New Technical Programme – 2023-24

Crop / subject matter	Problem being Investigated	Title of the **experiment**	Objectives	Year of start	Exptl. Details indicating broadly treatments / methodology	Centre proposed	Name of leader	Expected date of completion
1	2	3	4	5	6	7	8	9
Entomology	Biological method of up-cycling organic waste	Establishment of Black Soldier Fly (BSF) mass-production unit		2023-24	1. Black soldier fly will be used for up-cycling the organic waste 2. **Methodology**: Mass-production at ZAHRS, Brahmavar and CMC, Udupi	Brahmavar	Revanna Revannavar	2025
Entomology	Coffee stem borer	Evaluation of ant-attractants for coffee stem borer management		2023-24	Treatments: 1. Vegetable oil (VO), 2. Jaggery, 3. VO +Jaggery, 4. VO+ragi flour+Jaggery, 5. VO+ragi flour+Agri. Lime+Jaggery, 6. Untreated control Methodology: Applied once at the first week of coffee stem borer emergence period.	Brahmavar	Revanna Revannavar	2025
Entomology	Paddy earhead bug	Evaluation of entomopathogens against paddy ear head bug		2023-24	**Treatments:** 1. *Lecanicillium saksenae* 2. *Beauveria bassiana*, 3. *Metarrhizium anisopliae* 4. Thiamethoxam 5. Melathion 6. Untreated control **Methodology:** Applied at twice at fortnightly intervals from inflorescence intiation stage of paddy.	Brahmavar	Revanna Revannavar	2025

1	2	3	4	5	6	7	8	9
Paddy	Direct Sowing of Paddy	Design and development of sowing technique/device for paddy.	1. Design and development of concept/ prototype 2. Evaluation of newly developed technique/prototype for paddy. 3. To study the cost economics	2022-23	T1 =.Drum seeder T2 = Developed Prototype Control = Broad casting	ZAHRS, Brahmavar	Dr. Shankar Er. V.R. Vinod. Dr. Sharnappa Jangandi Er. Vidyashree	2023-24
Jasmine	Udupi Jasmine Knotting machine	Design and development of Udupi Jasmine Knotting machine.	1. Design and development of Jasmine Knotting machine. 2. Evaluation of newly developed Jasmine Knotting machine over traditional practice. 3. To study the cost economics	2022-23	T1 = Traditional Practice T2 = Developed Prototype	ZAHRS, Brahmavar	Dr. Shankar Er. V.R. Vinod. Dr. Sharnappa Jangandi Er. Vidyashree	2023-24
Coconut	Establishment of Udupi Coconut Kalparasa Rural Mart	Lack of market facility for Kalparasa and its bi-products.	1.Providing Marketing opportunity for Kalparasa. 2. Availability of Kalparasa in cities and Bus stands. 3.Providing employment opportunity to the youth and prevent urban migration	2023-24	The coconut sap is collected and scientifically processed in a controlled atmosphere to prevent fermentation thus making of Neera a zero alcoholic beverage. KVK Brahmavara is closely working with the UKAASA FPO which is involved in extraction of Kalparasa from the gardens of FPO farmers. Marketing is a problem. So, KVK is intervening in marketing of Kalparasa in different areas of the district.	Udupi 2 Units, Manipal DC office, KMC Manipal, Japthi, Kundapura, Karkala, Brahmavara,	Dr. Dhananjaya B. Dr. Chaitanya H S, Dr. Mohankumar, Dr. Sachin U S.	2024-25

