X CHALLENGES & OPPORTUNITIES IN THE DISTRICT

Agriculture in the Ranchi district is characterized by mono cropping, the main crop is being paddy. Other kharif crops are Maize, Arhar, Urad, Moong, Niger as rainfed crop. Rabbi crops are wheat, potato. How ever vegetable are grown extensively in some block of district. Main vegetables are Cauliflower, Cabbage, Tomato, Brinjal, Capsicum, Chilli, Cucurbitaceous vegetables. Unseasonal vegetables are also grown on large scale in the District. In winter and summer season 95% land remain fallow therefore cropping intensity is hardly 113% in the district. Therefore it is a great challenge to increase the cropping intensity at notational average 146%. There is an Opportunity to increase the cropping intensity through crop Diversification & Intensification. Since vegetable are also grown in AES-I, therefore opportunity for market led extension is also good by growing Unseasonal vegetables.

Yield of rainfed upland rice is low(less than 1000 kg/ha) and unstable. It is being cultivated to meet the family food requirement of small and marginal farmers who constitute 75 percent of total farm holdings. Replacement of rainfed upland rice with low water requiring high value crops may be one of the best options to increase the production, productivity, income and employment in rainfed upland rice areas of the state. It is generally recognized that second green revolution could be realized in the state through small farm diversification and integrated development of both farm and non-farm sectors is crucial from the point of view of alleviation of rural poverty. Therefore, viability and sustainability of small farms through diversification assume importance.

Crop diversification in rainfed uplands

Technological options for rice substitution and crop diversification in rainfed uplands are rain water management, summer ploughing, early sowing, closer spacing, early weeding, timely fertilizer application, plant protection measures, early harvesting and proper intercultural practices.

- The crops to replace rice should be of short duration, low duty and/or deep rooted which can extract moisture from deeper siol layers during dry spells.
- Some of the promising crops for rainfed upland Rice area are Maize, Ragi, Black gram, Pigeon pea, Cowpea, Groundnut, Systems, Niger and Sweet potato.
- Inclusion of legumes in the cropping systems improves soil fertility, besides providing food and nutritional security.
- Pulses have inherent quality to trap the moisture from the lower strata of the soil. Therefore, they are considered to be moisture stress tolerant and fit well in rainfed conditions.
- Adoption of dry land horticulture and agro-forestry systems in sloppy uplands.

Efficient cropping systems for Upland situations.

a. Maize – Vegetables	Vegetables
b. Maize – Potato	Potato
c. Maize – Rainfed Wheat (Early Sown)	Wheat
d. Maize – Linseed	Linseed
e. Maize – Lentil	Lentil
f. Maize – Chickpea	Chickpea
g. Maize - Pea	Pea
To promote the pulse production through Arhar based inter cropping :-	
Inter Cropping	Main Crop
I. Pigeon Pea + Ragi **1:2**	Pigeon Pea
II. Pigeon Pea + Maize **1:1**	Pigeon Pea
III. Pigeon Pea + Black gram **1:2**	Pigeon Pea
IV. Pigeon Pea + Rice **1:3**	Pigeon Pea
V. Pigeon Pea + Ground Nut **1:2**	Pigeon Pea

Inter Cropping with Maize :-		
I. Maize + Black gram	**1:2**	Maize
II. Maize + Lobia	**1:2**	Maize

Efficient cropping systems for Medium land situations.

Inter cropping with Wheat.		Main Crop
I. Wheat + gram	**4:2**	Wheat
II. Wheat + Toria	**8:2**	Wheat
III. Wheat + Lentil	**4:2**	Wheat

Inter cropping with Mustard :-		
I. Mustard + Lentil	**1:5**	Mustard
II. Mustard + Linseed	**1:5**	Mustard
III. Mustard + Gram	**1:5**	Mustard

parra cropping :-	
I. Rice - Linseed	Linseed
II. Rice - Lentil	Lentil
III. Rice - Gram	Gram
IV. Rice - Pea	Pea

Efficient cropping systems for Medium land situations to utilize residual moisture.

Cultivation of Torai under residual moisture situation in rainfed condition.	Torai
Cultivation of Rai under residual moisture situation in rainfed condition.	Rai
Printing of Leaflets/folders	-
Cultivation of newly released Variety of wheat under Irrigated.	Wheat
Cultivation of wheat in rainfed condition after harvest of early paddy.	Wheat

Efficient cropping systems for Medium land situations to utilize residual moisture.

Cultivation of Wheat under Zero Tillage surface seeded on wet land.	Wheat
Cultivation of wheat under minimum tillage in wet land condition.	Wheat
Cultivation of summer rice after the harvest of Kharif rice.	Rice

Efficient cropping systems for market led extension

Cultivation of Rainy season potato	Potato
Cultivation of Rainy season Tomato	Tomato
Cultivation of summer cauliflower	Cauliflower
Cultivation of summer Capsicum.(Simla Mirch)	Capsicum
Cultivation of Chili	Chili
Cultivation of summer Maize	Maize

Table-:10:01 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Pigeon Pea + Up land Rice.
AES – I, II & III Crop Ratio – 1:3
Farming Situation : Rainfed Upland/Red laterite soil Existing Farming Situation
Gap- Full Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Pigeon Pea	BR-65, Bahar	1,3,4,6	1,2,3
	Up land Rice	Birasa brown gora	1,3,4,6	1,2,3
Seed Rate	Pigeon Pea	20 kg/ha	1,3,4,6	1,2,3
	Up land Rice	75 kg/ha	1,3,4,6	1,2,3
Time	Pigeon Pea	20th June to 30th June	-	-
	Up land Rice	20th June to 30th June	-	-
Method of Sowing	Pigeon Pea	Lime Sowing	1,3,4,6	1,2,3
	Up land Rice	Lime Sowing	1,3,4,6	1,2,3
Organic Manure	Pigeon Pea	100 qut/ha.	1,3,4,6	1,2,3
	Up land Rice			
Fertilizer	Pigeon Pea	20:40:20	1,2,3,4,6	1,2,3,5
	Up land Rice	40:20:20	1,2,3,4,6	1,2,3,5
Basal	Pigeon Pea	20:40:20	1,3,4,6	1,2,3
	Up land Rice	20:20:20	1,3,4,6	1,2,3
Top Dressing	Pigeon Pea	-	1,3,4,6	1,2,3
	Up land Rice	20 N kg/ha.	1,3,4,6	1,2,3
Soil Reclamation	Pigeon Pea	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Up land Rice	-	-	-
Pest & Disease Management				
Soil Treatment	Pigeon Pea	Deep summer ploughing. Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Up land Rice		1,2,3,4,5	1,2,3,4,5
Seed Treatment	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Up land Rice	Carbendazim 2gm/ kg. seed	1,2,3,4,5	1,2,3,4,5
Crop Treatment	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
	Up land Rice	0.1% Solution of Monocrotophos/Mythile Dimetone against Aphids, Thrips e.t.c.	1,2,3,4,5	1,2,3,4,5
Weed Management	Pigeon Pea	Two hand weeding	-	-
	Up land Rice			
Irrigation and Drainage	Pigeon Pea	Irrigation if required. Drainage by open bund.	-	-
	Up land Rice			
Average Yield	Pigeon Pea	15-20 qut.	-	-
	Up land Rice	10-12 qut.	-	-

