Poor**

Animal: Pig **AES – I,II, III, IV** **Farming Situation: Rainfed local breed**

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation										
Artificial Insemination										
Breed	Local	Improved, T&D Pig	F	1, 2, 3	1, 2, 3	Improved, T&D Pig	Improved, T&D Pig	N		
Location	-	A.I. Centre	F	1, 2, 3	1, 2, 3	A.I. Centre	A.I. Centre	N		
Natural Insemination										
Breed	Local	Improved, T&D Pig	F	1, 2, 3	1, 2, 3	Improved, T&D Pig	Improved, T&D Pig	N		
Location		Mog. Centre				Mog. Centre	Mog. Centre			
Feed Management (per bird)										
Green Fodder (kg/day)	Open Grassing	2-3 kg	F	1, 2, 4	1, 2, 4	Open Grassing	2-3 kg	F	1 & 7	5
Dry Fodder (kg/day)	300 g	1-2 kg	P	1, 2, 4	1, 2, 4	1 kg	1-2 kg	P	7	5
Concentrates (g/day)	-	200-250 gm	F	1, 2, 4	1, 2, 4	100 gm	200-250 gm	F	1 & 5	3 & 6
Minerals (mix)	-	10 gm /day	F	1, 2, 4	1, 2, 4	-	10 gm /day	F	1 & 2	1 & 5
Vitamins (mix)	-	5 ml/day	F	1, 2, 4	1, 2, 4	-	5 ml/day	F	1 & 2	1 & 5
Health Care (per annum)	-	6-7 months				-	6-7 months			
HSBQ (No. of Vaccinations)	-	Twice	F	1, 2, 5	1, 2, 3	One	Twice	P	1 & 6	4 & 6

FMD		Twice	F	1, 2, 5	1, 2, 3	One	Twice	P	1 & 6	4 & 6
swine fever	-	On need	F	1, 2, 5	1, 2, 3	-	On need	F	1 & 6	4 & 6
Mastitis	-	On need	F	1, 2, 5	1, 2, 3	-	On need	F	1 & 6	4 & 6
Thilarisis			F	1, 2, 5	1, 2, 3			F		
General Management										
Washing (times/day)	-	On Need	F	1, 2, 6	1, 2, 4	-	On Need	F	1	6
Cleaning (times/day)	-	Once	F	1, 2, 6	1, 2, 4	-	Once	F	1	6
Housing (Pucca/Kaccha)	Kaccha	Pucca/Kantch	N	1, 2, 6	1, 2, 4	Kaccha	Pucca/Kantch	N	-	-
Drinking Water	6 liter/day	5 liter	N	1, 2, 6	1, 2, 4	6 liter/day	5 liter	N	-	-
Average Yield (Meat)			F					F		
Exotic Meat	-	75-90 kg/Animal (Age 9 Month)	-	1, 2, 3,4,5,6	1, 2, 3, 4	50-60 kg/animal (Age 9 Month)	75-90 kg/Animal (Age 9 Month)	P	-	-
Deshi Meat	25-30 kg	35-40 kg/Animal	P	1, 2, 3,4,5,6	1, 2, 3, 4		35-40 kg/Animal	P	1 & 3	6

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness about breeding plan
2. Lack of Finance
3. Non availability of improve Breed
4. Lack of availability of fodder concentrates minerals & vitamins
5. Lack of disease awareness
6. Lack of housing and clearing awareness

***** code for farmer proposed extension**

1. Awareness program
2. Training & Demostration
3. Exposure visit
4. Linkage with financial institution & market.

Gap in adoption and Proposed strategies for improving the production and productivity of the Livestock/ Commodity in different AES