1	2	3	4	5	6	7	8	9
	Improvement of Koraga Community through IFS Inter vension	1. Poor health and Sanitation 2. Drastic decline in population over the years 3. Not interested to settle in agriculture	1. Strengthen the production system recourse base of Koraga Community. 2. To assess the existing socio economic profile. 3. To provide different livelihood alternatives through IFS. 4. To provide technical and entrepreneurial skill through capacity building activities.	2023-24	Study will be conducted in Scheduled Tribe (Koraga) community settlements located in Udupi district of Karnataka 50 respondents who are having land will be selected. Demographic profile, socioeconomic and cultural status of the community will be studied. Introduction of suitable interventions Integrated crop planning and management Livestock management Small scale Agro based industries Marketing approaches and linkages	KVK and ZAHRS, Brahmavara	Dr. Dhananjaya B. Dr. Chaitanya H S, Dr. Mohankumar, Dr. Laxman Dr. Shankar M Mr. Shrinivas H Hulkoti Dr. Sachin U S.	2025-26
	Establishment of Aqua-Park and Business incubation centre to augment socio-economic prominence through public private partnership approach	Non availability of fingerlings, floating feed, hatchery, processing and cold storage in coastal Karnataka	1. Establishment of freshwater fish hatchery, nursery, parent block and grow out block 2. Establishment of feed mill to give cost effective feed to the farmers 3. Establishment of supply chain mechanism for effective marketing	2023-24	KVK will identify the suitable resources for freshwater fish culture. Formation of FPO for the purpose of leading the venture into PPP mode. Development of App on resource and create a data base of both resources and production. Establishment of hatchery and production unit will be established at KVK,	KVK and ZAHRS, Brahmavara	Mr. Shrinivas H Hulkoti Dr. Dhananjaya B. Dr. Chaitanya H S, Dr. Shankar M Dr. Sachin U	2025-26

			facilities 4. Establishment of Ice plant and cold storage unit 5. Identification of available resources for freshwater fish culture 6. Development of suitable app and create a data base on resources and production 7. Development and enhancement of freshwater fish production through FFPO 8. Employment generation and doubling farmers income		Brahmavara to fulfill the seed requirement of the district and to supply healthy and ideal sized fish seed for better survival and production. Feed mill also will be established at KVK, Brahmavara and provide the feed at an affordable price to the farmers. As a pilot study Fish production will be done initially in 50 ha of one particular Taluk where we get suitable ponds for the culture that can be identified only after the survey. Freshwater fish species like IMC, Exotic Carps and GIFT Tilapia seeds will be reared in nursery tanks and distributed to the farmers		S.	
Vegetable crops	Enhancing Off Season Productivity of Vegetable Crops Under Rain Shelter in Coastal Karnataka"	Vegetable cultivation in coastal Karnataka is reducing due to unfavourable weather conditions *viz*., heavy rain, high relative humidity during *kharif*	1. To standardize suitable rain shelter model for off season (cultivation of vegetable crops in coastal Karnataka. 2. To develop Good Horticultural Practices for vegetable cultivation under rain shelter.	2023-24	Rain shelter is a naturally ventilated low cost green house. It is a structure with only roof cladding and open sides. In this study performance of vegetables (brinjal (variety- Mattugulla), tomato, okra (variety-white velvet), spine gourd, leafy vegetables (amaranth, Malabar spinach)) will be evaluated during *kharif* and	KVK and ZAHRS, Brahmavara	Dr. Chaitanya H S, Dr. Dhananjaya B. Dr. Lakshman, Dr. Naveen N.E. Dr. Sachin U	2025-26

			3. To assess the performance of different vegetable crops of coastal Karnataka under rain shelter during kharif and summer 4. To popularize the superior rain shelter model to the vegetable growers of coastal Karnataka.		summer in different models of rain shelter of area 300 sqm with roof ventilation and without roof ventilation compared with cultivation under open condition.		S.	
Paddy	To identify suitable high yielding red rice genotype for salt affected areas of Coastal Karnataka	Screening of red rice (Oryza sativa L.) genotypes for salinity tolerance in Coastal Karnataka		2023-2024	RCBD with 2 replication 26 rice genotypes Resistant and susceptible Check(Local and national)	ZAHRS, Brahmavar (Farmers Salt affected field)	Leader Dr. Shridevi A. Jakkeral Dr. K. V. Sudhir Kamath Dr. S. M. Jayaprakash Dr. Shashikala Kolkar Dr. Arathi Yadwad	2
Paddy	Assessment of genetic variability at molecular level among red rice germplasm through DNA fingerprinting by SSR markers.	Molecular Characterization of Red Rice Germplasm (*Oryza Sativa L.)* of Coastal Karnataka		2024	Number of entries :35 SSR marker : 62 DNA Extraction : by cetyl trimethyl ammonium bromide (CTAB) method	Dept. of GPB, COA, KSNUAHS, Navile, Shivamogga	Leader Dr. Shridevi A. Jakkeral Dr. Dushyanthkumar B.M Dr. Lakshmana D. Dr. Shashikala Kolkar	1