Reasons for gap - 1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:02 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Pigeon Pea + Maize.
AES – I, II & III Crop Ratio – 1:1
Situation : Rainfed Upland/Red laterite soil Existing Farming Situation
Gap- Full Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Pigeon Pea	BR-65, Bahar	1,3,4,6	1,2,3
	Maize	Birasa maize-1 & 2	1,3,4,6	1,2,3
Seed Rate	Pigeon Pea	20 kg/ha	1,3,4,6	1,2,3
	Maize	18 kg/ha	1,3,4,6	1,2,3
Time	Pigeon Pea	20th June to 30th June	-	-
	Maize	20th June to 30th June	-	-
Method of Sowing	Pigeon Pea	Lime Sowing	1,3,4,6	1,2,3
	Maize	Lime Sowing	1,3,4,6	1,2,3
Organic Manure	Pigeon Pea	200 qut/ha.	1,3,4,6	1,2,3
	Maize			
Fertilizer	Pigeon Pea	20:40:20	1,2,3,4,6	1,2,3,5
	Maize	80:40:20	1,2,3,4,6	1,2,3,5
Basal	Pigeon Pea	20:40:20	1,3,4,6	1,2,3
	Maize	40:40:20	1,3,4,6	1,2,3
Top Dressing	Pigeon Pea	-	1,3,4,6	1,2,3
	Maize	40 N kg/ha.	1,3,4,6	1,2,3
Soil Reclamation	Pigeon Pea	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Maize			
Pest & Disease Management				
Soil Treatment	Pigeon Pea	Deep summer ploughing. Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Maize		1,2,3,4,5	1,2,3,4,5
Seed Treatment	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Maize	Carbendazim 2gm/ kg. seed	1,2,3,4,5	1,2,3,4,5
Crop Treatment	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
	Maize	Whorl application of phorate 10G/carbofuran 3G @ 12-15 granules/whorl.	1,2,3,4,5	1,2,3,4,5
Weed Management	Pigeon Pea	Two hand weeding	-	-
	Maize	Two hand weeding earthing up	-	-
Irrigation and Drainage	Pigeon Pea	Irrigation if required. Drainage by open bund.		
	Maize			
Average Yield	Pigeon Pea	15-20 qut.	-	-
	Maize	30-35 qut.	-	-

Reasons for gap - 1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:03 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Pigeon Pea + Black gram
AES – I, II & III Crop Ratio – 1:2
Situation : Rainfed Upland/Red laterite soil Existing Farming Situation
Gap- Full Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Pigeon Pea	BR-65, Bahar	1,3,4,6	1,2,3
	Black gram	Birasa Black gram-1, T-9	1,3,4,6	1,2,3
Seed Rate	Pigeon Pea	20 kg/ha	1,3,4,6	1,2,3
	Black gram	30 kg/ha	1,3,4,6	1,2,3
Time	Pigeon Pea	20^{th} June to 30^{th} June	-	-
	Black gram	20^{th} June to 30^{th} June	-	-
Method of Sowing	Pigeon Pea	Lime Sowing	1,3,4,6	1,2,3
	Black gram	Lime Sowing	1,3,4,6	1,2,3
Organic Manure	Pigeon Pea	100 qut/ha.	1,3,4,6	1,2,3
	Black gram			
Fertilizer	Pigeon Pea	20:40:20	1,2,3,4,6	1,2,3,5
	Black gram	20:40:20	1,2,3,4,6	1,2,3,5
Basal	Pigeon Pea	20:40:20	1,3,4,6	1,2,3
	Black gram	20:40:20	1,3,4,6	1,2,3
Top Dressing	Pigeon Pea	-	-	-
	Black gram	-	-	-
Soil Reclamation	Pigeon Pea	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Black gram			
Pest & Disease Management				
Soil Treatment	Pigeon Pea	Deep summer ploughing. Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Black gram		1,2,3,4,5	1,2,3,4,5
Seed Treatment	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Black gram	Carbendazim 2gm/ kg. seed. Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Crop Treatment	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
	Black gram	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
Weed Management	Pigeon Pea	Two hand weeding	-	-
	Black gram		-	-
Irrigation and Drainage	Pigeon Pea	Irrigation if required. Drainage by open bund.		
	Black gram			
Average Yield	Pigeon Pea	15-20 qut.	-	-
	Black gram	8-10 qut.	-	-

Reasons for gap - 1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratice rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:04 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Pigeon Pea + Ragi
AES – I, II & III Crop Ratio – 1:2
Situation : Rainfed Upland/Red laterite soil Existing Farming Situation
Gap- Full Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Pigeon Pea	BR-65, Bahar	1,3,4,6	1,2,3
	Ragi	Birasa Ragi -2, A - 404	1,3,4,6	1,2,3
Seed Rate	Pigeon Pea	20 kg/ha	1,3,4,6	1,2,3
	Ragi	10 kg/ha	1,3,4,6	1,2,3
Time	Pigeon Pea	20th June to 30th June	-	-
	Ragi	20th June to 30th June	-	-
Method of Sowing	Pigeon Pea	Lime Sowing	1,3,4,6	1,2,3
	Ragi	Lime Transplanting after 1st weeding within 25days.	1,3,4,6	1,2,3
Organic Manure	Pigeon Pea	100 qut/ha.	1,3,4,6	1,2,3
	Ragi			
Fertilizer	Pigeon Pea	20:40:20	1,2,3,4,6	1,2,3,5
	Ragi	20:20:20	1,2,3,4,6	1,2,3,5
Basal	Pigeon Pea	20:40:20	1,3,4,6	1,2,3
	Ragi	20:40:20	1,3,4,6	1,2,3
Top Dressing	Pigeon Pea	-	-	-
	Ragi	20kg N 20 D.A.T.	1,2,3,4,6	1,2,3,5
Soil Reclamation	Pigeon Pea	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Ragi			
Pest & Disease Management				
Soil Treatment	Pigeon Pea	Deep summer ploughing. Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Ragi		1,2,3,4,5	1,2,3,4,5
Seed Treatment	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Ragi	Carbendazim 2gm/ kg. seed	1,2,3,4,5	1,2,3,4,5
Crop Treatment	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
	Ragi	0.2% Solution of Monocrotophos against pod borer Carbendazime 01.% solution of leaf sport disease.	1,2,3,4,5	1,2,3,4,5
Weed Management	Pigeon Pea	Two hand weeding	-	-
	Ragi		-	-
Irrigation and Drainage	Pigeon Pea	Irrigation if required. Drainage by open bund.		
	Ragi			
Average Yield	Pigeon Pea	15-20 qut.	-	-
	Ragi	15 qut.	-	-

