



On Farm Testing (Discipline-Wise Summary) 2021



Discipline	Crop / Enterprise	Number of technology/ Social Concept		No. of trials		% of achievement	Reasons for shortfall, if any
		Assessed	Refined	Target	Achievement		
Agronomy	Rice – Lentil/Chickpea	1	-	6	6	100	
	Lentil	1	-	5	5	100	
Horticulture	Onion	1	-	3	3	100	
Plant Protection	Mustard	1	-	3	3	100	
PBG	Lentil	1	-	3	3	100	
Fisheries	<i>Clarias magur</i>	1	-	5	5	100	
	<i>Anabas testudineus</i>	1	-	5	5	100	
Home Science	Guava	1	-	5	5	100	
	Nutri Garden	1	-	5	5	100	
Total		9	-	40	40		

Title: Performance Assessment on Rice based cropping system (Rice-Lentil/ Rice-Chickpea) (2nd Year)

Cropping system

Rice-Lentil/Chickpea

Source of technology: RARS, Shillongani, AAU 2015

Area – 1.5 ha

No. of trial -6

Major Problem diagnosed

Rice alone cannot increase farmers income/unit area. Moreover, major rice areas are kept fallow/ unutilized due to lack of suitable rice based cropping system. **Severity: 80 %**



Remark for recommendation of FLD:-
Recommended for FLD

Rice: Var. CAU R1

Seed rate: 60 kg/ha
Spacing: 15x15 cm
DOT: July 1st week

Lentil: Var. IPL-316

Seed rate: 40 kg/ha
Spacing-30 cm between rows
DOP: 2nd fortnight of November

Chickpea: Var. JG-16

Seed rate : 60kg/ha
Spacing 30 x 10 cm
DOP-: 2nd fortnight of November

Parameters of Assessment (Sole Rice)

Parameter	Treatment
Plant ht. (cm)	135
No. of grains/panicles	272
No. of tillers/plant	12
Yield (q/ha)	55.00
Net Return(Rs./ha)	57500
B:C ratio	1.71

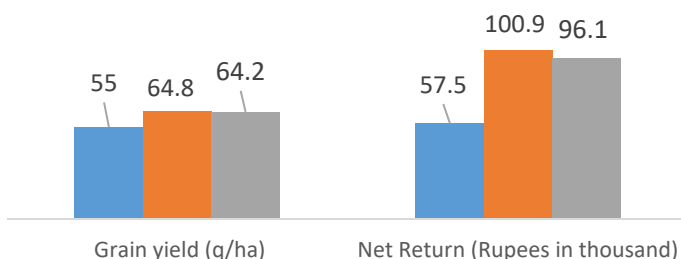
Parameters of Assessment (Lentil/Chickpea)

Parameter	Chickpea	Lentil
Plant ht. (cm)	35-40	30-35
Pl. stand/sq.m	35-40	80-90
No. of branches	7-10	9-12
No. of pods/pl	35-40	70-80
Yield(q/ha)	9.2	9.8
Net return (Rs./ha)	38600	43400
BC ratio	2.10	2.24

Comparison of different types of cultivation

■ Rice
■ Lentil
■ Chickpea

Rice only, Rice-Lentil, Rice- Chickpea



Economics of Rice – Lentil/ Rice – Chick pea

Crop	Grain yield (q/ha)	Net Return (Rs.)
Rice	55	57500
Lentil	64.80 (Rice + Lentil)	100900(Rice-Lentil)
Chickpea	64.20 (Rice + Chickpea)	96100 (Rice-Chickpea)

Location:
Ingourok,
Waikhong,
Hijam Khnou,
Thawai,
Wangjing,
Wangkhei

Title: Integrated Weed Management in Lentil (1st Year)