Crop:- Pig **Resource Rich & Poor**

AES – I, II, III, IV

Production Practices (items)	Gap in adoption in the different situations in which the crop/ commodity is grown		Reasons for gap in adoption as perceived by the farmers	Strategies as perceived by the farmers	Strategies proposed to overcome the gap
	Fs-1	Fs-2			
Breed Up gradation	-	-	-	-	-
Artificial Insemination	-	-	-	-	-
Breed	√	√	1, 2, 3	1, 2, 3	1, 2, 3
Location	√	√	1, 2, 3	1, 2, 3	1, 2, 3
Natural Insemination	-	-			-
Breed	√	√	1, 2, 3	1, 2, 3	1, 2, 3
Location	-	-	-	-	-
Feed Management (per bird)					
Green Fodder (kg/day)	√	√	1, 2, 4	1, 2, 4	1, 2, 4
Dry Fodder (kg/day)	√	√	1, 2, 4	1, 2, 4	1, 2, 4
Concentrates (g/day)	√	√	1, 2, 4	1, 2, 4	1, 2, 4
Minerals (mix)	√	√	1, 2, 4	1, 2, 4	1, 2, 4
Vitamins (mix)	√	√	1, 2, 4	1, 2, 4	1, 2, 4
Health Care (per annum)					
HSBQ (No. of Vaccinations)	√	√	1, 2, 5	1, 2, 3	1, 2, 5, 7 & 8
FMD	√		1, 2, 5	1, 2, 3	1, 2, 3, 5, 7 & 8
swine fever	√	√	1, 2, 5	1, 2, 3	1, 2, 3, 5, 7 & 8
Mastitis	√		1, 2, 5	1, 2, 3	1, 2, 3, 5, 7 & 8
Thilarisis	√		1, 2, 5	1, 2, 3	1, 2, 3, 5, 7 & 8
General Management		√			1, 2, 3, 5, 7 & 8
Washing (times/day)	√		1, 2, 6	1, 2, 4	1, 2, 3, 5, 7 & 8
Cleaning (times/day)	√	√	1, 2, 6	1, 2, 4	1, 2, 3, 5, 7 & 8
Housing (Pucca/Kaccha)	-	-	-	-	-
Drinking Water	-	-	-	-	-
Average Yield (Meat)					1, 2, 5
Exotic Meat	√	√	1, 2, 3,4,5,6	1, 2, 3, 4	-
Deshi Meat	√	√	1, 2, 3,4,5,6	1, 2, 3, 4	1,2,3,4,5,6, 7, 8

If the gap is present in that farming situation then (√) and no gap (-)

**** Code for specific reasons for gap in adoption**

1. Lack of awareness about breeding plan
2. Lack of Finance
3. Non availability of improve Breed
4. Lack of availability of fodder concentrates minerals & vitamins
5. Lack of disease awareness
6. Lack of housing and clearing awareness

***** code for farmer proposed extension**

1. Awareness program
2. Training & Demostration
3. Exposure visit
4. Linkage with financial institution & market.

***** Strategies proposed to overcome the gap**

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Breed inprovement through AI/Improved bull
7. Preventive vaccination
8. Control of disease and pest

Chapter VI

Table No. 4

CONSOLIDATED GAPS IN PRODUCTION PRACTICES OF A LIVESTOCK/ COMMODITY AND PROPOSED STRATEGIES FOR THE DISTRICT

Crop :- Pig

Production Practices (items)	AES-1		AES-2		AES-3		AES-4	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Breed Up gradation								
Artificial Insemination	-	-	-	-	-	-	-	-
Breed	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3
Location	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3
Natural Insemination	-	-	-	-	-	-	-	-
Breed	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3
Location	-	-	-	-	-	-	-	-
Feed Management (per bird)								
Green Fodder (kg/day)	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4
Dry Fodder (kg/day)	P	1, 2, 4	P	1, 2, 4	P	1, 2, 4	P	1, 2, 4
Concentrates (g/day)	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4
Minerals (mix)	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4
Vitamins (mix)	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4	F	1, 2, 4
Health Care (per annum)								

HSBQ (No. of Vaccinations)	F	1, 2, 5, 7 & 8	F	1, 2, 5, 7 & 8	F	1, 2, 5, 7 & 8	F	1, 2, 5, 7 & 8
FMD	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Swine fever	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Mastitis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Thilarisis	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
General Management								
Washing (times/day)	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Cleaning (times/day)	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8	F	1, 2, 3, 5, 7 & 8
Housing (Pucca/Kaccha)	N	-	N	-	N	-	N	-
Drinking Water	N	-	N	-	N	-	N	-
Average Yield (Meat)	F	1, 2, 5	F	1, 2, 5	F	1, 2, 5	F	1, 2, 5
Exotic Meat	-	-	-	-	-	-	-	-
Deshi Meat	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8	P	1,2,3,4,5,6, 7, 8

***** Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Breed inprovement through AI/Improved bull, 7. Preventive vaccination, 8. Control of disease and pest