Reasons for gap - 1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:05 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Pigeon Pea + Ground Nut
AES – I, II & III Crop Ratio – 1:2
Situation : Rainfed Upland/Red laterite soil Existing Farming Situation
Gap- Full Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Pigeon Pea	BR-65, Bahar	1,3,4,6	1,2,3
	Ground Nut	AK-12-24, Fule, Birasa ground nut-2	1,3,4,6	1,2,3
Seed Rate	Pigeon Pea	20 kg/ha	1,3,4,6	1,2,3
	Ground Nut	75 kg Kernel/ha.	1,3,4,6	1,2,3
Time	Pigeon Pea	20th June to 30th June	-	-
	Ground Nut	20th June to 30th June	-	-
Method of Sowing	Pigeon Pea	Lime Sowing	1,3,4,6	1,2,3
	Ground Nut	Lime Sowing between two rows of Pigeon pea.	1,3,4,6	1,2,3
Organic Manure	Pigeon Pea	200 qut/ha.	1,3,4,6	1,2,3
	Ground Nut			
Fertilizer	Pigeon Pea	20:40:20	1,2,3,4,6	1,2,3,5
	Ground Nut	25:50:25	1,2,3,4,6	1,2,3,5
Basal	Pigeon Pea	20:40:20	1,3,4,6	1,2,3
	Ground Nut	25:50:25	1,3,4,6	1,2,3
Top Dressing	Pigeon Pea	-	-	-
	Ground Nut	-	-	-
Soil Reclamation	Pigeon Pea	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Ground Nut			
Pest & Disease Management				
Soil Treatment	Pigeon Pea	Deep summer ploughing. Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Ground Nut		1,2,3,4,5	1,2,3,4,5
Seed Treatment	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Ground Nut	Carbendazim 2gm/ kg. seed. Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Crop Treatment	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
	Ground Nut	0.1.% solution of Carbendazime against Tikka disease.	1,2,3,4,5	1,2,3,4,5
Weed Management	Pigeon Pea	Two hand weeding each 15th days.	-	-
	Ground Nut		-	-
Irrigation and Drainage	Pigeon Pea	Irrigation if required. Drainage by open bund.		
	Ground Nut			
Average Yield	Pigeon Pea	15-20 qut.	-	-
	Ground Nut	12-15 qut.	-	-

Reasons for gap - 1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:06 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop –Maize + Black gram.
AES – I, II & III Crop Ratio – 1:2
Situation : Rainfed Upland/Red laterite soil Existing Farming Situation
Gap- Full Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Maize	Birasa maize-1 & 2	1,3,4,6	1,2,3
	Black gram	Birasa Black gram-1, T-9	1,3,4,6	1,2,3
Seed Rate	Maize	18 kg/ha	1,3,4,6	1,2,3
	Black gram	30 kg/ha	1,3,4,6	1,2,3
Time	Maize	20th June to 30th June	-	-
	Black gram	20th June to 30th June	-	-
Method of Sowing	Maize	Lime Sowing	1,3,4,6	1,2,3
	Black gram	Lime Sowing	1,3,4,6	1,2,3
Organic Manure	Maize	200 qut/ha.	1,3,4,6	1,2,3
	Black gram			
Fertilizer	Maize	80:40:20	1,2,3,4,6	1,2,3,5
	Black gram	20:40:20		
Basal	Maize	40:40:20	1,3,4,6	1,2,3
	Black gram	20:40:20		
Top Dressing	Maize	40 N kg/ha.	1,3,4,6	1,2,3
	Black gram	-		
Soil Reclamation	Maize	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Black gram			
Pest & Disease Management				
Soil Treatment	Maize	Deep summer ploughing. Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Black gram		1,2,3,4,5	1,2,3,4,5
Seed Treatment	Maize	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Black gram	Carbendazim 2gm/ kg. seed, Rhizobium treatment		
Crop Treatment	Maize	Whorl application of phorate 10G/carbofuran 3G @ 12-15 granules/whorl.	1,2,3,4,5	1,2,3,4,5
	Black gram	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
Weed Management	Maize	Two hand weeding earthing up	1,2,3,4,5	1,2,3,4,5
	Black gram			
Irrigation and Drainage	Maize	Irrigation if required. Drainage by open bund.	1,2,3,4,5	1,2,3,4,5
	Black gram			
Average Yield	Maize	30-35 qut.	-	-
	Black gram	8-10 qut.		

Reasons for gap - 1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:07 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop –Maize + Lobia.
AES – I, II & III Crop Ratio – 1:2
Situation : Rainfed Upland/Red laterite soil Existing Farming Situation
Gap- Full Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Maize	Birasa maize-1 & 2	1,3,4,6	1,2,3
	Lobia	Pusa barsati, Birasa Sweta	1,3,4,6	1,2,3
Seed Rate	Maize	18 kg/ha	1,3,4,6	1,2,3
	Lobia	30 kg/ha	1,3,4,6	1,2,3
Time	Maize	20th June to 30th June	-	-
	Lobia	20th June to 30th June	-	-
Method of Sowing	Maize	Lime Sowing	1,3,4,6	1,2,3
	Lobia	Lime Sowing	1,3,4,6	1,2,3
Organic Manure	Maize	200 qut/ha.	1,3,4,6	1,2,3
	Lobia			
Fertilizer	Maize	80:40:20	1,2,3,4,6	1,2,3,5
	Lobia	20:40:20		
Basal	Maize	40:40:20	1,3,4,6	1,2,3
	Lobia	20:40:20		
Top Dressing	Maize	40 N kg/ha.	1,3,4,6	1,2,3
	Lobia	-		
Soil Reclamation	Maize	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Lobia			
Pest & Disease Management				
Soil Treatment	Maize	Deep summer ploughing. Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Lobia		1,2,3,4,5	1,2,3,4,5
Seed Treatment	Maize	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Lobia	Carbendazim 2gm/ kg. seed, Rhizobium treatment		
Crop Treatment	Maize	Whorl application of phorate 10G/carbofuran 3G @ 12-15 granules/whorl.	1,2,3,4,5	1,2,3,4,5
	Lobia	0.2% Solution of Monocrotophos against pod borer		
Weed Management	Maize	Two hand weeding earthing up	1,2,3,4,5	1,2,3,4,5
	Lobia			
Irrigation and Drainage	Maize	Irrigation if required. Drainage by open bund.	1,2,3,4,5	1,2,3,4,5
	Lobia			
Average Yield	Maize	30-35 qut.	-	-
	Lobia	12-15 qut		

Reasons for gap - 1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:08 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop –Rainfed wheat.
AES – I, II & III Crop Sequence – Maize-Wheat
Farming Situation : Rainfed Midland/Sandy Loam Soil Early Rice wheat
Gap- Full

ITEMS	Recommended	Specific Reasons for gap	Farmer Strategy
Sowing			
Variety	C-306,HDR-77, K-8027	1,2,3,4	1,2,4,5
Method	Line Sowing	-	1,2,5,6
Seed Rate	125 Kg/ha		1,2,4,5
Time	25th Oct.-10th Nov.	1,2,4	1,2,3
Organic Manure & Fertilizer			
Organic Manure	100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)			
Early Sown	40:25:10		
Basal (N+P+K) KG/ H	20:25:10	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H	20 N	1,2,3,4	1,2,3,4,5
Method of fertilizer use			
Basal (N+P+K)	50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)	25 % + 25% N Broad Casting	-	1
Disease & Pest Management			
Pest Management			
Soil Treatment(Termite)	Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management			
Seed Treatment	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
Alternaria Blight	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Losse Smut	Coper Oxichloride 0.3% Soulation & Seed Treatment	1,2,3,4	1,2,4,5
Weed Management	Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management			
No. of Irrigation	1st Irrigation between CRI and tillering stage, 2nd At Panicle Stage, 3rd At Milking Stage if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method	Flooding	-	-
Soil Management			
Acidity	-	-	-
Water Logging	Extra water removed	1,7	7
Harvesting & Threshing			
Method of Harvesting	Sickle , Harvester	5	5,6
Any Other/Threshing	Tractor , Thresser	5	5,6
Average Yield			
Grain	20-22 qu/ha	1,2,3,4,5,7	1,2,3,4,5
Storage Pest Control	Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:09 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Intensification through Zero Tillage Surface Seeded on wet land Crop –wheat.
AES – I, II & III
Situation : Low Land/Loamy Clay Soil Crop Sequence –Early Rice

