

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.
- 4 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 into	er 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 :-		

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

AES - I, II & III

Farming Situation: Rainfed Upland/Red laterite soil

Gap- Full

Crop – Pigeon Pea + Up land Rice. Crop Ratio – 1:3

Existing Farming Situation Mono Cropping in each crop

ITEMS		Recommended	Specific Specific	Farmer Strategy
			Reasons for gap	
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	20 th June to 30 th June	-	-
	Up land Rice	20 th June to 30 th 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 gut/ba	1246	100
	Up land Rice	100 qut/ha.	1,3,4,6	1,2,3
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 Ma	nagement			
O - 11 To to t	Pigeon Pea	Deep summer ploughing.	1,2,3,4,5	1,2,3,4,5
Soil Treatment	Up land Rice	Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
O I T t t	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Seed Treatment	Up land Rice	Carbendazim 2gm/ kg. seed	1,2,3,4,5	1,2,3,4,5
	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
Crop Treatment	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		-	-
	Up land Rice	Two hand weeding		
Irrigation and	Pigeon Pea	Irrigation if required.	-	-
Drainage	Up land Rice	Drainage by open bund.		
Average Yield	Pigeon Pea	15-20 gut.	-	-
	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.

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

Agriculture : Crop Diversification

AES – I, II & III

Situation: Rainfed Upland/Red laterite soil

Gan- Full

Crop – Pigeon Pea + Maize.

Crop Ratio – 1:1

Existing Farming Situation Mono Cropping in each crop

jap- Full ITEMS		Recommended	Specific	ping in each cro Farmer Strategy
		Recommended	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	20 th June to 30 th June	-	-
	Maize	20 th June to 30 th 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 =::#/b=	4040	400
· ·	Maize	200 qut/ha.	1,3,4,6	1,2,3
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	40040	4005
	Maize		1,2,3,4,6	1,2,3,5
Pest & Disease Ma	nagement			
0.17	Pigeon Pea	Deep summer ploughing.	1,2,3,4,5	1,2,3,4,5
Soil Treatment	Maize	Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Seed Treatment	Maize	Carbendazim 2gm/ kg. seed	1,2,3,4,5	1,2,3,4,5
	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
Crop Treatment	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	Drainage by open bund.		
Average Yield	Pigeon Pea	15-20 qut.	-	-
•	Maize	30-35 gut.	-	-

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.

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

Agriculture : Crop Diversification

AES - I, II & III

Situation: Rainfed Upland/Red laterite soil

Gap- Full

Crop – Pigeon Pea + Black gram Crop Ratio – 1:2

Existing Farming Situation Mono Cropping in each crop

oup run			wiono Cropping	m cach 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	400	4046	400
_	Black gram	100 qut/ha.	1,3,4,6	1,2,3
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 gut/ha in each eran in furrous	1,2,3,4,6	1,2,3,5
	Black gram	Lime 4 qut/ha in each crop in furrow	1,2,3,4,0	1,2,3,5
Pest & Disease Ma	nagement	•		
Cail Transfers and	Pigeon Pea	Deep summer ploughing.	1,2,3,4,5	1,2,3,4,5
Soil Treatment	Black gram	Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
0 17 1	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Seed Treatment	Black gram	Carbendazim 2gm/ kg. seed. Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
Crop Treatment	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	Two flatid weeding	-	-
rrigation and	Pigeon Pea	Irrigation if required.		
Drainage	Black gram	Drainage by open bund.		
Average Yield	Pigeon Pea	15-20 gut.	-	-
ŭ	Black gram	8-10 gut.	-	=

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.

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

AES - I, II & III

Situation: Rainfed Upland/Red laterite soil

Gap- Full

Crop – Pigeon Pea + Ragi Crop Ratio – 1:2 Existing Farming Situation

Mono Cropping in each crop

Jap- Full Mono Cropping in e			11 0	
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	20 th June to 30 th June	-	-
	Ragi	20 th June to 30 th June	-	-
Method of Sowing	Pigeon Pea	Lime Sowing	1,3,4,6	1,2,3
	Ragi	Lime Transplanting after 1 st weeding within 25days.	1,3,4,6	1,2,3
Organic Manure	Pigeon Pea	100 cut/h c	1246	100
•	Ragi	100 qut/ha.	1,3,4,6	1,2,3
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 gut/ha in each aren in furrous	40040	1005
	Ragi	Lime 4 qut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
Pest & Disease Ma	nagement			
0.11	Pigeon Pea	Deep summer ploughing.	1,2,3,4,5	1,2,3,4,5
Soil Treatment	Ragi	Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
0 17 1	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Seed Treatment	Ragi	Carbendazim 2gm/ kg. seed	1,2,3,4,5	1,2,3,4,5
	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
Crop Treatment	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		-	-
	Ragi	Two hand weeding	-	-
Irrigation and	Pigeon Pea	Irrigation if required.		
Drainage	Ragi	Drainage by open bund.		
Average Yield	Pigeon Pea	15-20 gut.	-	-
	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.