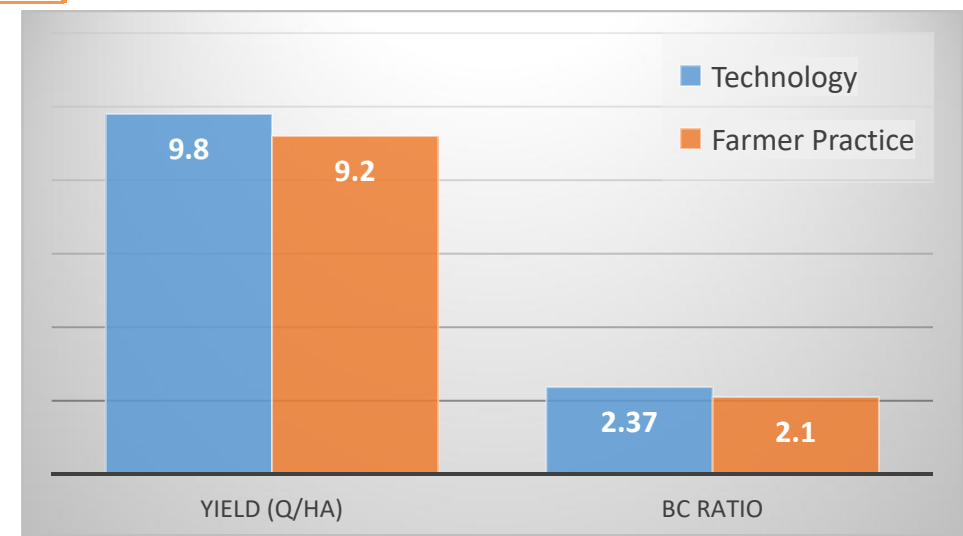
Crop	Major Problem Diagnosed	Severity of Problem : 70%	
Lentil Var. IPL-316	Lentil crop suffers heavy weed infestation resulting to low yield of lentil. Further cost of hand weeding two times is very high	Source of Tech:	AAU Jorhat, 2015
Area: 1.25 ha			

Details of technology

- **Seed Treatment:**
Carbendazim 3g/kg seed
- **Application of Oxyfluorfen**
@150g a.i /ha as pre-emergence followed by 1 HW @20 DAS;

Location: Wangjing, Serou, Heirol, Heitupokpi, Bengi

No. of trial :	5	
Parameters of assessment	Technology	Farmer Practice:(HW)
Plant height (cm)	30-35	30-35
Plant stand (no./sq.m)	80-90	70-75
Pod/plant (nos.)	70-80	60-65
Seed/pod	2	2
Seed yield (q/ha)	9.8	9.2
Net Return(Rs./ha)	43400	38600
BC Ratio	2.37	2.10



Remark :- Need repetition for 2nd year trial



Horticulture OFT-1

Title: Yield Performance in different Planting time of Onion var. Nashik Red (1st Year)



Major Problem diagnosed : Untimely sowing affect yield as the crop is long duration **Severity: 70%**

Details of Technology

Source of Technology: ICAR-IARI, Pusa, New Delhi- 2015

- **Planting time** (One month after Sowing of seed)
 - T1 - 01/11/2021
 - T2 - 14/11/2021
 - T3 - 28/11/2021
 - T4 - 12/12/2022
- **Seed rate:** 8 kg/ha
- **Spacing:** 15 x 8 cm
- **NPK:** 100:50:50 kg/ha
- **Time and dose of application:** Half N, full of P and K as basal dose, the rest half N as ridge dressing at 45 DAT.