ITEMS	Recommended	Specific Reasons for gap	Farmer Strategy
Sowing			
Variety	HUW-450, HUW- 468, PBW-443,	1,2,3,4	1,2,4,5
Method	Line Sowing	-	1,2,5,6
Seed Rate	125 Kg/ha	-	1,2,4,5
Time	^{25th} Oct.-15^{th} Nov.	1,2,4	1,2,3
Organic Manure & Fertilizer			
Organic Manure	100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)			
Early Sown	100:50:25		
Basal (N+P+K) KG/ H	50:25:25	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H	50 N	1,2,3,4	1,2,3,4,5
Method of fertilizer use			
Basal (N+P+K)	50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)	25 % + 25% N Broad Casting	-	1
Disease & Pest Management			
Pest Management			
Soil Treatment(Termite)	Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management			
Seed Treatment	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
Alternaria Blight	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Losse Smut	Coper Oxichloride 0.3% Soulation & Seed Treatment	1,2,3,4	1,2,4,5
Weed Management	Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management			
No. of Irrigation	1^{st} Irrigation between CRI and tillering stage, 2^{nd} At Panicle Stage, 3^{rd} At Milking Stage if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method	Flooding	-	-
Soil Management			
Acidity	-	-	-
Water Logging	Extra water removed	1,7	7
Harvesting & Threshing			
Method of Harvesting	Sickle , Harvester	5	5,6
Any Other/Threshing	Tractor , Thresser	5	5,6
Average Yield			
Grain	40-45 qu/ha	1,2,3,4,5,7	1,2,3,4,5
Storage Pest Control	Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:10 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Intensification through minimum Tillage on slightly wet land. Crop –wheat.
AES – I, II & III
Situation : Mid low land Crop Sequence –Early Rice-Wheat

ITEMS	Recommended	Specific Reasons for gap	Farmer Strategy
Sowing			
Variety	HUW-450, HUW- 468, PBW-443,	1,2,3,4	1,2,4,5
Method	Sowing behind the plough on furrow/Through seed drill.	-	1,2,5,6
Seed Rate	125 Kg/ha	-	1,2,4,5
Time	^{25th} Oct.-15^{th} Nov.	1,2,4	1,2,3
Organic Manure & Fertilizer			
Organic Manure	100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)			
Early Sown	100:50:25		
Basal (N+P+K) KG/ H	50:25:25	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H	50 N	1,2,3,4	1,2,3,4,5
Method of fertilizer use			
Basal (N+P+K)	50 % + 100% P_2o_5 +100% k_2O road Casting	-	1
Top Dressing (N)	25 % + 25% N Broad Casting	-	1
Disease & Pest Management			
Pest Management			
Soil Treatment(Termite)	Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management			
Seed Treatment	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
Alternaria Blight	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Losse Smut	Coper Oxichloride 0.3% Soulation & Seed Treatment	1,2,3,4	1,2,4,5
Weed Management	Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management			
No. of Irrigation	1^{st} Irrigation between CRI and tillering stage, 2^{nd} At Panicle Stage, 3^{rd} At Milking Stage if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method	Flooding	-	-
Soil Management			
Acidity	-	-	-
Water Logging	Extra water removed	1,7	7
Harvesting & Threshing			
Method of Harvesting	Sickle , Harvester	5	5,6
Any Other/Threshing	Tractor , Thresser	5	5,6
Average Yield			
Grain	40-45 qu/ha	1,2,3,4,5,7	1,2,3,4,5
Storage Pest Control	Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:11 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop –wheat + Gram
AES – I, II & III Ratio – 4:2
Gap – Full Situation : Mid Land
Existing Farming Situation Mono Cropping of Paddy

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Wheat	PBW-443	1,2,3,4	1,2,4,5
	Gram	Pant G-114	1,2,3,4	1,2,4,5
Method		Line Sowing	-	1,2,5,6
Seed Rate	Wheat	125 Kg/ha	-	1,2,4,5
	Gram	75 Kg/ha	-	-
Time	Wheat	15th Nov-30th Nov.	1,2,4	1,2,3
	Gram			
Organic Manure & Fertilizer				
Organic Manure		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)				
Wheat		100:50:25		
Basal (N+P+K) KG/ H		50:25:25	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		50 N	1,2,3,4	1,2,3,4,5
Gram		20:40:20		
Basal (N+P+K) KG/ H		20:40:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		-	-	-
Method of fertilizer use				
Basal (N+P+K)		50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	-	1
Disease & Pest Management				
Pest Management				
Soil Treatment(Termite)		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management				
Seed Treatment	Wheat	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
	Gram	Carbendazim 2gm/kg seed, Rhizobium treatment	1,2,3,4	1,2,4,5
Alternaria Blight (Wheat)		DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust (Wheat)		DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Losse Smut (Wheat)		Coper Oxichloride 0.3% Soulation & Seed Treatment	1,2,3,4	1,2,4,5
Pod Borer (Gram)		0.2% Solution of Monocrotophos	1,2,3,4	1,2,4,5,6
Weed Management		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management				
No. of Irrigation		1st Irrigation between CRI and tillering stage, 2nd At Panicle Stage, 3rd At Milking Stage if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method		Flooding	-	-
Soil Management				
Acidity		-	-	-
Water Logging		Extra water removed	1,7	7
Harvesting & Threshing				
Method of Harvesting		Sickle , Harvester	5	5,6
Any Other/Threshing		Tractor , Thresser	5	5,6
Average Yield				
Grain	Wheat	30-35 qu/ha	1,2,3,4,5,7	1,2,3,4,5
	Gram	10-12 qu/ha	-	-
Storage Pest Control		Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:12 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop –wheat + Lentil

AES – I, II & III Ratio – 4:2

Gap – Full Situation : Mid Land

Existing Farming Situation Mono Cropping of Paddy

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Wheat	PBW-443	1,2,3,4	1,2,4,5
	Lentil	PL-639, Aruan, K-75	1,2,3,4	1,2,4,5
Method		Line Sowing	-	1,2,5,6
Seed Rate	Wheat	125 Kg/ha	-	1,2,4,5
	Lentil	20 Kg/ha	-	-
Time	Wheat	15^{th} Nov-30^{th} Nov.	1,2,4	1,2,3
	Lentil			
Organic Manure & Fertilizer				
Organic Manure		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)				
Wheat		100:50:25		
Basal (N+P+K) KG/ H		50:25:25	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		50 N	1,2,3,4	1,2,3,4,5
Lentil		20:40:20		
Basal (N+P+K) KG/ H		20:40:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		-	-	-
Method of fertilizer use				
Basal (N+P+K)		50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	-	1
Disease & Pest Management				
Pest Management				
Soil Treatment(Termite)		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management				
Seed Treatment	Wheat	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
	Lentil	Carbendazim 2gm/kg seed, Rhizobium treatment	1,2,3,4	1,2,4,5
Alternaria Blight (Wheat)		DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust (Wheat)		DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Losse Smut (Wheat)		Coper Oxichloride 0.3% Soulation & Seed Treatment	1,2,3,4	1,2,4,5
Pod Borer (Lentil)		0.2% Solution of Monocrotophos	1,2,3,4	1,2,4,5,6
Weed Management		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management				
No. of Irrigation		1^{st} Irrigation between CRI and tillering stage, 2^{nd} At Panicle Stage, 3^{rd} At Milking Stage if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method		Flooding	-	-
Soil Management				
Acidity		-	-	-
Water Logging		Extra water removed	1,7	7
Harvesting & Threshing				
Method of Harvesting		Sickle , Harvester	5	5,6
Any Other/Threshing		Tractor , Thresser	5	5,6
Average Yield				
Grain	Wheat	30-35 qu/ha	1,2,3,4,5,7	1,2,3,4,5
	Lentil	8-10 qu/ha	-	-
Storage Pest Control		Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:13 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop –wheat + Toria