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock **Resource Rich/Poor**

Animal: Backyard Poultry ***Farming Situation: Rainfed Local Backyard Poultry***

ITEMS	AES - I FS-1					AES - II FS-I				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recom mended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation										
Artificial Insemination			F	1,2,3	1,2,3			F	1,2,3	1,2,3
Breed	Deshi	Red Divyayan	F	1,2,3	1,2,3	Deshi	Red Divyaya n	F	1,2,3	1,2,3
Location			F	1,2,3	1,2,3			F	1,2,3	1,2,3
Natural Insemination				1,2,3	1,2,3				1,2,3	1,2,3
Breed			F	1,2,3	1,2,3			F	1,2,3	1,2,3
Location					1,2,3					1,2,3
Feed Management (per bird)	Free grazing		F	2	1,2,3	Free grazing		F	2	1,2,3
Green Fodder (kg/day)		2-3 kg	F	2	1,2,3		2-3 kg	F	2	1,2,3
Dry Fodder (kg/day)			P	2	1,2,3			P	2	1,2,3
Concentrates (g/day)		80-100 gm	P	2	1,2,3		80-100 gm	P	2	1,2,3
Minerals (mix)		1 gm/bird/day	F	2,4	1,2,3		1 gm/bird /day	F	2,4	1,2,3
Vitamins (mix)		0.1 ml/bird/day	F	2,4	1,2,3		0.1 ml/bird/ day	F	2,4	1,2,3
Health Care (per annum)				2,4	1,2				2,4	1,2
Marks disease		Once in lifetime	F	2,4	1,2		Once in lifetime	F	2,4	1,2
RD (No. of vaccination)		Twice	F	2,4	1,2		Twice	F	2,4	1,2

Fowl Pox		Once	F	2,4	1,2		Once	F	2,4	1,2
Mastitis		On need	F	2,4	1,2		On need	F	2,4	1,2
Thilarisis			F	2,4	1,2			F	2,4	1,2
Deworming		Quarterly once	F	2,4	1,2		Quarterly once	F	2,4	1,2
General Management										
Washing (times/day)		Once	F	2,5	1,2,3		Once	F	2,5	1,2,3
Cleaning (times/day)		Once	F	2,5	1,2,3		Once	F	2,5	1,2,3
Housing (Pucca/Kaccha)	Kaccha	Pucca	N		1,2,3	Kaccha	Pucca	N		1,2,3
Drinking Water	Adequate	Adequate	P	2,5	1,2,3	Adequate	Adequate	P	2,5	1,2,3
Average Yield (egg)	70-75 eggs/year	150-200 eggs/year			1,2,3,4	70-75 eggs/year	150-200 eggs/year			1,2,3,4
Chicken Meat	1 kg/bird	2-2.5 kg / bird	P	2,5	1,2,3,4	1 kg/bird	2-2.5 kg / bird	P	2,5	1,2,3,4
Broiler Meat		1.2 – 2.0 kg/bird	N		1,2,3,4		1.2 – 2.0 kg/bird	N		1,2,3,4

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness about breeding plan
2. Lack of knowledge
3. Non availability of improve Breed
4. Lack of disease awareness
5. Lack of housing and clearing awareness

***** code for farmer proposed extension**

1. Awareness program
2. Training & Demostration
3. Exposure visit
4. Linkage with financial institution & market.

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock **Resource Rich/Poor**

Animal: Backyard Poultry ***Farming Situation: Rainfed Local Backyard Poultry***

ITEMS	AES - III FS-1					AES - IV FS-I				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Breed Up gradation										
Artificial Insemination			F	1,2,3	1,2,3			F	1,2,3	1,2,3
Breed	Deshi	Red Divyayan	F	1,2,3	1,2,3	Deshi	Red Divyayan	F	1,2,3	1,2,3
Location			F	1,2,3	1,2,3			F	1,2,3	1,2,3
Natural Insemination				1,2,3	1,2,3				1,2,3	1,2,3
Breed			F	1,2,3	1,2,3			F	1,2,3	1,2,3
Location					1,2,3					1,2,3
Feed Management (per bird)	Free grazing		F	2	1,2,3	Free grazing		F	2	1,2,3
Green Fodder (kg/day)		2-3 kg	F	2	1,2,3		2-3 kg	F	2	1,2,3
Dry Fodder (kg/day)			P	2	1,2,3			P	2	1,2,3
Concentrates (g/day)		80-100 gm	P	2	1,2,3		80-100 gm	P	2	1,2,3
Minerals (mix)		1 gm/bird/day	F	2,4	1,2,3		1 gm/bird/day	F	2,4	1,2,3
Vitamins (mix)		0.1 ml/bird/day	F	2,4	1,2,3		0.1 ml/bird/day	F	2,4	1,2,3
Health Care (per annum)				2,4	1,2				2,4	1,2
Marks disease		Once in lifetime	F	2,4	1,2		Once in lifetime	F	2,4	1,2
RD (No. of vaccination)		Twice	F	2,4	1,2		Twice	F	2,4	1,2
Fowl Pox		Once	F	2,4	1,2		Once	F	2,4	1,2

