

- I. NAME OF THE REGIONAL CENTRE/DIVISION/ SECTION: KVK Hailakandi, ICAR Research Complex for NEH Region, Assam**
- II. AREA OF WORK (WITH ACHIEVEMENTS) FOR LAST FIVE YEARS**

Sl. No.	Area of work	Achievement	
		% increase in yield	B:C ratio
1.	Integrated Nutrient Management in rice	35.82	1.54:1
2.	Varietal evaluation of performance of cabbage Var. BC-76	27.27	2.8:1
3.	Minimum tillage with paddy straw mulching in toria in paddy-toria cropping sequence	24.61	2.02:1
4.	Inoculation of Frenchbean seed with <i>Rhizobium</i> for increasing productivity	25.73	1.48:1
5.	Evaluation of high yielding variety (Var: <i>Megha tomato-3</i> )	38.33	2.44:1
6.	Evaluation of high yielding variety (Var: <i>Kashi Anmol</i> )	29.31	3.03:1
7.	Adoption of suitable cultivation practices for post flood condition in paddy (Var. <i>Manohar sali</i> )	26.32	1.15:1
8.	Varietal evaluation in Black gram	23.90	1.64:1
9.	Varietal evaluation in Green gram	29.75	2.21:1
10.	Management of insect pest complex in Pulse (Green gram)	30.8	2.15:1
11.	Management of insect pest complex in Pulse (Black gram)	28.45	2.0:1
12.	Shelf life extension of pineapple by chemical treatment	Av. Shelf life of pineapple was extended by 5 days	
13.	Performance of cauliflower with the improve package of practices (var. <i>White contessa</i> )	26.83	2.58:1
14.	Scientific Package and practices of Sali Paddy (var: <i>Ranjit</i> )	36.65	1.59:1
15.	Management of blast disease of Sali paddy (var: <i>Ranjit</i> ) with fungicides	37.5	1.53:1
		Disease incidence in the demo plot reduced to 3.5% compared to 7.5 % in farmers practice	
16.	Dhaincha Green manuring for N-supplementation in paddy field	10.00	1.51:1
17.	Rice-Azolla dual cropping for Nitrogen economy and better yield	17.07	1.49:1
18.	SRI – A resource conservation technology for farmers	60.84	1.97:1
19.	Varietal performance of Black gram to increase the cropping intensity	23.9	1.64:1
20.	Varietal trial of paddy for high yield and short duration (Var. <i>Chandrama Swarna</i> Sub-1 and Naveen)	13.02, 19.07 and 15.04	1.69, 1.78 and 1.72
21.	Livelihood improvement through summer oyster mushroom cultivation	Yield: 4.62 kg/ sqm, Net return (Rs.): 1560/-	2.32:1
22.	Integrated application of fertilizers and enriched compost on soil fertility and yield of Sali paddy	12.27	1.51:1
23.	Production and utilization of vermicompost using earthworms	900 kg of vermicompost/ 5.63 m <sup>3</sup> unit	
24.	Performance of hybrids/high yielding varieties with the improve package of practices of cauliflower (Var. <i>Teris</i> )	19.23	2.23:1
25.	Integrated pest management in paddy	29.20	1.43:1
26.	Introduction of low cost Zero Energy Cool Chamber for	Av. Shelf life of fresh vegetables (Bitter	

	shelf life extension of fresh fruits and vegetables	gourd, spine gourd, capsicum, French bean, cow pea and pointed gourd) was extended by 3 – 4 days			
27.	Introduction of dual purpose improved breed of poultry – <i>Vanaraja</i> for backyard	<i>Vanaraja</i> Wt. at Six wk.: 780 g Wt. at Maturity : 2.3 kg Av. Egg weight : 50 g Annual egg production : 150 nos Net return (Rs): 1080 /- bird			3.93:1
28.	Introduction of balanced diet for proper growth and development of carp	Breed	Initial	Final	Net return (Rs.): 132000.00/-  B:C ratio: 2:1
		Catla	10.0 g	1.2 kg	
		Rohu	5.0 g	1.0 kg	
		Mrigal	5.0 g	0.95 kg	
29.	Composite fish culture	Breed	Initial	Final	Net return (Rs.): 114000.00/-  B:C ratio: 1.98:1
		Catla	10.0 g	1.1 kg	
		Rohu	5.0 g	1.0 kg	
		Mrigal	5.0 g	0.85 kg	
30.	Carp seed rearing at backyard pond	Survival : 99% as compared to farmers practice of 80 %			1.98:1
31.	Urea treatment of paddy straw for improving roughage quality	Milk production increase in demo 2 lit/ day/ cow from 1.5 lit/day/cow in farmers practice			
32.	Varietal evaluation in fodder. Var. <i>Kent</i>	Yield: 300 q/ha			