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

Agriculture: Crop Diversification

AES – I, II & III

Situation: Rainfed Upland/Red laterite soil

Gap- Full

Crop – Pigeon Pea + Ground Nut Crop Ratio – 1:2

Existing Farming Situation Mono Cropping in each crop

rap- run		Wiono Cropping in each ci		
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	20 th June to 30 th June	-	-
	Ground Nut	20 th June to 30 th 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 +/1	4040	400
•	Ground Nut	200 qut/ha.	1,3,4,6	1,2,3
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	10046	1005
	Ground Nut		1,2,3,4,6	1,2,3,5
Pest & Disease Ma	nagement	•		
O-11 Ttt	Pigeon Pea	Deep summer ploughing.	1,2,3,4,5	1,2,3,4,5
Soil Treatment	Ground Nut	Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
0 17 1 1	Pigeon Pea	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Seed Treatment	Ground Nut	Carbendazim 2gm/ kg. seed. Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
	Pigeon Pea	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5
Crop Treatment	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 15 th days.	-	-
	Ground Nut	Two hand weeding each 13 days.	-	-
Irrigation and	Pigeon Pea	Irrigation if required.		
Drainage	Ground Nut	Drainage by open bund.		
Average Yield	Pigeon Pea	15-20 qut.	-	-
•	Ground Nut	12-15 gut.	-	-

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.

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

Agriculture: Crop Diversification

AES - I, II & III

Situation: Rainfed Upland/Red laterite soil

Crop – Maize + Black gram. Crop Ratio – 1:2 **Existing Farming Situation**

Gap- Full	I	· · · · · · · · · · · · · · · · · · ·		pping 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	20 th June to 30 th June	-	-	
	Black gram	20 th June to 30 th 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 cut/ha	1246	100	
· ·	Black gram	200 qut/ha.	1,3,4,6	1,2,3	
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 gut/ha in each crop in furrow	10046	1005	
	Black gram	Lime 4 quima in each crop in lunow	1,2,3,4,6	1,2,3,5	
Pest & Disease Ma	nagement	·			
O-H Toto	Maize	Deep summer ploughing.	1,2,3,4,5	1,2,3,4,5	
Soil Treatment	Black gram	Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5	
0 17 1	Maize	Carbendazim 2gm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5	
Seed Treatment	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	
orop rrodunom	Black gram	0.2% Solution of Monocrotophos against pod borer	1,2,3,4,5	1,2,3,4,5	
Weed Management	Maize		10015	10015	
	Black gram	Two hand weeding earthing up	1,2,3,4,5	1,2,3,4,5	
Irrigation and Drainage	Maize	Irrigation if required. Drainage by open bund.	1,2,3,4,5	1,2,3,4,5	
	Black gram	5 , .			
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.

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

Agriculture: Crop Diversification

AES – I, II & III

Situation: Rainfed Upland/Red laterite soil

Gap- Full

Crop –Maize + Lobia. Crop Ratio – 1:2

Existing Farming Situation Mono Cropping in each crop

ITEMS		Recommended	Specific Reasons for gap	Farmer Strategy
Sowing			ј томести је ј	
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	20 th June to 30 th June	-	-
	Lobia	20 th June to 30 th 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	4040	400
•	Lobia	200 qut/ha.	1,3,4,6	1,2,3
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 gut/ha in each crop in furrow	1,2,3,4,6	1,2,3,5
	Lobia	Line 4 quona in each crop in furrow	1,2,3,4,0	1,2,3,3
Pest & Disease Ma	nagement			
Cail Transferant	Maize	Deep summer ploughing.	1,2,3,4,5	1,2,3,4,5
Soil Treatment	Lobia	Chlorpyrifos dust 25 kg/ha against termite	1,2,3,4,5	1,2,3,4,5
0 17 1	Maize	Carbendazim 2qm/ kg. seed, Rhizobium treatment	1,2,3,4,5	1,2,3,4,5
Seed Treatment	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
orop rroutmont	Lobia	0.2% Solution of Monocrotophos against pod borer		
Weed Management	Maize	· · ·	40045	40045
	Lobia	Two hand weeding earthing up	1,2,3,4,5	1,2,3,4,5
Irrigation and Drainage	Maize	Irrigation if required. Drainage by open bund.	1,2,3,4,5	1,2,3,4,5
	Lobia	Dialilage by open bullu.		
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.

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

Agriculture: Crop Diversification

AES – I, II & III

Crop –Rainfed wheat. Crop Sequence – Maize-Wheat Early Rice wheat

Farming Situation : Rainfed Midland/Sandy Loam Soil

Gap- Full

ITEMS	Recommended	Specific Reasons for gap	Farmer Strategy
Sowing			T
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} Oct10 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	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 ₂ 0 ₅₊ 100% k ₂ O 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	<u> </u>		
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			I.
Method of Harvesting	Sickle , Harvester	5	5,6
Any Other/Threshing	Tractor , Thresser	5	5,6
Average Yield	1		<u> </u>
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.

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

${\bf Agriculture: Crop\ Intensification\ through\ Zero\ Tillage\ Surface\ Seeded\ on\ wet\ land}$

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} Oct15 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 ₂ 0 ₅₊ 100% k ₂ O Broad Casting	-	1
Top Dressing (N)	25 % + 25% N Broad Casting	-	1
Disease & Pest Management	1 3		•
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	Treatment 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			L
Method of Harvesting	Sickle , Harvester	5	5,6
Any Other/Threshing	Tractor , Thresser	5	5,6
Average Yield	· · · · · · · · · · · · · · · · · · ·	l	<u>'</u>
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.

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

ITEMS	Recommended	Specific Reasons for gap	Farmer Strategy
Sowing		5 1	
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} Oct15 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			1
Basal (N+P+K)	50 % + 100% P ₂ o ₅₊ 100% k ₂ O 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	•	ı	1
Grain	40-45 qu/ha	1,2,3,4,5,7	1,2,3,4,5
-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.