Mastitis		On need	F	2,4	1,2		On need	F	2,4	1,2
Thilarisis			F	2,4	1,2			F	2,4	1,2
Deworming		Quarterly once	F	2,4	1,2		Quarterly once	F	2,4	1,2
General Management										
Washing (times/day)		Once	F	2,5	1,2,3		Once	F	2,5	1,2,3
Cleaning (times/day)		Once	F	2,5	1,2,3		Once	F	2,5	1,2,3
Housing (Pucca/Kaccha)	Kaccha	Pucca	N		1,2,3	Kaccha	Pucca	N		1,2,3
Drinking Water	Adequate	Adequate	P	2,5	1,2,3	Adequate	Adequate	P	2,5	1,2,3
Average Yield (egg)	70-75 eggs/year	150-200 eggs/year			1,2,3,4	70-75 eggs/year	150-200 eggs/year			1,2,3,4
Chicken Meat	1 kg/bird	2-2.5 kg / bird	P	2,5	1,2,3,4	1 kg/bird	2-2.5 kg / bird	P	2,5	1,2,3,4
Broiler Meat		1.2 – 2.0 kg/bird	N		1,2,3,4		1.2 – 2.0 kg/bird	N		1,2,3,4

(*) F=Full **P = Partial** **N = Nil**

**** Code for specific reasons for gap in adoption**

1. Lack of awareness about breeding plan
2. Lack of knowledge
3. Non availability of improve Breed
4. Lack of disease awareness
5. Lack of housing and clearing awareness

***** code for farmer proposed extension**

1. Awareness program
2. Training & Demostration
3. Exposure visit
4. Linkage with financial institution & market.

Gap in adoption and Proposed strategies for improving the production and productivity of the Livestock/ Commodity in different AES

Crop:- Backyard Poultry **Resource Rich & Poor**

AES - I, II, III, IV

Production Practices (items)	Gap in adoption in the different situations in which the crop/ commodity is grown	Reasons for gap in adoption as perceived by the farmers	Strategies as perceived by the farmers	Strategies proposed to overcome the gap
	Fs-1			
Breed Up gradation				
Artificial Insemination	√	1,2,3	1,2,3	1, 2, 3
Breed	√	1,2,3	1,2,3	1, 2, 3
Location	√	1,2,3	1,2,3	1, 2, 3
Natural Insemination	-	-	-	-
Breed	√	1,2,3	1,2,3	1, 2, 3
Location	-	-	-	-
Feed Management (per bird)				
Green Fodder (kg/day)	√	2	1,2,3	1, 2, 3 & 5
Dry Fodder (kg/day)	√	2	1,2,3	1, 2, 3 & 5
Concentrates (g/day)	√	2	1,2,3	1, 2, 3 & 5
Minerals (mix)	√	2,4	1,2,3	1, 2, 3 & 5
Vitamins (mix)	√	2,4	1,2,3	1, 2, 3 & 5
Health Care (per annum)		2,4	1,2	1, 2, 3, 7 & 8
Marks disease	√	2,4	1,2	1, 2, 3, 7 & 8
RD (No. of vaccination)	√	2,4	1,2	1, 2, 3, 7 & 8
Fowl Pox	√	2,4	1,2	1, 2, 3, 7 & 8
Mastitis	√	2,4	1,2	1, 2, 3, 7 & 8
Thilarisis	√	2,4	1,2	1, 2, 3, 7 & 8
Deworming	√	2,4	1,2	1, 2, 3, 7 & 8
General Management				
Washing (times/day)	√	2,5	1,2,3	1, 2, 3, 5 & 5
Cleaning (times/day)	√	2,5	1,2,3	1, 2, 3, 5 & 5
Housing (Pucca/Kaccha)	-		-	-
Drinking Water	√	2,5	1,2,3	1, 2, 3 & 4
Average Yield (egg)				
Chicken Meat	√	2,5	1,2,3,4	1, 2, 3, 4, 6, 7 & 8
Broiler Meat	√		1,2,3,4	1, 2, 3, 4, 6, 7 & 8