### III. TECHNOLOGIES/ INTERVENTIONS AVAILABLE FOR FARMERS/ OTHERS

**Technologies suitable for agro climatic situation of Hailakandi district are mentioned below:**

- Integrated application of fertilizers and enriched compost on soil fertility and yield of *Sali* paddy (INM)
- Varietal evaluation of performance of vegetables (cabbage, tomato, chilli, cauliflower)
- Minimum tillage with paddy straw mulching in toria in paddy-toria cropping sequence
- Inoculation of Frenchbean seed with *Rhizobium* for increasing productivity
- Adoption of suitable cultivation practices for post flood condition in paddy (Var. *Manohar sali*)
- Varietal evaluation of pulses (Black gram and Green gram)

- Management of insect pest complex in Pulse (Black gram and Green gram)
- Shelf life extension of pineapple by chemical treatment
- Scientific Package and practices of Sali Paddy (var: *Ranjit*)
- Dhaincha Green manuring for N-supplementation in paddy field
- Management of blast disease of Sali paddy (var: *Ranjit*) with fungicides
- Rice-Azolla dual cropping for Nitrogen economy and better yield
- SRI – A resource conservation technology for farmers
- Varietal trial of paddy for high yield and short duration (Var. Chandrama Swarna Sub-1 and Naveen)
- Livelihood improvement through summer oyster mushroom cultivation
- Production and utilization of vermicompost using earthworms
- Integrated pest management in paddy
- Introduction of low cost Zero Energy Cool Chamber for shelf life extension of fresh fruits and vegetables
- Introduction of dual purpose improved breed of poultry – *Vanaraja* for backyard
- Carp seed rearing at backyard pond
- Introduction of balanced diet for proper growth and development of carp
- Composite fish culture
- Urea treatment of paddy straw for improving roughage quality
- Varietal evaluation in fodder. Var. *Kent*

#### IV. KNOWLEDGE INPUT FOR FARMERS

##### **Sustainable livelihood generation through backyard poultry- *Vanaraja*:**

*Vanaraja* breed of poultry is having capacity to lay more eggs, more body weight. They are more disease tolerant and the meat taste i.e similar to that of desi birds. Improved germplasm of dual purpose birds with features like better survivability, attractive feather colour pattern and larger egg size than the desi birds can be a choice for increasing egg and meat production in the district. To introduce *Vanaraja* rearing at farmers backyard, KVK Hailakandi has distributed 300 nos of four weeks old *Vanaraja* chicks to 20 farmers of the district. Both egg production (145 nos./ 500 days) and body weight (2.3 kg at sexual maturity) gain capacity of *Vanaraja* was found satisfactory in the farmers field under low-cost rearing system. The technology is gaining popularity in the district and farmers are visiting KVK office demanding *Vanaraja* eggs for hatching with local broody hens.

##### **Vermicomposting for sustainable management of soil health, fertility and crop yield**

Vermicompost has gaining popularity in agriculture owing to its richness in plant growth promoting nutrients, microbes as well as hormones. Vermicompost also plays important role in soil health and fertility management. There lies a great scope of production of vermicompost in the district as there are abundant raw materials/ substrates of agricultural wastes and animal dung in Hailakandi. An effort was made to produce vermicompost using weed biomass, paddy straw, banana pseudo stem, cowdung in a low-cost vermicomposting tank (size: 5.63 m<sup>3</sup>) that produced 900 q of vermicompost in a three and ½ month composting cycle. Three of the farmers from Durgimara village of Hailakandi earned 30% more income from vegetable cultivation using vermicompost. The technology is being greatly adopted by the farmers of the district.

**V. ACTION PHOTOGRAPHS**



Vermicompost Production at farmers field



Performance of cabbage (var. BC 76) at farmers field



Performance of poultry breed *Vanaraja* at farmers back yard



SRI at farmers field





Technology of summer mushroom cultivation



Fig: Carp seed rearing at farmers back yard pond



Vaccination and health camp



Entrepreneurship development through value addition



Distribution of High Yielding Paddy seed



Awareness on Computer Application



## **VI FAQ**

Q1 How to produce organic fertilization compost by using waste materials?

Ans: By low cost vermicomposting technology.

Q2 Is there any way to test soil samples quickly?

Ans: Yes, by using Rapid Soil Health Test Kit.

Q3 How to produce off season vegetable?

Ans: By adopting protected cultivation technologies (Shade net house).

Q4 Is there any scientific rice cultivation practice in water stress condition area?

Ans: Yes, SRI method can be adopted in water stressed area.

Q5 How to control earthworm attack in summer vegetables?

Ans: Soil drenching with chloropysiphos @ 5ml/ltr of water.

Q6 How to control Ranikhet disease in poultry?

Ans: By vaccinating poultry birds at proper time.

Q7 Is limming important for fish pond?

Ans: Yes , limming not only act as buffer agent maintaining pH level of the pond but also it helps in pond fertilization and also kills the parasite and helps in disease prevention.

Q8 What are the criteria for construction of new pond?

Ans: Although there are many important factors which we need to see before constructing a new pond, important one is topography of the land and physico chemical parameters of water and soil.

Q9 How the self life of fresh fruits & vegetables can be extended?

Ans: By utilizing Zero Energy Cool Chamber or Iceless Bamboo Refrigerator.

Q10 What are the different value added products of mushroom?

Ans: Dried mushroom, mushroom pickle, mushroom sauce and mushroom nuggets.