Aluminium phosphide 1 tablet/matric ton

1,2,3,4,5,7

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.

Storage Pest Control

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

AES – I, II & III

Gap – Full Existing Farming Situation

Crop –wheat + Gram

Ratio – 4:2

Situation : Mid Land Mono Cropping of Paddy

ITEMS	arming Situation	Recommended	Specific Reasons for	o Cropping of Pado Farmer Strategy	
			gap	3,	
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	15 th Nov-30 th Nov.	1,2,4	1,2,3	
	Gram				
	anure & Fertilizer			T	
Organic Ma		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5	
	Nutrient in Kg/ha.)				
Wheat		100:50:25			
Basal (N+P+K)		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 Basal (N+P+K)	VC/ H	20:40:20 20:40:20	1004	10045	
Top Dressing (N) KG/H	ZU.4U.ZU	1,2,3,4	1,2,3,4,5	
	fertilizer use		<u> </u>		
Basal (N+P		50 % + 100% P ₂ O ₅₊ 100% k ₂ O			
Dasai (INTE	+K)	Broad Casting	-	1	
Top Dressir	ng (N)	Broad Casting 25 % + 25% N	_	1	
•		Broad Casting		'	
	Pest Management			1	
Pest Manag					
	ent(Termite)	Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5	
Disease Ma	anagement				
Seed Treati	ment 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 B	light (Wheat)	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5	
Rust (Whea	nt)	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	
Pod Borer (Gram)	0.2% Solution of Monocrotophos	1,2,3,4	1,2,4,5,6	
Weed Mana		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6	
Water Man					
No. of Irriga		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 Manag	ement	•			
Acidity	,	-	-	-	
Water Logging		Extra water removed	1,7	7	
	& Threshing		-,,	<u>'</u>	
		Sickle , Harvester	5	5,6	
Method of Harvesting Any Other/Threshing		•	5	5,6	
		Tractor , Thresser	0	5,0	
Average Yi					
Grain Wh		30-35 qu/ha	1,2,3,4,5,7	1,2,3,4,5	
Gla		10-12 qu/ha Aluminium phosphide 1 tablet/matric ton	- 1,2,3,4,5,7	- 1	
Storage Per	St Control	Aluminium phosphilde i tablermathic tom	1,2,3,4,3,7	'	

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.

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

 $Crop\,\hbox{--wheat}+Lentil$

AES – I, II & III

Ratio – 4:2

Gap – Full

Situation : Mid Land

	rming Situation		On a life Dans on fam	Cropping of Pad
ITEMS		Recommended	Specific Reasons for gap	Farmer Strateg
Sowing			yap gap	
	Wheat	PBW-443	1,2,3,4	1,2,4,5
Variety	Lentil	PL-639, Aruan, K-75	1,2,3,4	1,2,4,5
Method		Line Sowing	-	1,2,5,6
	Wheat	125 Kg/ha	_	1,2,4,5
Seed Rate	Lentil	20 Kg/ha	_	-
- ·	Wheat	15 th Nov-30 th Nov.	1,2,4	1,2,3
Time	Lentil		.,_, .	1,=,=
Organic Ma	nure & Fertilizer			
Organic Mar		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
	utrient in Kg/ha.)	·		
Wheat	3 ,	100:50:25		
Basal (N+P+K)	KG/ H	50:25:25	1,2,3,4	1,2,3,4,5
Top Dressing (N		50 N	1,2,3,4	1,2,3,4,5
Lentil		20:40:20		
Basal (N+P+K)		20:40:20	1,2,3,4	1,2,3,4,5
Top Dressing (N		-	-	-
	ertilizer use	50 % 100% D 100% L 0		T
Basal (N+P+K)		50 % + 100% P ₂ o _{5 +} 100% k ₂ O Broad Casting	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	<u>-</u>	1
	Pest Management			1
Pest Manag				
Soil Treatme		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Ma	nagement			
Seed Treatm	nent 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 Bl	ight (Wheat)	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust (Wheat	t)	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
Pod Borer (L	_entil)	0.2% Solution of Monocrotophos	1,2,3,4	1,2,4,5,6
Weed Mana		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Mana		_		
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 Manage	ement	-		
Acidity		-	-	-
Water Loggii	nα	Extra water removed	1,7	7
	& Threshing		,-	1
		Sickle , Harvester	5	5,6
Method of Harvesting		· ·		, , , , , , , , , , , , , , , , , , ,
Any Other/Ti	nresning	Tractor , Thresser	5	5,6
Average Yie				
Grain Whe		30-35 qu/ha	1,2,3,4,5,7	1,2,3,4,5
Len	til	8-10 qu/ha	-	-

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.

Aluminium phosphide 1 tablet/matric ton

1,2,3,4,5,7

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.

