

## 10.4 Fertilizer Recommendation for Multiple Cropping System

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 3, 9, 11, 19	Rabi	Composite Maize (100%) + Groundnut (33%)	5-5.5 + 0.9-1.0	120	25	40	18	0	0	0	0
	Kharif	Composite Maize (100%) + Groundnut (33%)	3-3.50 + 0.6-0.7								

Sowing time : Kharif: Mid March – Mid April, Rabi: Mid November- Mid December

Sowing method : Four rows of groundnut (30 cm x 10 cm) in between maize paired rows (37.5 cm/ 150 cm/ 37.5 cm) or 2 rows of groundnut in maize normal row (75 cm x 25 cm)

Fertilizer : Kharif: 2/3rd N top dressed 21 & 42 DAS +1/3 N & other fertilizer as basal  
Rabi : 2/3<sup>rd</sup> N top dressed 30 & 60 DAS +1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High and medium highland AEZ: 11, 12, 13	Kharif	Composite Maize (100%) + Mungbean/ Blackgram (33%)	3-4 + 0.5-0.6/ 0.5-0.6	120	25	40	18	0	0	0	0

Sowing time : Mid March to Last week of March

Sowing method : Fours of Mungbean (25 cm x 5cm) in between maize paired rows (37.5 cm x 150 cm/ 37.5 cm) or 2 rows of mungbean in maize normal row (75 cm x 25 cm)

Fertilizer : 2/3 rd N top dressed 21 & 42 DAS in maize rows only. +1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High and medium highland AEZ: 11, 12, 26	Rabi	Composite Maize (100%) + Chickpea (33%)	4.5-5 + 0.8-1.0	120	25	40	18	0	0	0	0

Sowing time : 2<sup>nd</sup> week of November to last week of November

Sowing method : Fours rows of chickpea (30 cm x 5 cm) in between maize paired rows (37.5 cm x 15 cm x 37.1 cm) or 2 rows of chickpea in maize normal rows (75 cm x 25 cm)

Fertilizer : 2/3 rd N top dressed at 35 & 65 DAS in maize rows only +1/3<sup>rd</sup> N & other fertilizers as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 3, 11, 23	Rabi	Composite Maize (100%) + Radish (40%)	6.0-6.5 + 20.0-25.0	160	25	30	0	0	0	0	0

Sowing time : November 1<sup>st</sup> week to last week

Sowing method : One row of radish (15cm, plant to plant) in between maize row (75 cm x 25 cm)

Fertilizer : 2/3<sup>rd</sup> N top dressed at 35 DAS & rest after harvest of radish+1/3 N & other fertilizers as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 13, 23	Rabi	Composite Maize (100%) + Cowpea (50%)	3.0-4.0 + 1.0-1.5	110	25	40	0	0	0	0	0

Sowing time : Mid November to Mid December

Sowing method : Two rows of cowpea (30 cm x 100 cm) in between normal maize row (90cm x 25cm)

Fertilizer : 2/3<sup>d</sup> N top dressed at 30 and 65 DAS only +1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium high and medium land AEZ: 3, 11, 16,23, 25	Rabi	Composite Maize (100%) + Khesari/ Cowpea (33%) tillage after recedes of flood water)	4-4.5+ 0.5-0.6 0.7-0.8	100	20	25	20	0	0	0	0

Sowing time : Mid October to 1<sup>st</sup> week of December

Sowing method : Three rows of field pea (30 cm apart) or broadcast khesari in between maize rows

Fertilizer : 2/3<sup>d</sup> N top dressed at 30 & 60 DAS in maize rows only+1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High and medium highland AEZ: 4, 23, 25	Rabi	Chili (100%) + Composite maize (20%)	1.5-1.8 + 1.0-1.25	80	25	40	0	0	0	0	4-12 t/ha

Sowing time : November 1<sup>st</sup> week to last week of November

Sowing method : One row of maize (180 cm) in between chili rows (50cm x 30cm) or one row of maize (90 cm) in between chili rows