AES – I, II & III Ratio – 8:2

Gap – Full Situation : Mid Land

Existing Farming Situation Mono Cropping of Paddy

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Wheat	PBW-443	1,2,3,4	1,2,4,5
	Toria	Sihvani, Varuna	1,2,3,4	1,2,4,5
Method		Line Sowing	1,2,3,4	1,2,5,6
Seed Rate	Wheat	125 Kg/ha	-	1,2,4,5
	Toria	5 Kg/ha	-	1,2,4,5
Time	Wheat	15^{th} Nov-30^{th} Nov.	1,2,4	1,2,3
	Toria			
Organic Manure & Fertilizer				
Organic Manure		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)				
Wheat		100:50:25		
Basal (N+P+K) KG/ H		50:25:25	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		50 N	1,2,3,4	1,2,3,4,5
Toria		25:25:20		
Basal (N+P+K) KG/ H		15:20:10	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		10	1,2,3,4	1,2,3,4,5
Method of fertilizer use				
Basal (N+P+K)		50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	-	1
Disease & Pest Management				
Pest Management				
Soil Treatment(Termite)		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management				
Seed Treatment	Wheat	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
	Toria	Carbendazim 2gm/kg seed, Rhizobium treatment	1,2,3,4	1,2,4,5
Alternaria Blight (Wheat)		DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust (Wheat)		DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Losse Smut (Wheat)		Coper Oxichloride 0.3% Soulation & Seed Treatment	1,2,3,4	1,2,4,5
White Rust (Toria)		0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
Aphide e.t.c (Toria)		0.2% Solution of chlorpyriphos twice	1,2,3,4	1,2,4,5,6
Weed Management		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management				
No. of Irrigation		1^{st} Irrigation between CRI and tillering stage, 2^{nd} At Panicle Stage, 3^{rd} At Milking Stage if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method		Flooding	-	-
Soil Management				
Acidity		-	-	-
Water Logging		Extra water removed	1,7	7
Harvesting & Threshing				
Method of Harvesting		Sickle , Harvester	5	5,6
Any Other/Threshing		Tractor , Thresser	5	5,6
Average Yield				
Grain	Wheat	30-35 qu/ha	1,2,3,4,5,7	1,2,3,4,5
	Toria	6 - 8 qu/ha	-	-
Storage Pest Control		Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:14 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Mustard + Lentil

AES – I, II & III Ratio – 1:5

Gap – Full Situation : Mid Land

Existing Farming Situation Mono Cropping of Paddy

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Mustard	Sihvani, Varuna Kranti	1,2,3,4	1,2,4,5
	Lentil	PL-639, Aruan, K-75	1,2,3,4	1,2,4,5
Method		Line Sowing	1,2,3,4	1,2,5,6
Seed Rate	Mustard	5 Kg/ha	-	1,2,4,5
	Lentil	20 Kg/ha	-	1,2,4,5
Time	Mustard	15^{th} Nov-30^{th} Nov.	1,2,4	1,2,3
	Lentil			
Organic Manure & Fertilizer				
Organic Manure		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)				
Mustrd		25:25:20		
Basal (N+P+K) KG/ H		15:25:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		10N	1,2,3,4	1,2,3,4,5
Lentil		20:40:20		
Basal (N+P+K) KG/ H		20:40:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		-	1,2,3,4	1,2,3,4,5
Method of fertilizer use				
Basal (N+P+K)		50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	-	1
Disease & Pest Management				
Pest Management				
Soil Treatment(Termite)		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management				
Seed Treatment	Mustard	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
	Lentil	Carbendazim 2gm/kg seed, Rhizobium treatment	1,2,3,4	1,2,4,5
Pod Borer (Lentil)		0.2% Solution of Monocrotophos	1,2,3,4	1,2,4,5,6
White Rust (Mustard)		0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
Aphide e.t.c (Mustard)		0.2% Solution of chlorpyriphos twice	1,2,3,4	1,2,4,5,6
Weed Management		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management				
No. of Irrigation		2 - 3 Irrigation if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method		Flooding	-	-
Soil Management				
Acidity		-	-	-
Water Logging		Extra water removed	1,7	7
Harvesting & Threshing				
Method of Harvesting		Sickle , Harvester	5	5,6
Any Other/Threshing		Tractor , Thresser	5	5,6
Average Yield				
Grain	Mustard	12 15 qu/ha	1,2,3,4,5,7	1,2,3,4,5
	Lentil	6 - 8 qu/ha	-	-
Storage Pest Control		Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:15 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Mustard + Gram

AES – I, II & III Ratio – 1:5

Gap – Full Situation : Mid Land

Existing Farming Situation Mono Cropping of Paddy

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Mustard	Sihvani, Varuna Kranti	1,2,3,4	1,2,4,5
	Gram	Radhe, Pant-114, H-208	1,2,3,4	1,2,4,5
Method		Line Sowing	1,2,3,4	1,2,5,6
Seed Rate	Mustard	5 Kg/ha	-	1,2,4,5
	Gram	20 Kg/ha	-	1,2,4,5
Time	Mustard	15th Nov-30th Nov.	1,2,4	1,2,3
	Gram			
Organic Manure & Fertilizer				
Organic Manure		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)				
Mustrd		25:25:20		
Basal (N+P+K) KG/ H		15:25:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		10N	1,2,3,4	1,2,3,4,5
Gram		20:40:20		
Basal (N+P+K) KG/ H		20:40:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		-	1,2,3,4	1,2,3,4,5
Method of fertilizer use				
Basal (N+P+K)		50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	-	1
Disease & Pest Management				
Pest Management				
Soil Treatment(Termite)		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management				
Seed Treatment	Mustard	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
	Gram	Carbendazim 2gm/kg seed, Rhizobium treatment	1,2,3,4	1,2,4,5
Pod Borer (Gram)		0.2% Solution of Monocrotophos	1,2,3,4	1,2,4,5,6
White Rust (Mustard)		0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
Aphide e.t.c (Mustard)		0.2% Solution of chlorpyriphos twice	1,2,3,4	1,2,4,5,6
Weed Management		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management				
No. of Irrigation		2 - 3 Irrigation if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method		Flooding	-	-
Soil Management				
Acidity		-	-	-
Water Logging		Extra water removed	1,7	7
Harvesting & Threshing				
Method of Harvesting		Sickle , Harvester	5	5,6
Any Other/Threshing		Tractor , Thresser	5	5,6
Average Yield				
Grain	Mustard	12 15 qu/ha	1,2,3,4,5,7	1,2,3,4,5
	Gram	8 - 10 qu/ha	-	-
Storage Pest Control		Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:16 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture : Crop Diversification Crop – Mustard + Linseed