Storage Pest Control

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

AES – I, II & III

Gap – Full Existing Farming Situation

Crop –wheat + Toria

Ratio - 8:2

Situation : Mid Land 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
Occu rate	Toria	5 Kg/ha	-	1,2,4,5
Time	Wheat	15 th Nov-30 th Nov.	1,2,4	1,2,3
	Toria			
	nure & Fertilizer			1
Organic Ma		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
	lutrient 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 Basal (N+P+K)	KC/ II	25:25:20 15:20:10	1,2,3,4	12245
Top Dressing (15:20:10	1,2,3,4 1,2,3,4	1,2,3,4,5 1,2,3,4,5
	fertilizer use		1,∠,∪,⊤	1,2,0,7,0
Basal (N+P		50 % + 100% P ₂ O _{5 +} 100% k ₂ O		
Dasai (INTE	TK)	Broad Casting	-	1
Top Dressing (N)		25 % + 25% N Broad Casting	-	1
Disease & I	Pest Management			
Pest Manag	gement			
Soil Treatment(Termite)		Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Ma		1,,,		
Seed Treatr		Carbendazim 2gm/kg seed	1,2,3,4	1,2,4,5
occa maaii	Toria	Carbendazim 2gm/kg seed, Rhizobium treatment	1,2,3,4	1,2,4,5
Alternaria B	light (Wheat)	DM-45/Cafbendazim 0.2 % Soulation	1,2,3,4	1,2,4,5
Rust (Whea		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
White Rust	(Toria)	0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
Aphide e.t.c		0.2% Solution of chlorpyriphos twice	1,2,3,4	1,2,4,5,6
Weed Mana		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Mana			, ,-,	, , , , , , ,
No. of Irriga		1 st Irrigation between CRI and tillering stage,	1,2,3,4,5,7	1,2,3,4,5,6
No. of imgation		1 st Irrigation between CRI and tillering stage, 2 nd At Panicle Stage, 3 rd At Milking Stage if possible		
Method		Flooding	-	-
Soil Manag	ement			
Acidity		-	-	-
Water Logging		Extra water removed	1,7	7
	& Threshing			•
Method of Harvesting		Sickle , Harvester	5	5,6
Any Other/Threshing		Tractor , Thresser	5	5,6
Average Yi		- ,	<u> </u>	1
\//h	eat	30-35 qu/ha	1,2,3,4,5,7	1,2,3,4,5
(-rain	ia	6 - 8 qu/ha	-,=,=,1,0,1	-
1 10				i .

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.

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

AES – I, II & III

Gap – Full

Crop – Mustard + Lentil Ratio – 1:5

Situation: Mid Land Mono Cropping of Paddy

Existing Fa		Situation			Cropping of Paddy
ITEMS			Recommended	Specific Reasons for gap	Farmer Strategy
Sowing					
Variety	Musta	ırd	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	Musta	ırd	5 Kg/ha	-	1,2,4,5
	Lentil		20 Kg/ha	-	1,2,4,5
Time	Musta	ırd	15 th Nov-30 th Nov.	1,2,4	1,2,3
	Lentil				
Organic Ma		k Fertilizer			T
Organic Ma			100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (N	lutrien	t in Kg/ha.)			
Mustrd			25:25:20		
Basal (N+P+K)		<u> </u>	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	1001	40045
Basal (N+P+K) KG/ H Top Dressing (N) KG/H			20:40:20	1,2,3,4 1,2,3,4	1,2,3,4,5 1,2,3,4,5
Method of fertilizer use		or uso	-	1,2,3,4	1,2,3,4,3
		i use	50 % + 100% P ₂ o ₅₊ 100% k ₂ O	1	
Basal (N+P+K)			Broad Casting	-	1
Top Dressing (N)			25 % + 25% N Broad Casting	-	1
Disease & I	Pest M	anagement			
Pest Manag	gement	t			
Soil Treatme	ent(Ter	mite)	Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Ma			•	•	
Seed Treatr		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		d)	0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
Aphide e.t.c			0.2% Solution of chlorpyriphos twice	1,2,3,4	1,2,4,5,6
Weed Mana			Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Mana	agemen	nt	Trains mostaling times does on doing mostalin	.,=,0, .	.,_,.,,,,
		III.	2 - 3 Irrigation if possible	1,2,3,4,5,7	1,2,3,4,5,6
No. of Irriga	uon			1,2,3,4,3,7	1,2,3,4,3,0
Method			Flooding		-
Soil Manag	ement				ı
Acidity			-	-	-
Water Logging			Extra water removed	1,7	7
Harvesting					
Method of Harvesting		ng	Sickle , Harvester	5	5,6
Any Other/Threshing			Tractor , Thresser	5	5,6
Average Yi		J		1	<u>I</u>
N 4	stard		12 15 qu/ha	1,2,3,4,5,7	1,2,3,4,5
			•	, ,-,-,-,-	, ,-,-,-
	Lentil		6 - 8 gu/ha	-	-

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.