Fertilizer : 2/3<sup>d</sup> N top dressed at 30 & rest at 60 DAS in maize rows only+1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 8	Rabi	Tomato (100%) + Composite Maize (20%)	35 + 1.0-1.5	240- 250	74-78	120- 130	0	0	0	0	8-12 t/ha

Sowing time : Mid November to Mid December

Sowing method : One row of maize (140cm) in between tomato rows (60cm x 30cm)

Fertilizer : Top dressed N in tomato rows at 25 & 50 DAS, other fertilizers as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland & Medium land AEZ: 4, 9, 16	Rabi	Potato (100%) + Composite maize (25%)	25-30 + 1.25-1.50	160- 165	40-44	82-87	18-21	0	0	0	

Sowing time : 1<sup>st</sup> week of November to last week of December

Sowing method : Potato 60cm x 30cm, maize ((100cm apart) in same potato rows

Fertilizer : Top dressed 2/3<sup>d</sup> N at 25 & rest 45 DAS in potato rows, +1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High & Medium high AEZ: 9, 12, 24	Rabi	Sweet potato (100%) + Composite Maize (10 to 20%)	16.0 + 1.5-2.0	60	25	30	18	0	0	0	0

Sowing time : November to Mid December  
Sowing method : Sweet potato (60cm x 30cm), one row of maize (60cm apart) in sweet potato rows  
Fertilizer : 2/3<sup>d</sup> N top dressed at 25 & rest at 40 DAS in maize rows, +1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High & Medium highland AEZ: 11	Kharif (Rainfed)	Mukhikachu (100%) + Composite maize (as fodder 50%)	5.0 + 6.0 (Green fodder)	70	25	85	0	0	0	0	0

Sowing time : Mid March – Mid April  
Sowing method : Mukhikachu (60cm x 25cm), one row of maize (25cm apart) alternate two rows of mukhikachu  
Fertilizer : 1/4<sup>th</sup> N & K at 45 DAS and rest ¼ N & N at 75 DAS in mukhikachu rows only, +1/2 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High and medium highland AEZ: 3a, 3b, 3c, 11, 1	Rabi	Hybrid Maize (100%)+ Soybean (33%)	7.5-8.0 + 1.0-1.2	200-250	35-50	65-100	20-40	2	4	0	0

Sowing time : December 1<sup>st</sup> week to 2<sup>nd</sup> week of December  
Sowing method : Fours of Soybean (30 cm x 10cm) in between maize paired rows (37.5 cm x 150 cm/ 37.5 cm) or 2 rows of Soybean in between maize normal row (75 cm x 25 cm)  
Fertilizer : 1/3<sup>d</sup> N top dressed at 35 & rest 1/3 at 65 DAS in maize rows only+1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High & medium highland AEZ: 3, 4, 11, 13	Rabi	Hybrid maize (100%) + French bean (50%)	7.0 + 9.0	200	40	60	30	0	0	0	0

Sowing time : Mid November to 1<sup>st</sup> week of December  
Sowing method : 4 rows of French bean (40%) 25cm apart in between maize paired row (37.5cm/ 150cm/37.5cm)  
Fertilizer : 2/3<sup>d</sup> N as top dressed at 30 and 35 DAS in maize rows only+1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High and medium highland AEZ: 3, 11, 23	Rabi	Hybrid maize (100%) + Carrot (33%)	7.0 + 5.0	200	35	66	30	0	0	0	0

Sowing time : Mid November to 1<sup>st</sup> week of December  
Sowing method : 4 rows of carrot 25 cm apart in between maize paired rows (37.5cm/ 150cm/37.5cm)  
Fertilizer : 2/3<sup>d</sup> N as top dressed at 30 and 65 DAS. +1/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High and medium highland AEZ: 4, 11, 12	Rabi	Onion (100%) +	12.0 +	260	80	125	30	0	0	0	0
		Maize (10%)	1.5								