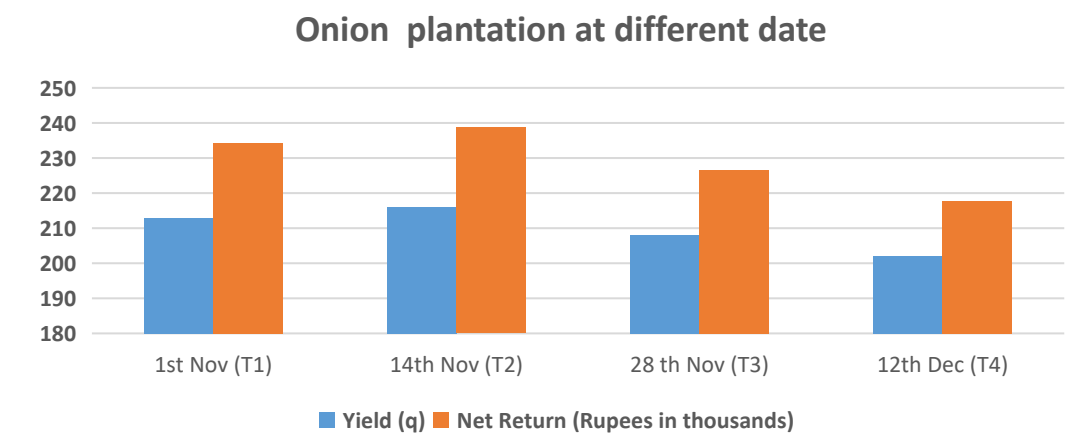
Area : 0.312 ha **No. of Trial** 3

Parameters of Assessment				
Parameter	T1	T2	T3	T4
Pl height (cm)	42-44	45-48	45-48	40-45
Bulb size (g)	50-58	50-65	50-60	45-50
Duration (days)	140-150	140-150	140-150	140-150
Yield (q/Ha)	213	216	209	204
Net return (Rs./ha)	234200	238700	228200	220700
B.C Ratio	3.74	3.85	3.67	3.58



Locations: Langmeithek, Hijam Khunou, Ingourok, Khangabok

Remark for recommendation of FLD:-
Will be repeated with short duration var. Bhima Super



Langmeithek, Manipur, India
Ujmanag Road, Langmeithek, Manipur 794149, India
Lat 24.020404°
Long 94.077371°
31/12/21 12:17 PM



Title: Organic management of painted bug, aphid and sawfly in mustard (1st Year)

Crop	Mustard Var.NRCHB-101	Source of technology: ICAR- NOFRI, Tadong, Sikkim 2014	Area – 1.5 ha	No. of trial -3
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Major Problem diagnosed	Insect pest infestation Severity: Aphid - 45 % ,Painted bug- 30 % ; Sawfly- 20 %
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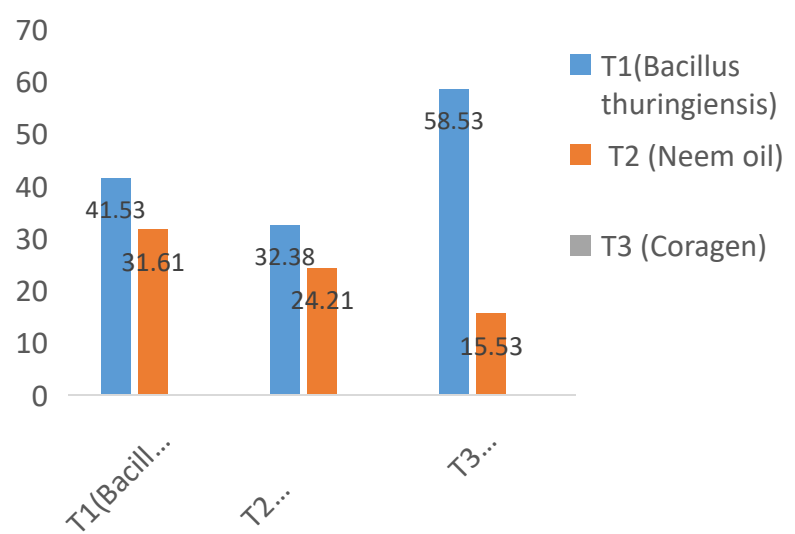
Details of technology

- T1- *Bacillus thuringiensis*** @2gm/ lt. of water. (750 ml/ha) Spraying at 1, 3, 7, 10 days interval.
- T2 - Neem oil** @ 3ml/lt. of water (750 ml/ha) Sprayed 3 times at 20 days interval
- T3 - Farmers practice**
(Coragen application @ 50ml/ ha- single spray)