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

Crop – Mustard + Gram

AES – I, II & III

Ratio – 1:5

Gap – Full

Situation : Mid Land Mono Cropping of Paddy

Sowing	1,2,4,5 1,2,4,5 1,2,4,5 1,2,5,6 1,2,4,5 1,2,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Variety	1,2,4,5 1,2,5,6 1,2,4,5 1,2,4,5 1,2,3,4 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Mustard	1,2,4,5 1,2,5,6 1,2,4,5 1,2,4,5 1,2,3,4 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Method	1,2,5,6 1,2,4,5 1,2,4,5 1,2,3 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Seed Rate	1,2,4,5 1,2,4,5 1,2,3 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Gram	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Time	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Gram Organic Manure 100 Qt To be Used in the previous crop 1,2,3,4,5 Fertilizer (Nutrient in Kg/ha.) 25:25:20 Mustrd 25:25:20 1,2,3,4 Basal (N+P+K) KG/ H 15:25:20 1,2,3,4 Top Dressing (N) KG/H 10N 1,2,3,4 Gram 20:40:20 1,2,3,4 Basal (N+P+K) KG/ H 20:40:20 1,2,3,4 Top Dressing (N) KG/H - 1,2,3,4 Method of fertilizer use 8asal (N+P+K) 50 % + 100% P₂o₅ +100% k₂O - Broad Casting - - Disease & Pest Management - - Post Management - - Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management - - Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder <td>1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5</td>	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Gram 100 Qt To be Used in the previous crop 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 Top Dressing (N) KG/H 10N 1,2,3,4 Gram 20:40:20 1,2,3,4 Basal (N+P+K) KG/H 20:40:20 1,2,3,4 Top Dressing (N) KG/H - 1,2,3,4 Method of fertilizer use 8 8 Basal (N+P+K) 50 % + 100% P₂o₅,100% k₂O - Basal (N+P+K) 50 % + 25% N - Broad Casting - - Top Dressing (N) 25 % + 25% N - Broad Casting - - Disease & Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Organic Manure 100 Qt To be Used in the previous crop 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 Top Dressing (N) KG/H 10N 1,2,3,4 Gram 20:40:20 1,2,3,4 Basal (N+P+K) KG/ H 20:40:20 1,2,3,4 Top Dressing (N) KG/H - 1,2,3,4 Method of fertilizer use Basal (N+P+K) 50 % + 100% P₂₀₅₊100% k₂O - Broad Casting - - Top Dressing (N) 25 % + 25% N - Disease & Pest Management - - Post Management 50il Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management - - Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Seed Treatment Mustard Mustard	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Mustrd 25:25:20	1,2,3,4,5 1,2,3,4,5
Basal (N+P+K) KG/ H	1,2,3,4,5 1,2,3,4,5
Top Dressing (N) KG/H 10N 1,2,3,4 Gram 20:40:20 1,2,3,4 Basal (N+P+K) KG/H 20:40:20 1,2,3,4 Top Dressing (N) KG/H - 1,2,3,4 Method of fertilizer use Basal (N+P+K) 50 % + 100% P₂o₅ +100% k₂O Broad Casting - Top Dressing (N) 25 % + 25% N Broad Casting - Disease & Pest Management Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1,2,3,4,5 1,2,3,4,5
Gram 20:40:20 1,2,3,4 Basal (N+P+K) KG/ H 20:40:20 1,2,3,4 Top Dressing (N) KG/H - 1,2,3,4 Method of fertilizer use Basal (N+P+K) 50 % + 100% P₂o₅,100% k₂O Broad Casting - Top Dressing (N) 25 % + 25% N Broad Casting - Disease & Pest Management Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Seed Treatment Mustard Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1,2,3,4,5
Basal (N+P+K) KG/ H	
Top Dressing (N) KG/H 1,2,3,4 Method of fertilizer use Basal (N+P+K) 50 % + 100% P₂o₅₊100% k₂O Broad Casting - Top Dressing (N) 25 % + 25% N Broad Casting - Disease & Pest Management Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	
Method of fertilizer use Basal (N+P+K) 50 % + 100% P₂O₅₊100% k₂O Broad Casting - Top Dressing (N) 25 % + 25% N Broad Casting - Disease & Pest Management Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1,2,3,4,5
Basal (N+P+K) 50 % + 100% P₂o₅₊100% k₂O Broad Casting - Top Dressing (N) 25 % + 25% N Broad Casting - Disease & Pest Management Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	
Broad Casting Casting	
Top Dressing (N) 25 % + 25% N Broad Casting - Disease & Pest Management Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Seed Treatment Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1
Pest Management Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1
Soil Treatment(Termite) Chlorepyrphus Dust @ 10Kg/ha 1,2,3,4 Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	
Disease Management Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	
Seed Treatment Mustard Carbendazim 2gm/kg seed 1,2,3,4 Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1,2,4,5
Gram Carbendazim 2gm/kg seed, Rhizobium treatment 1,2,3,4 Pod Borer (Gram) 0.2% Solution of Monocrotophos 1,2,3,4 White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	
Pod Borer (Gram)0.2% Solution of Monocrotophos1,2,3,4White Rust (Mustard)0.2% Solution of Carbendazim1,2,3,4Aphide e.t.c (Mustard)0.2% Solution of chlorpyriphos twice1,2,3,4Weed ManagementHand weeding twice Use of Cono weeder1,2,3,4	1,2,4,5
White Rust (Mustard) O.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) O.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1,2,4,5
White Rust (Mustard) 0.2% Solution of Carbendazim 1,2,3,4 Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 1,2,3,4	1,2,4,5,6
Aphide e.t.c (Mustard) 0.2% Solution of chlorpyriphos twice 1,2,3,4 Weed Management Hand weeding twice Use of Cono weeder 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
	1,2,4,5,6
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
Any Other/Threshing Hactor, Thresher 5 Average Yield	J,U
Mustand 10.45 gu/ha 1.00.45 7	1,2,3,4,5
Grain Mustard 12 15 qu/ha 1,2,3,4,5,7 Gram 8 - 10 qu/ha -	1,4,0,4,0
	-
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.