Sowing time : Mid December  
Sowing method : One row of maize (140cm) in between onion rows (30cm apart)  
Fertilizer : All basal except 50% N top dressed 3 & 5 weeks after transplantation

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 3, 8, 11,	Rabi	Maize (100%) +	4.0-5.0 +	100	20	20	20	0	0	0	0
		Spinach +	4.0-5.0 +								
		Lalshak +	3.0-4.0 +								
		Gimakalmi	10-11								

Sowing time : Mid November to Last week of November  
Sowing method : Maize 75cm x 25cm, two rows of lalshak/spinach/gimakalmi at a spacing of 25 cm  
Fertilizer : 1/3<sup>rd</sup> N and all fertilizer as basal. Rest urea at 30 and 60 DAS as band placement in maize rows

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 3a, 3b, 3c, 11, 13	Rabi (rainfed)	Tobacco (100%) +	1.60 +	50	20	35	0	0	0	0	0
		Chickpea (10%)/	0.70/								
		Lentil (50%)	0.60								

Sowing time : Mid October to– Mid November  
Sowing method : Three rows of chickpea (40cm apart) in between paired rows of tobacco (37.5cm/4 cm/37.5cm), plant to plant tobacco 60cm. But in case of Lentil, broadcast (50% seed rate)  
Fertilizer : ½ N 30 DAS in tobacco plants, ½ N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 13, 11	Rabi (Rainfed)	Chickpea (100%) + Coriander (33%)	1.0 + 0.30	20	17	15	0	0	0	0	0

Sowing time : Mid October to November  
Sowing method : Broadcast (30 kg seed/ha of chickpea and 3 kg seed/ ha of coriander)  
Fertilizer : As basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 11, 26	Rabi (Rainfed)	Chickpea (67%) + Linseed (33%)	1.0 + 0.30	20	17	15	0	0	0	0	0

Sowing time : Mid October to Mid November  
Sowing method : One row of linseed in between two rows of chickpea (30cm x 10cm)  
Fertilizer : All fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 11, 26	Rabi (Rainfed)	Chickpea (50%) + Mustard (50%)	1-10 + 0-90	20	6	10	0	0	0	0	0

Sowing time : Mid October to last week of November  
Sowing method : Two rows of chickpea alternate with two rows of mustard at 30cm apart  
Fertilizer : All fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 11, 16, 26	Rabi (Rainfed)	Wheat (67%) + Chickpea (33%)	3.00 + 0.70	60	20	25	0	0	0	0	0

Sowing time : Mid November to last week of November  
Sowing method : Two rows of wheat (20cm apart) alternate with one row of chickpea  
Fertilizer : All fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High plain land AEZ: 3, 11	KharifII (Rainfed)	Cotton (100%) + Mungbean/ Blackgram	2.00 + 0.80/ 0.90	90	20	45	18	0	0	0	0

Sowing time : 1<sup>st</sup> week of August to third week of August  
Sowing method : Cotton 60cm x 30cm, one row of mungbean/blackgram (30cm apart) in between cotton rows or two rows of mungbean/blackgram (30cm apart) in between paired cotton rows (30cm/30cm/30cm)  
Fertilizer : 2/3<sup>d</sup> N at 30 & 50 DAS in cotton rows + 1/3<sup>d</sup> N & other fertilizers as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Rainfed highland AEZ: 11a, 19	Kharif-II	Jute (seed) + Radish	1.0 + 16.0	180	26	33	20	0	0	0	0

Sowing time : Mid September  
Spacing (jute) : 30cm x 10cm  
Fertilizer : 45 kg N at 20 DAE, 45 kg N at 35 DAE

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 3, 11, 13	Rabi	Groundnut (100%) + Kaon (25%)	1.60-1.80 + 0.50-0.70	30	20	40	0	0	0	0	0