If the gap is present in that farming situation then (√) and no gap (-)

**** Code for specific reasons for gap in adoption**

1. Lack of awareness
2. Lack of availability of fooder
3. Cost Factor
4. Lack of technical persons.
5. Unaware of management practices

***** code for farmer proposed extension**

1. Awareness programme through training & field visit.
2. Health Camp
3. Exposure Visit
4. Credit facilities
5. Management practices
6. Fooder availability

***** Strategies proposed to overcome the gap**

1. Training and exposure visit
2. Demonstrations/on farm trails
3. Linkage with financial institution/crop insurance
4. Providing market opportunities
5. Gearing quality input supply in rural areas
6. Breed inprovement through AI/Improved bull
7. Preventive vaccination
8. Control of disease and pest

Chapter VI

Table No. 4

CONSOLIDATED GAPS IN PRODUCTION PRACTICES OF A LIVESTOCK/ COMMODITY AND PROPOSED STRATEGIES FOR THE DISTRICT

Crop :- Backyard Poultry

Production Practices (items)	AES-1		AES-2		AES-3		AES-4	
	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap	Gap in adoption N/P/F	Proposed Strategy to overcome the gap
Breed Up gradation								
Artificial Insemination	-	-	-	-	-	-	-	-
Breed	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3
Location	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3
Natural Insemination								
Breed	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3	P	1, 2, 3
Location	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3	F	1, 2, 3
Feed Management (per bird)								
Green Fodder (kg/day)	P	1, 2, 3 & 5	P	1, 2, 3 & 5	P	1, 2, 3 & 5	P	1, 2, 3 & 5
Dry Fodder (kg/day)	F	1, 2, 3 & 5	F	1, 2, 3 & 5	F	1, 2, 3 & 5	F	1, 2, 3 & 5
Concentrates (g/day)	P	1, 2, 3 & 5	P	1, 2, 3 & 5	P	1, 2, 3 & 5	P	1, 2, 3 & 5
Minerals (mix)	F	1, 2, 3 & 5	F	1, 2, 3 & 5	F	1, 2, 3 & 5	F	1, 2, 3 & 5
Vitamins (mix)	F	1, 2, 3 & 5	F	1, 2, 3 & 5	F	1, 2, 3 & 5	F	1, 2, 3 & 5
Health Care (per annum)								
Marks disease	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8

RD (No. of vaccination)	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8
Fowl Pox	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8
Mastitis	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8
Thilarisis	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8
Deworming	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8	F	1, 2, 3, 7 & 8
General Management								
Washing (times/day)	N	-	N	-	N	-	N	-
Cleaning (times/day)	F	1, 2, 3, 5 & 5	F	1, 2, 3, 5 & 5	F	1, 2, 3, 5 & 5	F	1, 2, 3, 5 & 5
Housing (Pucca/Kaccha)	P	-	P	-	P	-	P	-
Drinking Water	P	1, 2, 3 & 4	P	1, 2, 3 & 4	P	1, 2, 3 & 4	P	1, 2, 3 & 4
Average Yield (egg)	F		F		F		F	
Chicken Meat	P	1, 2, 3, 4, 6, 7 & 8	P	1, 2, 3, 4, 6, 7 & 8	P	1, 2, 3, 4, 6, 7 & 8	P	1, 2, 3, 4, 6, 7 & 8
Broiler Meat	P	1, 2, 3, 4, 6, 7 & 8	P	1, 2, 3, 4, 6, 7 & 8	P	1, 2, 3, 4, 6, 7 & 8	P	1, 2, 3, 4, 6, 7 & 8

*** **Strategies proposed to overcome the gap :** 1. Training and exposure visit, 2. Demonstrations/on farm trails, 3. Linkage with financial institution/crop insurance, 4. Providing market opportunities, 5. Gearing quality input supply in rural areas, 6. Breed inprovement through AI/Improved bull, 7. Preventive vaccination, 8. Control of disease and pest