AES – I, II & III Ratio – 1:5

Gap – Full Situation : Up/Mid Land

Existing Farming Situation Mono Cropping of Paddy

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing				
Variety	Mustard	Sihvani, Varuna Kranti	1,2,3,4	1,2,4,5
	Linseed	T-397, BAU-334, Shweta	1,2,3,4	1,2,4,5
Method		Line Sowing	1,2,3,4	1,2,5,6
Seed Rate	Mustard	5 Kg/ha	-	1,2,4,5
	Linseed	20 Kg/ha	-	1,2,4,5
Time	Mustard	15^{th} Nov-30^{th} Nov.	1,2,4	1,2,3
	Linseed			
Organic Manure & Fertilizer				
Organic Manure		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)				
Mustard		25:25:20		
Basal (N+P+K) KG/ H		15:25:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		10N	1,2,3,4	1,2,3,4,5
Linseed		30:20:20		
Basal (N+P+K) KG/ H		30:20:20	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		-	1,2,3,4	1,2,3,4,5
Method of fertilizer use				
Basal (N+P+K)		50 % + 100% P_2o_5 +100% k_2O Broad Casting	-	1
Top Dressing (N)		50% N Broad Casting	-	1
Disease & Pest Management				
Pest Management				
Soil Treatment(Termite)		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Management				
Seed Treatment	Mustard	Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
	Linseed	Carbendazim 2gm/kg seed, Rhizobium treatment	1,2,3,4	1,2,4,5
Rust (Linseed)		0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
White Rust (Mustard)		0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
Aphide e.t.c (Mustard)		0.2% Solution of chlorpyriphos twice	1,2,3,4	1,2,4,5,6
Weed Management		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Management				
No. of Irrigation		2 - 3 Irrigation if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method		Flooding	-	-
Soil Management				
Acidity		-	-	-
Water Logging		Extra water removed	1,7	7
Harvesting & Threshing				
Method of Harvesting		Sickle	5	5,6
Any Other/Threshing		-	-	-
Average Yield				
Grain	Mustard	12 15 qu/ha	1,2,3,4,5,7	1,2,3,4,5
	Linseed	6 - 8 qu/ha	-	-
Storage Pest Control		Aluminium phosphide 1 tablet/matric ton	1,2,3,4,5,7	1

Reasons for gap-1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices.

Prop. Strategies :- 1. Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund.

Table-:10:17 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Horticulture Situation : Up/Mid Land

Market led extension Crop - Rainy season Potato

AES- I, II & III

ITEMS		Existing practices	Recommended	Gap in adop tion	Specific Reasons for gap	Farmer Strategy
Sowing						
Variety	Rainy Season	Altamus On 2236,	Kufari jyoti, Kufari Chandrmukhi, K. Ashok.	F	1,2,4,5	1,2,5,8
Method		Furrow	Furrow	N	-	-
Seed Rate		20 Qut.	25Qut.	P	1,4	1,2,5
Time	Rainy Season	15th Aug. to 31st Aug.	**20th Aug. to 10th Sep.**			
Organic Manure & Fertilizer						
Organic Manure		100Qut./ha.	200Q	P	1,2,4,6	1,2,3
Fertilizer (Nutrient in Kg/ha.)						
Rainy Season						
Basal (N+P+K) KG/ H		40:40:20	60:60:40	P	1,2,3,4	1,2,3,4,5,8
Top Dressing (N) KG/H		40	60	P	1,2,3,4	1,2,3,4,5,8
Total KG/ H		**80:40:20**	**120:60:40**			
Method of fertilizer use						
Basal (N+P+K)		In Furrow	In Furrow	N	-	-
Top Dressing (N)		Earthing up	Earthing up	N	-	-
Disease & Pest Management						
Pest Management						
Tuber Moth		-	Chlorepyriphos 4% Duest @ 25kg/ha.	F	1,2,3,4,5	1,2,3,4,5
Soil Sanitation		-	10 kg Bleaching Powder with 300kg of Karanj Cake	F	1,2,3,4,5	1,2,3,4,5
Disease Management						
Seed Treatment		-	Carbehdazim 0.2% Solution	F	1,2,3,4,5	1,2,3,4,5
Early & Lef Blight		Mencozeb	Mencozeb/Carbehdazim /Ridomil 0.2% Solution	F	1,2,4,5	1,2,4,5
Wilt		-	Mencozeb/Carbehdazim /Ridomil 0.2% Soluti+Streptomycin	F	1,2,4,5	1,2,4,5
Damping off		-	Copper Oxichloride 0.3% Solution at root jone	F	1,2,4,5	1,2,4,5
Weed Management						
Mechanical		Spade/Hoe	Spade/Hoe	N	-	-
Chemical		-	Atrazine 50%/ha	F	1,2,4,5	1,2,4,5
Water Management						
No. of Irrigation		6-8	6-8	N	-	-
Method		Furrow	Furrow	N	-	-
Soil Management						
Acidity		100 kg/ha	300kg/ha	P	1,2,4	1,2,4,5
Water Logging		-	-	-	-	-
Harvesting & Threshing						
Method of Harvesting		Hand Weeding	Hand Weeding	N	-	-
Any Other/Threshing		-	-	-	-	-
Average Yield*						-
Grain	Rainy Season	50-60 Qut/ha	100-100Qut/ha	P	1,2,4,5,6	1,2,4,5
Storage Pest Control		-	?	F	2,4,5	-

Reasons for gap -1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies:- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund. 8. Irrigation facility.

Table-:10:18 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Horticulture Situation : Up/Mid Land