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

Crop – Mustard + Linseed

AES – I, II & III Ratio – 1:5 Gap – Full

Situation: Up/Mid Land

Existing Fa	arming Situation			Cropping of Paddy
ITEMS	arming Studenton	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
Cood Hato	Linseed	20 Kg/ha	-	1,2,4,5
Time	Mustard	15 th Nov-30 th Nov.	1,2,4	1,2,3
	Linseed			
	nure & Fertilizer			
Organic Mai		100 Qt To be Used in the previous crop	1,2,3,4,5	1,2,3,4,5
Fertilizer (N	lutrient 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 (I	N) KG/H	10N	1,2,3,4	1,2,3,4,5
Linseed	KC/II	30:20:20	1001	10045
Basal (N+P+K) Top Dressing (I		30:20:20	1,2,3,4 1,2,3,4	1,2,3,4,5 1,2,3,4,5
	fertilizer use		1,2,5,7	1,2,0,4,0
Basal (N+P-		50 % + 100% P ₂ o _{5 +} 100% k ₂ O		
Dasai (INTE	TK)	Broad Casting	-	1
Top Dressing (N)		50% N Broad Casting	-	1
	Pest Management			
Pest Manag	gement			
Soil Treatme	ent(Termite)	Chlorepyrphus Dust @ 10Kg/ha	1,2,3,4	1,2,4,5
Disease Ma	nagement	·		
Seed Treatr		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 (Linse	ed)	0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
White Rust		0.2% Solution of Carbendazim	1,2,3,4	1,2,4,5,6
Aphide e.t.c		0.2% Solution of chlorpyriphos twice	1,2,3,4	1,2,4,5,6
Weed Mana		Hand weeding twice Use of Cono weeder	1,2,3,4	1,2,4,5,6
Water Mana			, , ,	
No. of Irrigat		2 - 3 Irrigation if possible	1,2,3,4,5,7	1,2,3,4,5,6
Method		Flooding	-	-
Soil Manag	omont	l		
	ement		_	_
Acidity		Extra water removed	1,7	7
Water Loggi		Extra water removed	1,7	1
	& Threshing	2		T = -
Method of Harvesting		Sickle	5	5,6
Any Other/T		-	=	-
Average Yi	eld			
	stard	12 15 qu/ha	1,2,3,4,5,7	1,2,3,4,5
Lin	seed	6 - 8 qu/ha	-	-
Storage Pes	st 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.

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

AES- I, II & III

AES- 1, 11 ITEMS	X III	Existing practices	Recommended	Gap in	Specific	Farmer
		Existing practices	recommended	adop	Reasons for	Strategy
				tion	gap	
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.	Р	1,4	1,2,5
Time	Rainy Season	15 th Aug. to 31 st Aug.	20 th Aug. to 10 th Sep.			
	Manure & Fertiliz			1		
Organic N		100Qut./ha.	200Q	Р	1,2,4,6	1,2,3
	(Nutrient in Kg/h	ıa.)				
Rainy Sea						
Basal (N+P+	,	40:40:20	60:60:40	Р	1,2,3,4	1,2,3,4,5,8
Total KG/		40	60	Р	1,2,3,4	1,2,3,4,5,8
		80:40:20	120:60:40			
	of fertilizer use		T		1	
Basal (N+		In Furrow	In Furrow	N	-	-
Top Dress		Earthing up	Earthing up	N	-	-
	& Pest Managem	<u>ent</u>		1	1	
	agement					
Tuber Mo		-	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
	Management					
Seed Treatment		-	Carbehdazim 0.2% Solution	F	1,2,3,4,5	1,2,3,4,5
Early & Le	ef 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		-	Copper Oxichloride 0.3% Solution at root jone	F	1,2,4,5	1,2,4,5
	nagement					
Mechanic		Spade/Hoe	Spade/Hoe	N	-	-
Chemical		-	Atrazine 50%/ha	F	1,2,4,5	1,2,4,5
	anagement					
No. of Irri	gation	6-8	6-8	N	-	-
Method		Furrow	Furrow	N	-	-
Soil Mana	agement					
Acidity		100 kg/ha	300kg/ha	Р	1,2,4	1,2,4,5
Water Logging		-	-	-	-	-
	ng & Threshing					
Method of Harvesting		Hand Weeding	Hand Weeding	N	-	-
Any Othe	r/Threshing	-	-	-	-	-
Average						-
Grain F	Rainy Season	50-60 Qut/ha	100-100Qut/ha	Р	1,2,4,5,6	1,2,4,5
Storage F	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.