Sowing time : Mid February to Mid March  
Sowing method : Groundnut 25cm x 10cm (100%), broadcast Kaon (25%)  
Fertilizer : As basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High & medium highland AEZ: 12, 13, 26, 28	Rabi	Groundnut (100%) + Onion/ Garlic (33%)	1.4-1.5 + 4.0	90	44	83	30	4	0	0	0

Sowing time : November to December

Sowing method : Groundnut spacing: 40cm x 10cm, in between 2 normal groundnut rows, two rows of onion/garlic (10cm x 5cm) can be planted

Fertilizer : All basal except 2/3<sup>rd</sup> N at 20 & 40 DAS

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High & Medium highland AEZ: 12, 18, 19	Rabi	Groundnut + Sesame	1.20 + 0.50	13	28	42	30	2	1.7	0	0

Sowing time : Middle of February to end of March (KharifI), Middle of August to September (KharifII)

Sowing method : Three rows of groundnut (25cm x 10cm) in between paired rows of sesame (30cm in continuous)

Fertilizer : All fertilizer as basal except 9 kg/ha of N as top dressed in sesame row 25 DAS.

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High & medium highland AEZ: 13, 14, 18	Rabi	Sunflower + Soybean	1.4-1.5 + 0.50	50	30	80	30	4	2	0	0

Sowing time : Mid December

Sowing method : Two rows of Soybean (30cm in continuous line) in between paired rows of sunflower (40cm)

Fertilizer : All fertilizer as basal except 50% of N in two installment 25 and 50 DAS.

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland & Medium land AEZ: 1, 3, 15, 25	Rabi	Potato (100%) + Vegetables (Lalshak/Spinach)	25-30 + 2.0-3.0	120	40	110	0	0	0	0	0

Sowing time : 1<sup>st</sup> week of November – 3<sup>rd</sup> week of November

Sowing method : Potato 60cm x 30cm, two rows of lalshak/spinach (30cm apart) in between paired cotton rows

Fertilizer : 1/3<sup>rd</sup> N and other fertilizers as basal, 1/3<sup>rd</sup> N 25 at DAS & rest N at 45-55 DAS in potato rows

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Rainfed highland AEZ: 3, 8d, 15, 25, 28	Rabi	Potato + Red amaranth + Sweet gourd	22.0 + 2.0 + 2.50	90	15	40	0	0	0	0	0

Sowing time : Mid December

Spacing : Potato 60cm x 25cm

Sowing method : Red amaranth: Broadcast, Sweet gourd in pit

Fertilizer : 1/3<sup>rd</sup> kg N at 30 DAP in potato rows & rest 2/3 N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Rainfed highland AEZ: 3d	Rabi + Kharif	Blackgram (GM) + Potato + Garlic/ Palwal	7-10 (biomass) + 18-20 + 1.5 (bulb)/ 6.0 (fruit)	0 + 80	0 + 18	0 + 66	0 + 10	0	0	0	5 t/ha

Sowing time : Blackgram: Late September  
Potato: Last week of November  
Garlic- Late March  
Palwal: April to August

Sowing method : Potato 60cm x 30cm and Garlic: 40cm x 10cm  
Palwal: 180cm x continuous

Fertilizer : Potato: 20 kg N at 30 DAS, 20 kg N at 50 DAS & rest 40 kg N & other fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
High & medium highland AEZ: 3, 19, 28	Rabi	Cabbage (100%) + Tomato (25%)	60-70 + 10-15	110	25	70	0	0	0	0	12 t/ha

Sowing time : Last week of October to Mid November

Sowing method : Cabbage 60cm x 45cm, in between cabbage rows one row of tomato (45cm spaced)

Fertilizer : Cowdung 50% at pit, rest 50% cowdung and P at final land preparation, N and K at 15-20 DAS and 35 DAS as top dress

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg	Zn	B	CD
Medium highland AEZ: 3, 7, 9, 28	Rabi	Banana + Dhaincha	50-60 + 20-25 (biomass)	30	13	104	0	0	0	0	12.5 t/ha