Market led extension Crop - Rainy season Tomato

AES- I, II & III

ITEMS		Existing practices	Recommended	Gap in adop tion	Specific Reasons for gap	Farmer Strategy
Sowing						
Variety	Rainy Season	Pusa Rubi, Pusa Early Dwarf, Panjab Keshari, Panjab Chohara	Swarn Lalima, Swarn Navien, Arka Abhay, Swarn baibhav, Kishi hybrid-1 & 2	N	-	-
Method		Lime Transplanting	Lime Transplanting	N	-	-
Seed Rate	Rainy Season	600-700 gm/ha (Hybrid-300gm)	500 gm/ha ha (Hybrid-300gm)	P	1,2,3,4,5	1,3,4,5
Time	Rainy Season	Feb - March	Feb - March	N	-	-
Organic Manure & Fertilizer						
Organic Manure		200qt/ha	200qt/ha	N	-	-
Fertilizer (Nutrient in Kg/ha.)						
HYV (OP)						
Basal (N+P+K) KG/ H		40:40:20	80:60:60	P	1,2,4,5,6	1,2,4,5
Top Dressing (N) KG/H		40:00:00	80:00:00	P	1,2,4,5,6	1,2,4,5
Total KG/ H		**80:40:20**	**120:60:60**	**-**	**-**	**-**
Hybrid						
Basal (N+P+K) KG/ H		50:60:40	100:100:75	P	1,2,4,5,6	1,2,4,5
Top Dressing (N) KG/H		50:00:00	100:00:00	P	1,2,4,5,6	1,2,4,5
Total KG/ H		**100:60:40**	**200:100:75**	**-**	**-**	**-**
Method of fertilizer use						
Basal (N+P+K)		Near Root Zone	Near Root Zone	N	-	-
Top Dressing (N)		Near Root Zone	Near Root Zone	N	-	-
Disease & Pest Management						
Pest Management						
Dimoend back moth		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Fruit Borer		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Leaf Minor		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Aphides		Mono crotophos, Metacistox 1.5 Lit/water	Mono crotophos, Metacistox 1.5 Lit/water	N	-	-
Termite		Lindel	Chlorepyriphos Dust @ 10Kg/ha	P	1,3,4,5	1,2,3,5,6
Disease Management						
Damping off		Mencozeb 75% (0.2% Solution)	Bule copper/copper Oxichloride 0.3% Sol.	P	1,3.4,5	1,2,3,5,6
Early & Late Blight		Mencozeb 75% (0.2% Solution)	Carbendazim 2.0gm/Mencozeb 2.0gm/Lit. of water for Spraying	P	1,3.4,5	1,2,3,5,6
Bactirial Blight		-	Use of Resistant Varieties	F	1,3.4,5	1,2,3,5,6
Weed Management		Hand Weeding, Earthing up	Hand Weeding, Earthing up	N	-	-
Water Management						
No. of Irrigation		8 To 10 Times	6 To 8 Times	P	2,5,7	5,6,8
Method		Flooded	Flooded	N	-	-
Soil Management						
Acidity		3 – 4 qut. Lime	3 – 4 qut. Lime	N	-	-
Water Logging		Removal of Water	Removal of Water	N	-	-
Harvesting & Threshing						
Method of Harvesting		Hand Picking	Hand Picking	N	-	-
Average Yield	HYV (OP)	100-125 qu/ha	200-225 qu/ha	P	4,5,7	1,3,5,6
	Hybrid	200-225 qu/ha	400-425 qu/ha	P	4,5,7	1,3,5,6

Reasons for gap -1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies:- 1.Training and awareness campaign. 2. Demonstration. 3. Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund. 8. Irrigation facility.

Table-:10:19 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Horticulture Situation : Up/Mid Land

Market led extension Crop - Rainy season Cauliflower

AES- I, II & III

ITEMS		Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing						
Variety	Summer/rainy Season	Early Kuvari, HazipuExtra Early, Patna Early	Early Kuvari, HazipuExtra Early	N	-	-
Method		Lime Transplanting	Lime Transplanting	N	-	-
Seed Rate	Summer/rainy Season	700-800 gm/ha (Hybrid-150gm)	500 gm/ha ha (Hybrid-150gm)	P	1,2,3,4,5	1,3,4,5
Time	Summer/rainy Season	Feb - March	Feb - March	N	-	-
Organic Manure & Fertilizer						
Organic Manure		200qt/ha	200qt/ha	N	-	-
Fertilizer (Nutrient in Kg/ha.)						
Summer/Rainy Season						
Basal (N+P+K) KG/ H		50:60:40	80:75:50	P	1,2,4,5,6	1,2,4,5
Top Dressing (N) KG/H		50:00:00	80:00:00	P	1,2,4,5,6	1,2,4,5
Total KG/ H		**100:60:40**	**160:75:50**	-	-	-
Method of fertilizer use						
Basal (N+P+K)		Near Root Zone	Near Root Zone	N	-	-
Top Dressing (N)		Near Root Zone	Near Root Zone	N	-	-
Disease & Pest Management						
Pest Management						
Dimoend back moth		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Borer		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Semi Looper		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Aphides		Mono crotophos, Metacistox 1.5 Lit/water	Mono crotophos, Metacistox 1.5 Lit/water	N	-	-
Termite		Lindel	Chlorepyriphos Dust @ 10Kg/ha	P	1,3,4,5	1,2,3,5,6
Disease Management						
Damping off		-	Bule copper/copper Oxichloride 0.3% Sol.	F	1,3.4,5	1,2,3,5,6
Black Rott		-	Boric Acid 5.0 gm/20Lit Water 10 D.A.T. 3 To 4 Times.	F	1,3.4,5	1,2,3,5,6
Downy mildew		-	copper Oxichloride	F	1,3.4,5	1,2,3,5,6
Weed Management		Hand Weeding	Hand Weeding	N	-	-
Water Management						
No. of Irrigation		8 To 10 Times	6 To 8 Times	P	2,5,7	5,6,8
Method		Forrow	Forrow	N	-	-
Soil Management						
Acidity		-	-	-	-	-
Water Logging		Removal of Water	Removal of Water	N	-	-
Harvesting & Threshing						
Method of Harvesting		Cutting by Sickel	Cutting by Sickel	N	-	-
Average Yield		175-200 qu/ha	225-250 qu/ha	P	4,5,7	1,3,5,6

Reasons for gap -1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies:- 1.Training and awareness campaign. 2. Demonstration. 3. Exposure r visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund. 8. Irrigation facility.

Table-:10:20 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Horticulture Situation : Up/Mid Land

Market led extension Crop - Summer season Capsicum

AES- I, II & III

ITEMS		Existing practices	Recommended	Gap in adop tion	Specific Reasons for gap	Farmer Strategy
Sowing						
Variety	Summer Season	Arka Gaurav, Arka mohani,Arka Basant,.	Arka Gaurav, Arka mohani, Arka Basant.	N	-	-
Method		Lime Transplanting	Lime Transplanting	N	-	-
Seed Rate	Summer Season	700-750 gm/ha	600 gm/ha)	P	1,2,3,4,5	1,3,4,5
Time	Summer Season	July- August	July- August	N	-	-
Organic Manure & Fertilizer						
Organic Manure		200qt/ha	200qt/ha	N	-	-
Fertilizer (Nutrient in Kg/ha.)						
Basal (N+P+K) KG/ H		25:30:30	40:60:50	P	1,2,4,5,6	1,2,4,5
Top Dressing (N) KG/H		25:00:00	35:00:00	P	1,2,4,5,6	1,2,4,5
Total KG/ H		**50:30:30**	**75:60:50**	**-**	**-**	**-**
Method of fertilizer use						
Basal (N+P+K)		Near Root Zone	Near Root Zone	N	-	-
Top Dressing (N)		Near Root Zone	Near Root Zone	N	-	-
Disease & Pest Management						
Pest Management						
Leaf Hooper		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Aphides		Mono crotophos, Metacistox 1.5 Lit/water	Mono crotophos, Metacistox 1.5 Lit/water	N	-	-
Termite		Lindel	Chlorepyriphos Dust @ 10Kg/ha	P	1,3,4,5	1,2,3,5,6
Disease Management						
Damping off		Mencozeb 75% (0.2% Solution)	Bule copper/copper Oxichloride 0.3% Sol.	P	1,3.4,5	1,2,3,5,6
Anthrecnose		Mencozeb 75% (0.2% Solution)	Carbendazim 2.0gm/Mencozeb 2.0 gm/Lit. of water for Spraying	P	1,3.4,5	1,2,3,5,6
Leaf Sport		-	Seed Treatment with Carbendazim & Spraying of 0.2% Solution of Carbendazim 3 - 4 Time			
Bactirial Blight		-	Use of Resistant Varieties	F	1,3.4,5	1,2,3,5,6
Weed Management		Hand Weeding, Hoeing	Hand Weeding, Hoeing	N	-	-
Water Management						
No. of Irrigation		8 To 10 Times	6 To 8 Times	P	2,5,7	5,6,8
Method		Flooded	Flooded	N	-	-
Soil Management						
Acidity		-	-	-	-	-
Water Logging		Removal of Water	Removal of Water	N	-	-
Harvesting & Threshing						
Method of Harvesting		Hand Picking	Hand Picking	N	-	-
Average Yield		50-55 qu/ha	90-100 qu/ha	P	4,5,7	1,3,5,6

Reasons for gap -1. Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies:- 1.Training and awareness campaign. 2. Demonstration. 3. Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund. 8. Irrigation facility.