1	2	3	4	5	6	7	8	9
Groundnut	To identify suitable high yielding groundnut varieties for rabi/summer of Coastal Karnataka	Evaluation of suitable high yielding groundnut (*Arachis hypogeae* L.) varieties for rabi/summer of zone 10		2023-2024	RCBD with 2 replication 20 groundnut varieties Resistant and susceptible Check(Local and national)	ZAHRS, Brahmavar	Dr. Shridevi A. Jakkeral Dr. K. V. Sudhir Kamath Dr. Harish B. N. Dr. Shashikala Kolkar Dr. Arathi Yadwad	2
Paddy	1. To assess the farmers perception and knowledge in adoption of ZAHRS released rice varieties 2. To study the socio-economic factors influencing in adoption of ZAHRS released rice varieties 3. Problems and suggestions as perceived by the farmers	Impact of KSNUAHS Released Rice verities for Coastal Zone'		2023	Study Area: Udupi, Mangalore and a part of Uttar Kannada district Sample size : 250 Research Design: Ex-post facto research design Sampling Procedure: Simple Random Sampling Statistical tools: frequency and percentages etc.	ZAHRS, Brahmavar	**Dr. Mohanakmara V,** **Dr. Shridevi A Jakkeral,** Dr. Lakshmana Dr. Dhananjaya B Dr. K. V. Sudhir Kamath,	2025

1	2	3	4	5	6	7	8	9
Cashew Breeding	Cashew Crop Improvement	Genetic improvement of cashew for nut yield and quality through hybridization and seedling selection		2023	**Objectives** 1. To collect and evaluate cashew varieties/germplasm for nut yield and quality 2. Hybridization among the superior cultivars with higher yield and bold/medium nut size 3. Seedling evaluation of promising genotypes to select desirable plant types 4. Breeding for special traits like cashew apple quality and dwarf plant types **Methodology** **Objective 1.** Scions of Cashew germplasm with diverse origin/traits available at Directorate of Cashew Research, Puttur and other areas of coastal and transitional zone will be collected. Grafts will be prepared for planting at AHRS, Ullal for further evaluation and selection. **Objective 2**. Seedling evaluation of promising varieties selected based on nut yield and quality traits will be attempted by collecting 50 nuts each from nine varieties viz., Ullal 1, Ullal 3, UN 50, VRI 3, Bhaskara, Priyanka, Vengurla 7, Amrutha and Sulabha. These plants will be planted at AHRS, Ullal following RBD with two replications. **Objective 3.** Based on the previous evaluation/studies on varietal performance of cashew genotypes	AHRS Ullal and ZAHRS Brahmavar	**Leader** Dr. Arati Yadawad Dr. Maruthesh, A. M., Dr. Sunil, .	2028 Funding support Rs. 2,00,000 =00 per year

					and on-going evaluation at AHRS, Ullal, promising varieties of cashew will be selected. Hybridization is attempted among the diverse genotypes with desirable traits to combine the characters of both the parents and to exploit the heterosis/hybrid vigour. **Objective 4** Among the plant material generated, selection will be attempted to identify promising trees with special traits like Apple quality, dual types, dwarf/compact plant types.			
Okra Breeding	Genetic enhancement of YVMV resistance/tolerance in elite local variety of okra	Collection and evaluation of okra varieties for YVMV resistance and transfer of resistance into Halu Bhindi		2023	Objectives 1.Purification of Halu bhende/white bhende 2. To collect and evaluate okra varieties for Yellow Vein Mosaic disease 3.Transfer of resistance/tolerance to YVMV into Halu Bhende through back cross breeding 4.Evaluation of progenies and selection of YVMV resistant/tolerant lines in the background of Halu bhende. Treatments : 8 varieties Replications : 3 Design : RBD Location :AHRS, Ullal,/ZAHRS, Brahmavar Seasons: Kharif and Rabi 2023 & 24	ZAHRS Brahmavar	Dr. Arati Yadawad 1) Dr. Marutesh A. M., 2) Dr. Chaitanys H S Assistant Professor	2025 Rs. 1,00,000=00 per year

