AGENDA NOTES

Agenda Item No. 01

Chairman's Opening Remarks about KVK

a) Establishment details

S. No	Particulars	Details
01	Name of the KVK	Tumakuru-A
02	Postal address of the KVK	**KRISHI VIGYAN KENDRA**, HIREHALLI, NH-4, TUMAKURU-572 168
03	Telephone number/Fax/email and Web site address of the KVK	**Phone**: 0816-2243175 **Fax** :0816-2243177 **Email:** iihrkvk@gmail.com **Website:** www.iihrkvk.org
04	Name of the Host Organization	**INDIAN INSTITUTE OF HORTICULTURAL RESEARCH**
05	Postal address of the Host Organization	**INDIAN INSTITUTE OF HORTICULTURAL RESEARCH** Hessaraghatta Lake Post, Bengaluru-560089
06	Telephone number/Fax/email and Web site address of Host Organization	**Phone :**080-28466420-423 **Fax : 080-28466291** **Email :** director@iihr.ernet.in, iihrdirector@gmail.com **Website :** www.iihr.ernet.in
07	Sanction Order Details	2009-10 (vide ref no. F.No.16(1)/2009-AE-I of Assistant Director General (AE), ICAR, New Delhi dt. 24.03.2009
08	Name of the Programme Coordinator	Dr. N. Loganandhan
09	Total land area with the KVK in ha.	**16.24 ha**

b) Mandate

The overall mandate of the KVK is to develop and disseminate location specific technological modules at district level through Technology Assessment, Refinement and Demonstration and to act as Knowledge and Resource Centre for agriculture and its allied activities. The specific activities to carry out this mandate are:

- Conducting on-farm testing to identify the location specificity of agricultural technologies under various farming systems
- Organizing frontline demonstrations to establish production potential of various crops and enterprises on the farmers' fields
- Organizing need based training of farmers to update their knowledge and skills in modern agricultural technologies related to technology assessment, refinement and demonstration, and training of extension personnel to orient them in the frontier areas of technology development.

- Creating awareness about improved technologies to larger masses through appropriate extension programmes.
- Production and supply of good quality seeds and planting materials, livestock, poultry and fisheries breeds and products and various bio-products to the farming community.
- Work as resource and knowledge centre of agricultural technology for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district.

c) Staff details

Sl. No.	Sanctioned Post name	Name of the incumbent	Designation	Discipline	Qualification	Pay Scale	Date of joining	Permanent/ Temporary
01	Programme Co-ordinator	Dr. N.Loganandhan	PC	Agril. Extn	Ph.D. Agri.	37400-67000+9000	02.08.2013	Permanent
02	SMS	Sri K.N. Jagadish	SMS	Agril. Extn	M.Sc. Agri.	15600 - 39100+5400	17.11.2009	Permanent
03	SMS	Sri P.R.Ramesh	SMS	Soil Science	M.Sc. Agri.	15600 - 39100+5400	17.11.2009	Permanent
04	SMS	Sri Prasanth J.M	SMS	Horticulture	M.Sc. Horti.	15600 - 39100+5400	24.11.2009	Permanent
05	SMS	Sri B. Hanumanthe Gowda	SMS	Plant Protection	M.Sc. Agri.	15600 - 39100+5400	02.12.2009	Permanent
06	SMS	Smt RadhaR.Banakar	SMS	Home Science	M.Sc. Home Science	15600 - 39100+5400	05.12.2009	Permanent
07	SMS	Dr. Somashekhar	SMS	Plant Breeding	Ph.D. Agri.	15600 - 39000+5400	07.12.2009	Permanent
08	Prog.Asst. Farm Manager	Sri H.D.Parashuram	Farm Manager	Horticulture	B.Sc.-Horti.	9300 - 34800+4200	25.7.2013	Permanent
09	Prog.Asst. (Computer)	Ms. Jyoti Appu Naik	Prog.Asst. (Computer)	Information Science	B.E. (IS)	9300 - 34800+4200	30.09.2009	Permanent
10	Prog.Asst. (Lab Tech.)	Mr. Shashidhara K N	Prog.Asst. (Lab Tech.)	Crop Physiology	M.Sc. Agri.	9300 - 34800+4200	17.11.2012	Permanent
11	Assistant	Vacant	Assistant			9300 - 34800+4200		
12	Jr. Stenographer	Smt Veda Kurnalli	Jr. Steno		DCP	5200 - 20200+2400	17.02.2010	Permanent
13	Driver	Sri M.H. Ningappa	Driver	Tractor Driver	S.S.L.C.	5200 - 20200+2000	30.12.2009	Permanent
14	Driver	Sri Hemanth Kumar	Driver	Jeep Driver	P.U.C.	5200 - 20200+2000	04.01.2010	Permanent
15	Supporting staff	Sri G.Manjanna	Supporting Staff	Supporting Staff	S.S.L.C.	5200 - 20200+1800	01.11.2011	Permanent
16	Supporting staff	Sri C.M. Anjanappa	Supporting Staff	Supporting Staff	-	5200 - 20200+1800	16.10.2015	Permanent