Table-:10:20 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Horticulture Situation : Up/Mid Land

Market led extension Crop – Rainy season Chili

AES- I, II & III

ITEMS		EFS – I				
		Existing practices	Recommended	Gap in adoption	Specific Reasons for gap	Farmer Strategy
Sowing						
Variety	Rainy Season	Pusa Sadabhar, Pusa Jwala.	Pusa Sadabhar, Pusa Jwala, Kalyanpur red, Bhagya luxmi, K-2	P	1,2,3,4,5	1,2,3,4,5
Method		Lime Transplanting	Lime Transplanting	N	-	-
Seed Rate	Rainy Season	700-750 gm/ha	600 gm/ha)	P	1,2,3,4,5	1,3,4,5
Time	Rainy Season	Feb - March	Feb - March	N	-	-
Organic Manure & Fertilizer						
Organic Manure		200qt/ha	200qt/ha	N	-	-
Fertilizer (Nutrient in Kg/ha.)						
Basal (N+P+K) KG/ H		25:30:30	40:60:50	P	1,2,4,5,6	1,2,4,5
Top Dressing (N) KG/H		25:00:00	35:00:00	P	1,2,4,5,6	1,2,4,5
Total KG/ H		**50:30:30**	**75:60:50**	**-**	**-**	**-**
Method of fertilizer use						
Basal (N+P+K)		Near Root Zone	Near Root Zone	N	-	-
Top Dressing (N)		Near Root Zone	Near Root Zone	N	-	-
Disease & Pest Management						
Pest Management						
Leaf Hooper		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	P	1,3,4,5	1,2,3,5,6
Aphides		Mono crotophos, Metacistox 1.5 Lit/water	Mono crotophos, Metacistox 1.5 Lit/water	N	-	-
Termite		Lindel	Chlorepyriphos Dust @ 10Kg/ha	P	1,3,4,5	1,2,3,5,6
Disease Management						
Damping off		Mencozeb 75% (0.2% Solution)	Bule copper/copper Oxichloride 0.3% Sol.	P	1,3.4,5	1,2,3,5,6
Anthrecnose		Mencozeb 75% (0.2% Solution)	Carbendazim 2.0gm/Mencozeb 2.0 gm/Lit. of water for Spraying	P	1,3.4,5	1,2,3,5,6
Leaf Sport		-	Seed Treatment with Carbendazim & Spraying of 0.2% Solution of Carbendazim 3 - 4 Time			
Bactirial Blight		-	Use of Resistant Varieties	F	1,3.4,5	1,2,3,5,6
Weed Management		Hand Weeding, Hoeing	Hand Weeding, Hoeing	N	-	-
Water Management						
No. of Irrigation		8 To 10 Times	6 To 8 Times	P	2,5,7	5,6,8
Method		Flooded	Flooded	N	-	-
Soil Management						
Acidity		-	-	-	-	-
Water Logging		Removal of Water	Removal of Water	N	-	-
Harvesting & Threshing						
Method of Harvesting		Hand Picking	Hand Picking	N	-	-
Average Yield		50-55 qu/ha	90-100 qu/ha	P	4,5,7	1,3,5,6

Reasons for gap -1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies:- 1.Training and awareness campaign. 2. Demonstration. 3. Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund. 8. Irrigation facility.

Table-:10:20 Gap in adoption and Farmer Strategies for improving the production and productivity of the crop.

Agriculture Situation : Up/Mid Land

Market led extension Crop – Summer season Maize

AES- I, II & III For Green Cob.

ITEMS		Existing practices	Recommended	Gap in adop tion	Specific Reasons for gap	Farmer Strategy
Sowing						
Variety	Summer Season	Ganga Safed -2, Ganga-5, Swan-1,	Birasa-1, Birasa-2, Kanchan, Priya	P	1,2,3,4	1,2,4,5
Method		Line Sowing	Line Sowing	N	-	1,2,5,6
Seed Rate	Summer Season	20 Kg/ha	18 Kg/ha	P	1,3,4,6,7	1,2,3,4,6
Time	Summer Season	Feb - Mar.	Feb – Mar.	N	8	8
Organic Manure & Fertilizer						
Organic Manure		50 Qt.	100 Qt	P	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nutrient in Kg/ha.)						
Early & Normal Sown						
Basal (N+P+K) KG/ H		30:40:10	40:60:40	P	1,2,3,4	1,2,3,4,5
Top Dressing (N) KG/H		30	30+30N	P	1,2,3,4	1,2,3,4,5
Total KG/ H		**60:40:10**	**100:60:40**	**-**	**-**	**-**
Method of fertilizer use						
Basal (N+P+K)		50 % + 100% P_2o_5 +100% k_2O Broad Casting	50 % + 100% P_2o_5 +100% k_2O Broad Casting	N	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	25 % + 25% N Broad Casting	N	-	1
Disease & Pest Management						
Pest Management						
Soil Treatment(Termite)		Lindel dust @25%	Indoselafan 4% dust @25kg	P	1,2,3,4	1,2,4,5
Stem/Shoot Borer						
Disease Management						
Seed Treatment		-	-	-	-	-
Helmenthosparium Lef Blight		-	DM-45/Cafbendazim 0.2 % Soulation	F	1,2,3,4	1,2,4,5
Sheath Blight		-	DM-45/Cafbendazim 0.2 % Soulation	F	1,2,3,4	1,2,4,5
Weed Management						
Mechanical		Hand weeding Once	Hand weeding twice and earthing up	P	1,2,3,4	1,2,4,5,6
Chemical		-	Simazine and Atrazine 1.0-1.25kg/ha	F	1,2,4,5	1,2,3,5
Water Management						
No. of Irrigation		Rainfed	Rainfed Life saving irrigation may be needed	P	8	8
Method		-	-	-	-	-
Soil Management						
Acidity		-	3Qt/he. Furough	F	1,2,3,4,5,6	1,2,3,4,5,6
Water Logging		Open bunding	Extra water to be removed through Open bunding	N	-	-
Harvesting & Threshing						
Method of Harvesting		Hand plucking	Hand plucking	N	-	-
Any Other/Threshing		By hand	Maize Seller machine	F	4,5	5,6
Average Yield*						
Grain	Summer Season	65000 cobs/ha.	75000 cobs/ha.	P	1,2,3,4,5,7	1,2,3,4,5
Storage Pest Control		-	Alluminium phosphide 1 tablet/matric ton	P	1,2,3,4,5,7	1

Reasons for gap -1.Reluctance to new technology. 2. Lack of capital. 3. Poor excess to improved technologies. 4. Lack of awareness. 5. Lack of resources.6. Lack of trained resources person.7. Improper management practices. 8. Erratic rainfull.

Prop. Strategies :- 1.Training and awareness campaign. 2. Demonstration. 3 Exposure visit. 4. On farm trail/ORF. 5. Financial support. 6. Availability of improved implement.7. Open Bund. 8. Irrigation facility .