Parameters of Assessment (Mustard)

Parameter		T1 (<i>Bacillus thuringiensis</i>)	T2 (Neem oil)	T3 (Coragen) Farmers Practice
1. Aphid/10 cm of central twig	Before spray	41.53	32.38	58.53
	After spray	31.61	24.21	15.53
2. Painted bug per plant	Before Spray	3.3	2.6	3.3
	After spray	2.47	1.8	1.65
3. Sawfly larvae per plant	Before Spray	2.6	2.3	3.6
	After spray	1.78	1.8	1.65
4. Net Return (Rs/ha)		40300	45100	48700
5. Yield (q/ha)		8.7	8.9	9.3
6. B:C ratio		2.06	2.20	2.4

Location:
Wangjing,
Thoubal Okram,
Ingourok



Remark for recommendation of FLD:- Repeated for 2nd year



Title: Performance Assessment of Lentil Var. IPL 220 (1st year)

Crop **Lentil Var. IPL-220** Source of technology: **IIPR, Kanpur, 2018** Area – **1.5 ha** No. of trial -**3**

Location:

Hijam khunou,
Salungpham,
Khangabok



Major Problem diagnosed

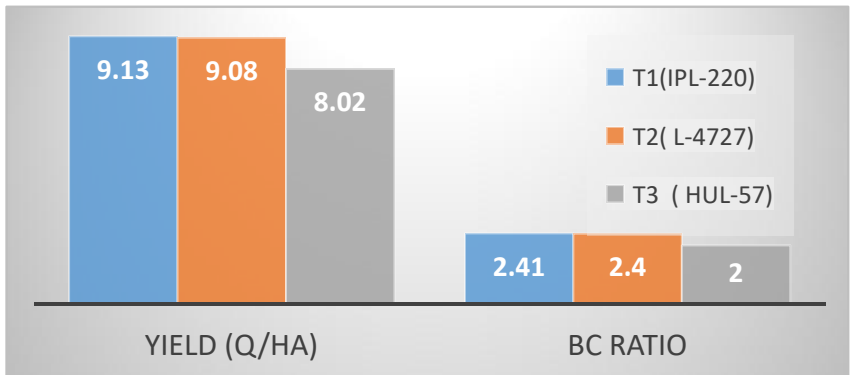
Poor varietal Diversification. **Severity -20%**

Details of technology

Parameter	T1 (IPL-220)	T2 (L-4727)	T3 (HUL-57) Farmers Practice
Seed Rate	40 kg/ha		
Seed treatment	Trichoderma viride 4g/kg seed		
Fertilizer dose	NPK @ 18:46:20 kg/ha (½ N, full P & K at basal and ½ N at flowering/Pod formation)		

Parameters of Assessment

Parameter	T1 (IPL-220)	T2 (L-4727)	T3 (HUL-57) Farmers Practice
1. Plant height (cm)	33.5	31.66	31.33
2. Days to 50 % Flowering	62.32	63.13	62.45
3. Days to 80 % maturity	118.57	117.23	115.22
4. No. of Pods/Plant	52.66	51.21	51.17
5. No. of Seeds/ Pod	2.46	2.42	2.13
6. Yield(q/ha)	9.13	9.08	8.02
7. Net Return(Rs./ha)	48170	47200	41180
8. B:C ratio	2.41	2.40	2.32



Remark for recommendation of FLD:- Repeated for 2nd year

Title: Seed production of walking cat fish (*Clarias magur*) using BRICS (Barrier Removal In Catfish for Voluntary Captive Spawning) method (1st Year)

Enterprise: Fish (walking cat fish)

No. of Trial : 5

Source and Year of Release : CoF, CAU, Lembucherra, 2020

Problem with severity: Sacrificing male brooder for seed production, Non availability of sufficient quantity of quality seed : **Severity-80%**