Spacing : Banana pit size: 0.6m x 0.6m x 0.4m

Fertilizer : In Banana: Two weeks before planting/pit: cowdung 5 kg, TSP 25 g, MP 25 g, Three month after planting/pit: Urea 25 g, MP 25 g

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg*	Zn	B	CD
High & medium highland AEZ: 1a, 11a, 25a	Rabi	T. Sugarcane (100%) + Onion	100.0 ±10.0 8.0±0.8	150	50	100	30	20	-	-	-
				75	30	75	30	-	-	-	-

\*Only in Mg deficient areas

Spacing : Sugarcane: 100cm x 45cm, Onion: 30cm x 10cm

Sowing method : Bulb of onion planted in two rows between Sugarcane

Fertilizer : For Sugarcane: 50 kg N 20 DAT, 50 N 40 K kg at 4-6 tiller stage, 50 N 40 K at earthing up. For Onion, all fertilizer as basal

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg*	Zn	B	CD
High and medium highland AEZ: 1a, 11a, 25a	Rabi & Kharif	Sugarcane (paired row)	100.0±10.0	150	50	100	30	20	-	-	-
		+									
		Potato + Kangkong	10.0 ±1.0 10.0 ±1.0	70 28	15 28	60 30	- 2	- -	- -	- -	- -

**\*Only in Mg deficient areas**

Sowing time : Sugarcane: Mid October to Mid November  
 Potato: Mid October to Mid November  
 Gimakalmi: February to April

Spacing : Sugarcane: 60cm between two rows and 140 cm between two paired rows. Plant to plant 45cm. Three lines of potato and kangkong in 30cm between 2 paired rows of Sugarcane.

Fertilizer : Sugarcane: 50 kg N at 20 DAT, 50 kg N and 40 K at 4-6 tillering, 50 N and 40 K at earthing up.  
 Potato: 40 kg N at earthing up  
 Kangkong: 10 kg N after 1<sup>st</sup> harvest and 10 kg N at 2<sup>nd</sup> harvest

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg*	Zn	B	CD
High & medium highland AEZ: 1a, 11a, 25a	Rabi + Kharif	Sugarcane (paired row)	100.0±1.0	150	50	100	30	20	-	-	-
		+									
		Potato + Red amaranth	10.0±1.0 6.0±0.6	70 23	15 5	60 25	- 2				

**\*Only in Mg deficient areas**

Sowing time : Sugarcane: Mid October to Mid November  
 Potato: Mid October to Mid November  
 Red amaranth: February to March

Spacing : Sugarcane: 60cm between two rows and 140 cm between two paired rows. Plant to plant 45cm.

Fertilizer : Sugarcane: 50 kg N at 20 DAT, 50 kg N and 40 K at 4-5 tillering, 50 N and 40 K at alternative earthing up.  
 Potato: 40 kg N at earthing up  
 Red amaranth: 10 kg N at 20 DAS

Land and soil characteristics	Cropping pattern		Yield Goal (t/ha)	Fertilizer Recommendation (kg/ha)							
	Seasons	Crops		N	P	K	S	Mg*	Zn	B	CD
High & medium highland AEZ: 1a, 11a, 25a	Rabi + Kharif	Sugarcane (paired row)	100.0±10.0	150	50	100	30	20	-	-	-
		+									
		Potato + Mungbean	10.0±1.0 0.7±0.07	70 7	15 7	60 5	- -	- -	- -	- -	- -

**\*Only in Mg deficient areas**

Sowing time : Sugarcane: Mid October to Mid November  
 Potato: Mid October to Mid November

Spacing : Sugarcane: 60cm between two rows and 140 cm between two paired rows. Plant to plant 45cm.

Fertilizer : Soybean: 50 kg N at 20 DAT, 50 kg N and 40 K at 4-6 tillering, 50 N and 40 K at earthing up.  
 Potato: 30 kg N at earthing up  
 Mungbean: All as basal