Agenda Item No. 02

Constitution of SAC and self-introduction by SAC members and invitees

The following is the constitution of Scientific Advisory Committee Meeting

1) Vice Chancellor of SAU/Director of ICAR Institute/Chairman of the Host Organization of NGO - Chairman
2) ATARI, Zone VIII, Bengaluru - Member
3) Director of Extension - do-
4) Director/Head of the nearest ICAR Institute - do-
5) Assistant Director of Research / Assistant Director of Extension of SAU - do-
6) Officials from Departments of Agriculture/Horticulture/ Agricultural Engineering/Animal Husbandry/Fisheries/ Sericulture/ Irrigation/Forestry/Soil Conservation/ Social Forestry/Agro-forestry/Small Scale Industries/DIC etc. -Members
7) Project Director, ATMA - Member
8) Lead Bank Official - do-
9) Manager/AGM, NABARD - do-
10) Official from AIR / FM Radio - do-
11) Official from Doordarshan - do-
12) Two representatives from farmers Members
13) Two representatives from farm women - do-
14) Programme Coordinator Member Secretary

Other invitees if any

(Accordingly the name and designation of the above listed committee members are given below)

The following is the constitution of Scientific Advisory Committee Meeting

1) Dr. M. Anandraj, Director, IIHR, Bengaluru - Chairman
2) Dr. Srinath Dixit, Director, ATARI, Zone VIII, Bengaluru - Member
3) Dr. K.Jagadeeshwara, Director of Extension, UAS-, Bengaluru - Member
4) Dr. Raghvendra Bhatta, Director, NIANP, Bengaluru - Member
5) Dr. Nuthan,D., Assistant Director of Research, UAS, Bengaluru - Member
6) **Officials from State Department** - Members
    1. Dr. Roopadevi, JDA, Department of Agriculture, Tumakuru
    2. Dr. Savitha G., DDH, Horticulture, Tumakuru
    3. Dr. N.Rajashekhar, DD, Animal Husbandry, Tumakuru
    4. Sri H.K.Manjunath, SAD, Fisheries Dept, Tumakuru
    5. Sri M.V.Chandru, DD, Sericulture, Tumakuru
    6. Sri Y.Chakrapani, DCF, Social Forestry, Tumakuru
    7. Sri L.Nagaraju, Joint Director, DIC, Tumakuru
    8. Sri Nanjegowda, DD, Department of Women and Child Development, Tumakuru
7) Dr. Ramesh N., PD, ATMA, Tumakuru - Member
8) Sri Jayaramaiah, Chief manager, Lead Bank Official, Tumakuru - Member
9) Sri J.S.Veerabhadran, DDM, NABARD, Tumakuru - Member
10) Sri Shivaji Ganeshan, PC, Radio Siddhartha, Tumakuru - Member

11) Sri Mohan, DD Official from Doordarshan, Tumakuru - Member

12) Two representatives from farmers - Members

1. Sri Mahesh,N.M,, D.Nagenahalli, Koratagere, Tumakuru
2. Sri Prabhakar, PanchvatiFarm, Urdigere Hobli, Tumakuru

13) Two representatives from farm women - Members

1. Smt Mangalagowramma, Srirangabadavane, Tumakuru
2. Smt Gowramma, Pemanahalli, Tumakuru

14) Dr. Loganandhan N., Sr. Scientist & Head, KVK, Hirehalli - Member Secretary

Other Invitees:

1. Sri Kumar Nagaraj, Member, APEDA, Karnataka.
2. Dr. A.K.Chakravarthy, Head, Division of Entomology, IIHR, Bengaluru
3. Dr. A.T.Sadashiva, Head, Division of Vegetable Crops, IIHR, Bengaluru
4. Dr. M.R. Dinesh, Head, Division of Fruit Crops, IIHR, Bengaluru
5. Dr. R.Venkattakumar, Head, TTC, IIHR, Bengaluru
6. Dr. A.N. Ganeshmurthy, Prl. Scientist, SS & AC, IIHR, Bengaluru
7. Dr. G. Karunakaran, Sr. Scientist & Head, CHES, Hirehalli
8. Dr. T.Vasanthkumar, Prl. Scientist, Medicinal & Aromatic Plants, IIHR, Bengaluru
9. Dr. B.T.Rayudu, Prl. Scientist, ATARI, Zone VIII, Bengaluru
10. Dr. Rajendra Hegde, Head, NBSS & LUP, RC, Bengaluru
11. Dr. B.K. Ramachandrappa, Chief Scientist, AICRPDA, UAS, Bengaluru
12. Dr. Prakash Patil, Project Coordinator, AICRP (Tropical Fruits), IIHR, Bengaluru
13. Dr. K. Hima Bindu, Prl. Scientist, Medicinal & Aromatic Plants, IIHR, Bengaluru
14. Dr. M.A.Suryanarayna, Prl. Scientist, Medicinal & Aromatic Plants, IIHR, Bengaluru
15. Dr. Chandrashekhar, MD, KMF, Tumakuru
16. Dr Senthil Kumar, Scientist, CHES, Hirehalli
17. Dr Saju George, Sr. Scientist & Head, KVK, Gonikoppalm
18. Dr. Sukanya, Sr. Scientist & Head, KVK , Konehalli, Tiptur
19. Dr. Prabhu Ganigar, Head, ARS, Pavagada
20. Sri Vijaykumar T., Krisi Pandit Awardee, Thovinakere, Koratagere
21. Engg. N.V. Ramamurthy, AWARE, NGO, Tumakuru
22. Sri Dinesh Poojary, Project Director, SKRDP, NGO, Tumakuru
23. Sri G.Raghu, Project Director, ORDER, NGO, Tumakuru
24. Mrs. Jayalakshmi, WLARS, NGO, Madhugiri
25. Mr. Raghavendra, Team Leader, DHAN Foundation, Tumakuru
26. Sri Bhaskar, PD, Mother NGO, Sira