Parameters of Assessment

Technology (BRICS method)

Farmers Practice: (sacrificing male brooder)

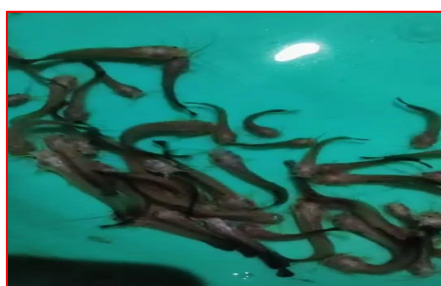
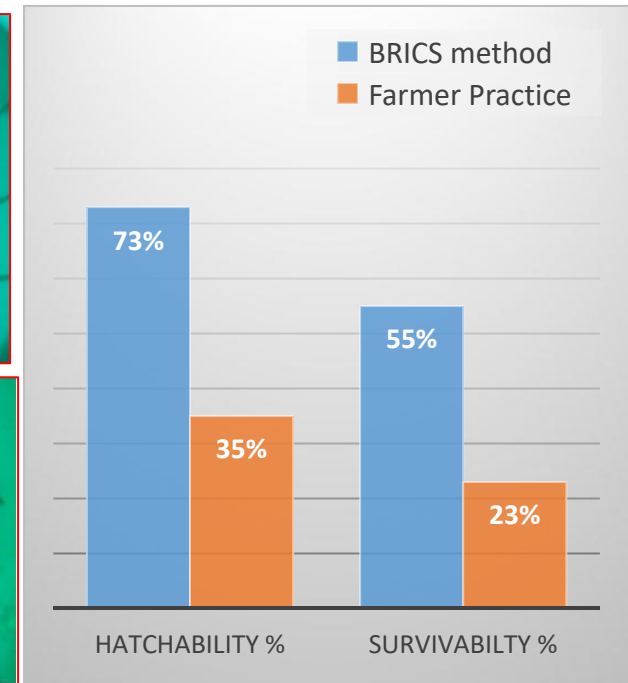
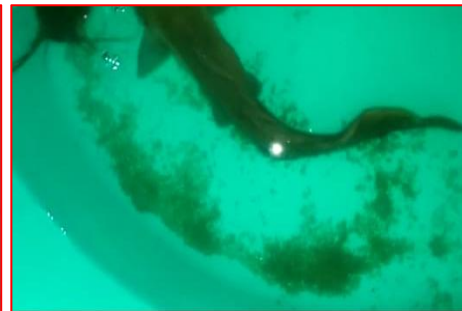
Hatchability : 73 %
 Growth rate : 1 g/month
 Survivability % : 55%
 Net return(Rs./unit) : 31308
 BC Ratio : 2.25

Hatchability : 35 %
 Growth rate : 1 g/month
 Survivability % : 23%
 Net Return(Rs./unit) : 19920
 BC Ratio : 1.8

Technology to be Assessed

- **Selection of brooder-**
- Hormone administration:**
- **1st dose: Ovatide** @ 0.5ml per Kg body weight in both Male & Female;
- **2nd dose: Oxytocin** @40 milli IU after 12 hrs of ovatide injection in both Male & Female
- **Removal of brooders** after 24 hrs of injection;
- **Incubation of eggs** in the tank with water flow @ 0.3-0.5 litre/min;
- **Incubation period:** 24-30 hours.

Remark for recommendation of FLD:-
 Repeated for 2nd year



Title: Seed production of Climbing perch (*Anabas testudineus*) (1st Year)

Enterprise: Fish (Climbing perch)

No. of Trial : 5

Source and Year of Release : ICAR –CIFA Bhubaneswar, 2016

Problem with severity: Scarcity of quality seeds of local Climbing perch. **Severity-60%**