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

AES- I, II & III

AES- I, II ITEMS		Existing practices	Recommended	Gap in adop tion	Specific Reasons for gap	Farmer Strategy
Sowing					<u> </u>	
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	ı	-
Seed Rate	Rainy Season	600-700 gm/ha (Hybrid- 300gm)	500 gm/ha ha (Hybrid-300gm)	Р	1,2,3,4,5	1,3,4,5
Time	Rainy Season	Feb - March	Feb - March	N	-	-
	Manure & Fertiliz					
Organic Mar		200qt/ha	200qt/ha	N	-	-
	(Nutrient in Kg/h	ıa.)				1
HYV (OP) Basal (N+P+	K) KO/II	40:40:20	90,60,60	P	12456	1045
Top Dressin		40:40:20 40:00:00	80:60:60 80:00:00	P	1,2,4,5,6 1,2,4,5,6	1,2,4,5 1,2,4,5
Total KG/		80:40:20	120:60:60	-	-	·, <u>-</u> , - , - ,
Hybrid						
Basal (N+P+	+K) KG/ H	50:60:40	100:100:75	Р	1,2,4,5,6	1,2,4,5
Top Dressin		50:00:00	100:00:00	Р	1,2,4,5,6	1,2,4,5
Total KG/I	n of fertilizer use	100:60:40	200:100:75	-	-	-
		Near Root Zone	Near Root Zone	N.		1
Basal (N+		Near Root Zone		N N	<u>-</u>	-
			Near Root Zone	IN	-	-
	& Pest Managem	ent	Г			1
	agement		Siper methrin 0.2 ml., Padan			
Fruit Bore	back moth	Endosulphan, Roger	1gm/Lit. Sol. Siper methrin 0.2 ml., Padan	Р	1,3,4,5	1,2,3,5,6
Leaf Mind		Endosulphan, Roger	1gm/Lit. Sol. Siper methrin 0.2 ml., Padan	Р	1,3,4,5	1,2,3,5,6
Aphides)i	Endosulphan, Roger Mono crotophos,	1gm/Lit. Sol. Mono crotophos, Metacistox	Р	1,3,4,5	1,2,3,5,6
Termite		Metacistox 1.5 Lit/water	1.5 Lit/water Chlorepyriphos Dust @	N -	-	-
		Lindel	10Kg/ha	Р	1,3,4,5	1,2,3,5,6
	Management					
Damping		Mencozeb 75% (0.2% Solution)	Bule copper/copper Oxichloride 0.3% Sol.	Р	1,3.4,5	1,2,3,5,6
Early & La		Mencozeb 75% (0.2% Solution)	Carbendazim 2.0gm/Mencozeb 2.0gm/Lit. of water for Spraying	Р	1,3.4,5	1,2,3,5,6
Bactirial E	Blight	-	Use of Resistant Varieties	F	1,3.4,5	1,2,3,5,6
Weed Ma	inagement	Hand Weeding, Earthing up	Hand Weeding, Earthing up	N	-	-
	anagement					
No. of Irrigation		8 To 10 Times	6 To 8 Times	Р	2,5,7	5,6,8
Method		Flooded	Flooded	N	-	-
Soil Mana	agement					
Acidity		3 – 4 qut. Lime	3 – 4 qut. Lime	N	ı	-
Water Logging		Removal of Water	Removal of Water	N	-	-
	ng & Threshing					
	f Harvesting	Hand Picking	Hand Picking	N	-	-
Average	HYV (OP)	100-125 qu/ha	200-225 qu/ha	Р	4,5,7	1,3,5,6
Yield	Hybrid	200-225 qu/ha	400-425 qu/ha	Р	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.

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 adop tion	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)	Р	1,2,3,4,5	1,3,4,5
Time	Summer/rainy Season	Feb - March	Feb - March	N	-	-
	nure & Fertilizer					
Organic Ma	nure	200qt/ha	200qt/ha	N	-	-
	lutrient in Kg/ha.)				
Summer/Rai	ny Season					
Basal (N+P+K)		50:60:40	80:75:50	Р	1,2,4,5,6	1,2,4,5
Top Dressing (I	N) KG/H	50:00:00	80:00:00	Р	1,2,4,5,6	1,2,4,5
Total KG/H	fa4:1!a.v.v.a.a	100:60:40	160:75:50	-	-	-
	fertilizer use		T 5 . 7		T I	
Basal (N+P-		Near Root Zone	Near Root Zone	N	-	-
Top Dressin		Near Root Zone	Near Root Zone	N	-	-
	Pest Managemen	t	·		T	
Pest Manag						
Dimoend back moth		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	Р	1,3,4,5	1,2,3,5,6
Borer		Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	Р	1,3,4,5	1,2,3,5,6
Semi Loope	er .	Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	Р	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	Р	1,3,4,5	1,2,3,5,6
Disease Ma						
Damping off	f	-	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 mild	ew	-	copper Oxichloride	F	1,3.4,5	1,2,3,5,6
Weed Mana	agement	Hand Weeding	Hand Weeding	N	-	_
Water Mana						
No. of Irriga		8 To 10 Times	6 To 8 Times	Р	2,5,7	5,6,8
Method		Forrow	Forrow	N	-	-
Soil Manag	ement			· .		
Acidity	CINCIL	_		_	- I	_
	ina	Removal of Water	Removal of Water	N	-	
Water Loggi		romoval of water	removal of vvaler	1 1	-	
	& Threshing	Cutting by Sigled	Cutting by Ciple!	NI NI		
Method of H		Cutting by Sickel	Cutting by Sickel	N	-	- 4050
Average Yield		175-200 qu/ha	225-250 qu/ha	Р	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.

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

AES- I, II ITEMS	<u> </u>	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)	Р	1,2,3,4,5	1,3,4,5
Time	Summer Season	July- August	July- August	N	-	-
Organic	Manure & Fert	ilizer				
Organic N	/lanure	200qt/ha	200qt/ha	N	-	-
	(Nutrient in K	g/ha.)				
Basal (N+P+		25:30:30	40:60:50	Р	1,2,4,5,6	1,2,4,5
Top Dressin		25:00:00	35:00:00	Р	1,2,4,5,6	1,2,4,5
Total KG/	н of fertilizer use	50:30:30	75:60:50	-		-
Basal (N+		Near Root Zone	Near Root Zone	N	T _ T	
		Near Root Zone Near Root Zone	Near Root Zone Near Root Zone	N N	-	<u> </u>
Top Dres			Near Root Zone	IN	-	-
	& Pest Manage	ement	T			
	agement		Cia an areathaire C. C. and Dadan			
Leaf Hoo	per	Endosulphan, Roger	Siper methrin 0.2 ml., Padan 1gm/Lit. Sol.	Р	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	Р	1,3,4,5	1,2,3,5,6
	Management					
Damping		Mencozeb 75% (0.2% Solution)	Bule copper/copper Oxichloride 0.3% Sol.	Р	1,3.4,5	1,2,3,5,6
Anthrecno		Mencozeb 75% (0.2% Solution)	Carbendazim 2.0gm/Mencozeb 2.0 gm/Lit. of water for Spraying	Р	1,3.4,5	1,2,3,5,6
Leaf Spor	t	-	Seed Treatment with Carbendazim & Spraying of 0.2% Solution of Carbendazim 3 - 4 Time			
Bactirial E	Blight	-	Use of Resistant Varieties	F	1,3.4,5	1,2,3,5,6
Weed Ma	nagement	Hand Weeding, Hoeing	Hand Weeding, Hoeing	N	-	-
	nagement					
No. of Irri		8 To 10 Times	6 To 8 Times	Р	2,5,7	5,6,8
Method		Flooded	Flooded	N	-	-
Soil Man	agement					
Acidity	<u></u>	-	-	-	-	-
Water Logging		Removal of Water	Removal of Water	N	-	-
Harvestir					1	
Threshin						
	f Harvesting	Hand Picking	Hand Picking	N	-	-
Average `		50-55 qu/ha	90-100 qu/ha	Р	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.