1	2	3	4	5	6	7	8	9
Turmeric Improvement	Identification of promising turmeric genotypes with higher yield and curcumin content	Germplasm collection, characterization and evaluation of turmeric genotypes		2023	Objectives 1. To collect and evaluate turmeric genotypes for rhizome yield and quality 2. Selection of promising varieties with higher yield and curcumin content Treatments : 20 varieties Replications : 2 Design : RBD Location :AHRS, Ullal Season: 2023 and 2024 Kharif Observations to be recorded 1. Plant height 2. Number of tillers per plant 3. Number of leaves per plant 4. Leaf length 5. Leaf width 6. Leaf area 7. Number of primary fingers per rhizome 8. Number of secondary fingers per rhizome 9. Weight of mother rhizomes/plot 10. Weight of finger rhizomes per plot/plot 11. Curcumin content% Data will be analysed and promising genotypes will be selected.	AHRS Ullal And ZAHRS Brahmavar	Leader Dr. Arati Yadawad Dr. Marutesh A. M., Dr. Brijesh A. S.,	2025 Rs. 1,25,000=00 per year

1	2	3	4	5	6	7	8
Paddy / Drone	To test the efficiency of herbicide at recommended dose and varied levels and To assess the scope for reducing herbicide dosage using agricultural drone	Bio-efficacy of Pre-emergent herbicide Pendimethalin 38.7%CS applied through agriculture drone against broad spectrum of weeds in rice crop	2023	Bioefficacy study of Pendimethalin 38.7% CS at different dosage (150 ml per ha to 1500ml/ha) No of Treatments = 13 Design - RCBD	AHRS, Kathalgere and AHRS Honnavile	**Dr. Naveen.N.E.** Scientist (Agronomy) ICAR- Krishi Vigyan Kendra, Brahmavar	2025
Paddy	To evaluate the performance of spraying equipment types.	Evaluating the performance of conventional spraying equipment types Vs Agriculture Drone using Nano urea liquid for rice productivity	2023	Drone Sprayer (Battery operated with Hexacopter) Knapsack Electro Battery Sprayer (16 lit tank) Knapsack Power Operated Sprayer (20 lit tank) Foot Sprayer (Hydraulic Energy Sprayer) No of Treatments = 07 Design - RCBD	AHRS, Kathalgere and ZAHRS Brahmavar		2025
Ridge Gourd	Secondary nutrients & soil acidity.	Management of soil acidity and Ca-Mg nutrition in ridge gourd	2023-24	Treatment details: *T_1 : Package of practice (RDF) (NPK= 50:50:50 kgs/ha)* *T_2 : T_1+ Lime equivalent to 50% exchangeable acidity* *T_3 : T_1 + lime equivalent to 50% exchangeable acidity + 10 kg magnesium sulphate* *T_4 : T_1 + Lime equivalent to*	Zonal Agricultural & Horticultural research Station, Brahmavar	Dr. Jayaprakash, S.M. (Leader) Dr. Lakshman (Co-leader) Dr. Jayaprakash, R. (Co-leader)	2024-25

				50% exchangeable acidity + 20 kg magnesium sulphate *T_5 : T_1 + lime equivalent to 100% exchangeable acidity* *T_6 : T_1 + lime equivalent to 100% exchangeable acidity + 10 kg magnesium sulphate* *T_7 : T_1 + lime equivalent to 100% exchangeable acidity + 20 kg magnesium sulphate* *T_8 : T_1 + Dolomite application equivalent to 50% exchangeable acidity* *T_9 : T_1 + Dolomite application equivalent to 100% exchangeable acidity*		Dr. Chaitanya, H.S. (Co-leader)	
Black Pepper	Harvesting device	Fabrication and development of a battery operated pepper catcher for harvesting	2023	Design and adoption of a battery-operated pepper catcher for the harvesting unit	ZAHRS, Brahmavar	Er. V. R. Vinod Dr. M. Shankar	2024 GoK
Areca nut	De-husking *chali*areca nuts	Design and fabrication of a power operated de-husking machine for dry areca nut	2023	Design and adoption of a power unit to areca nut de-husking unit	ZAHRS, Brahmavar	Er. V. R. Vinod Dr. M. Shankar	2024 GoK
Jack Fruit	Skin peeling Jack fruit	Design of a power operated jackfruit skin peeler	2023	Design and development of a blade unit for Jackfruit skin peeler	ZAHRS, Brahmavar	Er. V. R. Vinod Dr. M. Shankar	2024 GoK