Parameters of Assessment

Technology to be Assessed

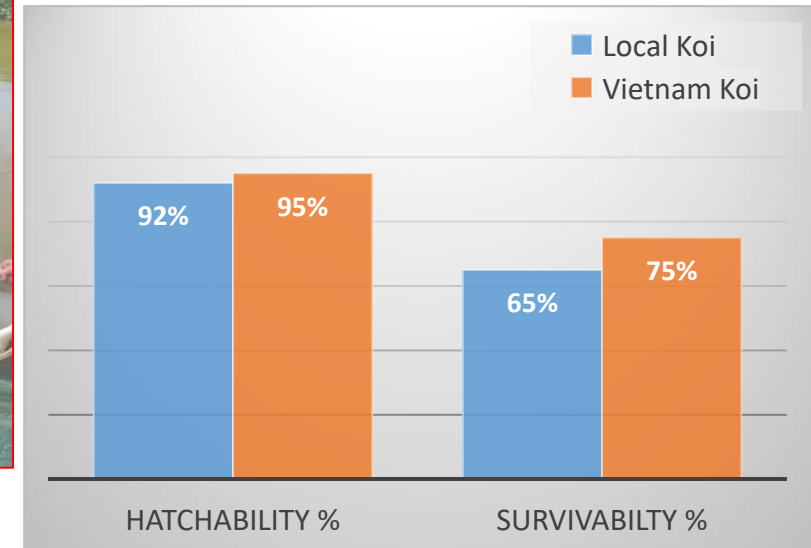
- Selection of brooder.
- Injecting with ovatide hormone-
- Male- 0.25-0.5 $\mu\text{l/g}$ bw;
- Female- 0.5-1.0 $\mu\text{l/g}$ bw;
- Releasing of brooder in breeding pool
- Spawning time- 7- 8 hours after hormone injection. Incubation of fertilized egg in stagnant water in plastic tubs;
- Incubation period: 12-15 hrs.

Technology (Local *Anabas testudineus*)

Hatchability : 92 %
 Growth rate : 1.5g/month
 Survivability % : 65%
 Net Return(Rs./unit) : 60063
 BC Ratio : 2.31
 Consumers preference : Highly accepted by the consumer because of its taste

Farmers Practice: (Vietnam Koi)

Hatchability : 95 %
 Growth rate : 2.0g / month
 Survivability % : 75%
 Net Return(Rs./unit) : 84150
 BC Ratio : 2.83
 Consumer preference : Less consumer acceptance due to its appearance and taste (reduce in chewiness & Springiness)



Remark for recommendation of FLD:- Repeated for 2nd year



Title : Preparation of Guava Cheese (1st year)

Enterprise: Guava cheese

Problem with severity: Due to its perishable nature during peak season it is difficult to store. **Severity** -80%

Source and Year of Release :
Horticulture Division ICAR, Barapani, 2014

No. of Trials : 5

Details of Technology
Preparation of guava cheese

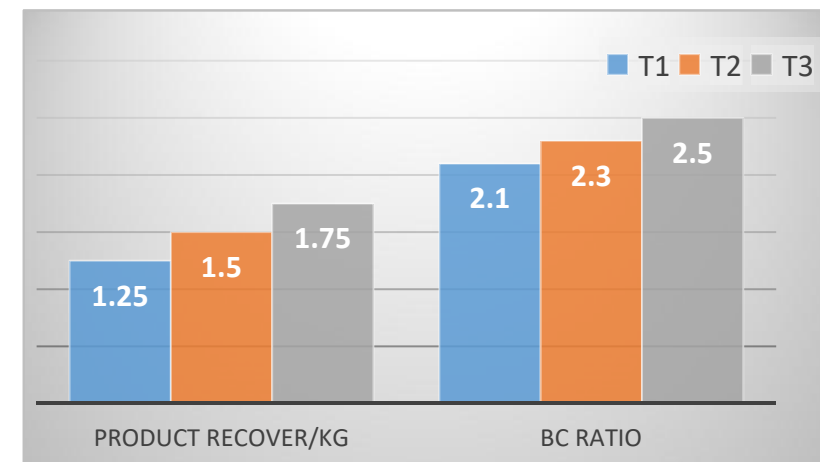
Ingredients	T1	T2	T3
Pulp :Sugar (kg)	1:1	1:1.25	1:1.5
Citric acid(gm)	2	3	5
Butter(gm)	40	60	80