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

AES- I, II & III

ITEMS		EFS – I						
		Existing practices	Recommended	Gap in adop tion	Specific Reasons for gap	Farmer Strategy		
Sowing								
Variety	Rainy Season	Pusa Sadabhar, Pusa Jwala.	Pusa Sadabhar, Pusa Jwala, Kalyanpur red, Bhagya luxmi, K-2	Р	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)	Р	1,2,3,4,5	1,3,4,5		
Time	Rainy Season	Feb - March	Feb - March	N	-	-		
	nure & Fertilizer							
Organic Manur		200qt/ha	200qt/ha	N	-	-		
	lutrient in Kg/ha.)					I.		
Basal (N+P+K)		25:30:30	40:60:50	Р	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 t	fertilizer use							
Basal (N+P		Near Root Zone	Near Root Zone	N	_	-		
Top Dressin		Near Root Zone	Near Root Zone	N	-	_		
	Pest Management		Near Noot Zone	14	_			
			T			I		
Pest Manag			Siper methrin 0.2 ml.,	_				
•	ı	Endosulphan, Roger	Padan 1gm/Lit. Sol.	Р	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	Р	1,3,4,5	1,2,3,5,6		
Disease Ma	nagement							
Damping of		Mencozeb 75% (0.2% Solution)	Bule copper/copper Oxichloride 0.3% Sol.	Р	1,3.4,5	1,2,3,5,6		
Anthrecnose	е	Mencozeb 75% (0.2% Solution)	Carbendazim 2.0gm/Mencozeb 2.0 gm/Lit. of water for Spraying	Р	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 Blig	ght	-	Use of Resistant Varieties	F	1,3.4,5	1,2,3,5,6		
Weed Mana	agement	Hand Weeding, Hoeing	Hand Weeding, Hoeing	N	-	-		
Water Mana	agement							
No. of Irriga		8 To 10 Times	6 To 8 Times	Р	2,5,7	5,6,8		
Method		Flooded	Flooded	N	-	-		
Soil Manag	ement		11111					
Acidity	omont.	-	T =	_	-	I -		
	ina	Removal of Water	Removal of Water	N	-	_		
Water Logg		removal of water	Nemoval of water	IN	-	-		
	& Threshing							
Method of H		Hand Picking	Hand Picking	N	-	-		
Average Yield		50-55 qu/ha	90-100 qu/ha	Р	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.

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 AES- I, II & III

Situation : Up/Mid Land Crop – Summer season Maize 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	Р	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	Р	1,3,4,6,7	1,2,3,4,6
Time	Summer Season	Feb - Mar.	Feb – Mar.	N	8	8
Organic Man		er				
Organic Manu	ire	50 Qt.	100 Qt	Р	1,2,3,4,5	1,2,3,4,5
Fertilizer (Nu		a.)				
Early & Norma						
Basal (N+P+K) Ko		30:40:10	40:60:40	P	1,2,3,4	1,2,3,4,5
Top Dressing (N)	KG/H	30	30+30N	Р	1,2,3,4	1,2,3,4,5
Total KG/ H Method of fe	wtilinar was	60:40:10	100:60:40	-	- 1	-
Basal (N+P+k		50 % + 100% P ₂ o ₅₊ 100% k ₂ O Broad Casting	50 % + 100% P ₂ O ₅₊ 100% k ₂ O Broad Casting	N	-	1
Top Dressing	• •	25 % + 25% N Broad Casting	25 % + 25% N Broad Casting	N	-	1
Disease & Pe		ent				
Pest Manage						
Soil Treatment(Termite)		Lindel dust @25%	Indoselafan 4% dust @25kg	Р	1,2,3,4	1,2,4,5
Stem/Shoot B						
Disease Man						
Seed Treatme	ent	-	-	-	-	-
Helmenthospa Blight	arium Lef	-	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 Manag	ement					
Mechanical		Hand weeding Once	Hand weeding twice and earthing up	Р	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 Manag		Doi:-fo-d	Doinford Life accident			0
No. of Irrigation	on	Rainfed	Rainfed Life saving irrigation may be needed	P	8	8
		-	-	-	_	-
Soil Manager	nent					
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				<u> </u>	
Method of Harvesting		Hand plucking	Hand plucking	N	-	-
Any Other/Threshing		By hand	Maize Seller machine	F	4,5	5,6
Average Yiel				•	.,0	-,0
Grain	Summer Season	65000 cobs/ha.	75000 cobs/ha.	Р	1,2,3,4,5,7	1,2,3,4,5
Storage Pest Control		-	Alluminium phosphide 1 tablet/matric ton	Р	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.