Chapter VI Table-2

Gap in adoption and Farmer Strategies for improving the production and productivity of the Livestock

Livestock **AES I, II, III, IV** **Resource Rich**

Animal: Fishery ***Farming Situation: RainfedSeasonal Pond*** ***Farming Situation: Rainfed Perinial Pond***

ITEMS	FS-1					FS-II				
	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy	Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Culture Component										
Indian Carp	Catla, Rohu, Mrigal	Catla, Rohu, Mrigal	P	2,4,5	2,3,4	Catla, Rohu, Mrigal	Catla, Rohu, Mrigal	P	2,4,5	2,3,4
Exotic Carp	-	IMC with EC	F	1,2,4,5	1,2,3,4	-	IMC with EC	F	1,2,4,5	1,2,3,4
Prawn	-	Catla, Rohu, Mrigal	F	1,2,4,5	1,2,3,4	-	Catla, Rohu, Mrigal	F	1,2,4,5	1,2,3,4
Cat fish	-	Silver carp grass	F	1,2,4,5	1,2,3,4	Silver carp grass	Silver carp grass	P	1,2,4,5	1,2,3,4
Pond preparation	-	Murrah, / PVC, MPCS	F	1,2,4,5	1,2,3,4	-	Murrah, / PVC, MPCS	F	1,2,4,5	1,2,3,4
Organic Manure	-	10000 kg	F	3,5	1,4	100 kg	10000 kg	P	3,5	1,4
Inorganic manure	-	200 kg/ha	F	3,5	1,4	-	200 kg/ha	F	3,5	1,4
Bio fertilizer	-	40000 kg/ha	F	3,5	1,4	-	40000 kg/ha	F	3,5	1,4
Lime	-	200 kg/ha	F	3,5	1,4	-	200 kg/ha	F	3,5	1,4
Water depth	-	1.5m	F	1,2,5	1,4	-	1.5m	F	1,2,5	1,4
Weed control	Manual	Manual/ mechanical	P	1,4,5	1,4	Manual	Manual/ mechanical	P	1,4,5	1,4

Stocking Zone										
Spawn		10000-20000	F	1,2,4,5	1,2,3,4	3000	10000-20000	P	1,2,4,5	1,2,3,4
Fry	700	10000	P	1,2,4,5	1,2,3,4	700	10000	P	1,2,4,5	1,2,3,4
Fingerling	-	5000	F	1,2,4,5	1,2,3,4	2000	5000	P	1,2,4,5	1,2,3,4
Feeding schedule	-		F	1,2,4,5	1,2,3,4	-		F	1,2,4,5	1,2,3,4
Rice bran	-	1:1	F	1,2,4,5	1,2,3,4	-	1:1	F	1,2,4,5	1,2,3,4
Oil cake	-		F	1,2,4,5	1,2,3,4	-		F	1,2,4,5	1,2,3,4
Green leaf	-		F	1,2,4,5	1,2,3,4	-		F	1,2,4,5	1,2,3,4
Disease	-	CIFAX, lime	F	1,2,4,5	1,2,3,4	-	CIFAX, lime	F	1,2,4,5	1,2,3,4
Sample netting	-		F	1,2,4,5	1,2,3,4	-		F	1,2,4,5	1,2,3,4
Aeration	-		F	1,2,4,5	1,2,3,4	-		F	1,2,4,5	1,2,3,4
Harvesting Method	Net	Cycle	F	1,2,4,5	1,2,3,4	Net	Cycle	F	1,2,4,5	1,2,3,4
Culture Method	Indigenous	Composite pisciculture	F	1,2,4,5	1,2,3,4	Indigenous	Composite pisciculture	F	1,2,4,5	1,2,3,4
Average yield	2 q/ha	2-3 t/ha	F	1,2,4,5	1,2,3,4	10 q/ha	2-3 t/ha	F	1,2,4,5	1,2,3,4

(*) F=Full	**P = Partial**		**N = Nil**
**** Code for specific reasons for gap in adoption**		***** code for farmer proposed extension**	
1. Lack of technical personal		1. Providing qualified technical personal	
2. Lack of awareness & availability of seed		2. Providing improved quality of composite culture seed	
3. Lack of availability of organic matter		3. Linkage with finance agency and market	
4. Lack of finance		4. Training and awareness campaign	
5. Lack of Knowledge and skill			