J4P6 + MVJ, Sikhong Sekmai, Manipur 795131, India
Latitude 24.63820325° Longitude 94.11198951°
Local 09:54:21 AM Altitude 782.38 meters
GMT 04:24:21 AM Tuesday, 21 - 12 - 2021

Parameters	T1	T2	T3
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Product recovery/kg:	1.25	1.5	1.75
Shelf life (months)	3 months		
Net return (from 1 kg)	Rs.395	Rs.520	Rs.645
BC Ratio	2.1	2.3	2.5



Location:
Athokpam, Ingourok,
Lourembam,
Khangabok, Ukhongsang

Title : Introduction to year round nutri rich crops in NARI village during covid pandemic

Enterprises	Nutrition gardening	Severity of the problem (%)	70	No. of Trials	5	Source	ATARI, Jabalpur 2019
Major Problem diagnosed: Non availability of diversified nutrient rich crops			Area: 200 sqm	Location: Ingourok, Khangabok, Lourembam, Ukhongsang			

Sl.No.	Crop	Production (Kg)			Nutrient availability (gm)			
		Kharif	Rabi	Zaid	Nutrients	Kharif	Rabi	Zaid
1.	Roots & tubers	15	77.50	25	Protein	4797.06	7956.11	4375.86
2.	Leafy vegetables	36	28.00	33	Fat	6914.63	1143.53	6307.4
3.	Other vegetables	142	174.00	109	Fibre	2030.55	3367.75	1852.26
4.	Pulses	-	20.00	-	Carbohydrate	13636.40	22616.56	12439.10
5.	Diversified crops	-	10.50	-				
6.	Fruits (Papaya, Watermelon)	25	30.00	20				

Reference: Nutritive value of Indian foods – ICMR- National Institute of Nutrition Hyderabad, 2020



Remark for recommendation of FLD:- Repeated for 2nd year OFT by adding biofortified crops.

Year round production of vegetables in Nutri Garden (200 sq.m)

Rabi		Kharif		Zaid		Remark
Crop & area (sq.m.)	Production (Kg)	Crop & area (sq.m)	Production (kg)	Crop & area	Production (kg)	
Cabbage (9.5)	100	Tomato (9.5)	14	Sponge guard(9.5)	6	Quantity of crop produced from a field of 200sqm will serve nutrient requirement of a family of 5-7 members depending on the age group throughout the year
Cauliflower(9.5)	30	Alocasia (9.5)	20	Bottle guard(9.5)	18	
Broccoli(9.5)	30	Colocasia (9.5)	15	Bitter Guard(9.5)	6	
Carrot (4.75)	9	Rajma (9.5)	13	Ash Guard(9.5)	18	
Raddish (4.75)	5	Cucumber(19)	35	Pumpkin(9.5)	20	
Beet Root (4.75)	13	Coriander (9.5)	14	Coriander(9.5)	15	
Lettuce (4.75)	4.5	Spinach (9.5)	15	Lettuce(9.5)	5	
Onion (9.5)	30	Chilli(9.5)	18	Spinach(9.5)	13	
Coriander (9.5)	6	Okra (19)	30	French bean(9.5)	11	
Potato (19)	20	Frenchbean (9.5)	10	Beet Root (9.5)	25	
Pea (9.5)	6	Lettuce(9.5)	6	Okra (9.5)	15	
Lentil (19)	7	Brinjal (9.5)	15	Cucumber (9.5)	15	
Frenchbean (9.5)	9			Watermelon(19)	20	
Spinach(4.75)	14					
Chia(4.75)	.500					
Quinoa (4.75)	1					
Broadbean(9.5)	14					
Total	340.500 kg		205kg		187kg	