Agenda Item No. 03

Action Taken Report on the previous SAC meeting

<table>
<tr><th>Sl. No.</th><th>Recommendation</th><th>Proposed by</th><th>Action Taken (to be quantified)</th><th>Specific constraints in taking action / for not taking action</th></tr>
<tr><td>1.</td><td>Exchange programmes between two KVKs located in Tumakuru district is benefitting farmers of Tumakuru district, and this should be continued.</td><td>Dr.Sukanya, Sr. Scientist & Head, KVK , Konehalli, Tiptur</td><td>SMS (Horticulture) & SMS (Soil Science) Participated in the Training Programmes organized by KVK Tiptur as Resource persons on Coconut production practices and Soil, Water and nutrient management. Date: 13.10.14 & 06.11.14</td><td></td></tr>
<tr><td>2.</td><td>Like Vegetables, flower crops can also be raised in pro-trays and given to farmers</td><td rowspan="2">Dr.Tejeswani, Principal Scientist, IIHR, Bengaluru</td><td>Production and sale of Protray based vegetable seedlings initiated for roof and kitchen garden. Around 95000 Nos. of Aster Seedlings produced and 85000 Nos. were sold.</td><td></td></tr>
<tr><td>3.</td><td>Flower crops can be promoted in plantations like Coconut, Areca nut, etc., and demos can be taken up in KVK Farm</td><td>Flower crops like Tube rose, Marigold taken as a demonstration at KVK farm and Aster was taken as a FLD in the Farmers field as well as KVK Farm.
<table><tr><td>Tuberose Seedlings sold</td><td>16000</td></tr><tr><td>Aster seedlings sold</td><td>85000</td></tr></table></td><td></td></tr>
<tr><td>4.</td><td>ARYA Programme could be intensified.</td><td rowspan="2">Mr.J.S.Veerabhadran, DDM, NABARD, Tumakuru</td><td rowspan="2">Vocational Training: (Coconut friends, Mushroom Cultivation) & IFS Programmes are organized keeping Rural Youth in consideration.
<table><tr><th>Date</th><th>No. of Participants</th></tr><tr><td>10 .11.14 to 15.11.14</td><td>20</td></tr><tr><td>18.11.2014</td><td>17</td></tr><tr><td>23.1.2015</td><td>14</td></tr><tr><td>1.8.2015</td><td>26</td></tr><tr><td>6.10.2015</td><td>21</td></tr><tr><td>13.1.2016</td><td>27</td></tr></table></td><td></td></tr>
<tr><td>5.</td><td>For sustainable profit, IFS has to be promoted.</td><td></td></tr>
</table>

6.	Emphasis on Farmers' Producer Organization (FPO) is need of the hour.		Technology backstopping for FPOs of ORDER NGO Kasturi Rangappa Nayaka Thotagarika Krushi Uthpannagala Samaskarane Mattu Marata Sowharda Sahakarai (600 Farmers, 2015) SWAVALAMBI Agriculture Crop Producer Organisation (200 Farmers, 2015) Date: 6.11.2015 at Kumbarahalli, Sira	
7.	Beekeeping programmes has to be conducted regularly and NABARD funded programme has to be supported by KVK.		One training was organized. Additional Five Honeybee boxes were erected at KVK farm. Efforts were taken to cover entire KVK Farm with Honey bee boxes. Date:14 to 16 July, 2014	
8.	Fodder Requirement in the country is 22 lakh MT. But the supply is only 15 lakh MT. This gap has to be met out in the future. In this direction, NIFTD is a good initiative	Dr.Manjunath, A.D., Dept of Veterinary	Through NIFTD, it is demonstrated (25 Nos.) that green fodder yield was increased to the extent of 31.7% in NB Grass, 61.55% in Multicut fodder sorghum and 37.97% in fodder cow pea. In an area of 5 ha demonstration on Fodder Crops were taken.	
9.	Foot and Mouth disease has become a major problem. Through effective programs this can be controlled		An awareness programme organized at D Nagenahalli in Collaboration with NIANP, Bengaluru on 25th February 2015, One more awareness programme organized at Baraka village in Collaboration with NIANP, Bengaluru on 12th December 2014 Meeting with State Animal husbandry department was held at u on various schemes of State Government.	
10.	Market rate issue has to be addressed and the programmes which creates awareness about the prices of		More than 15 Nos. of Training Programmes were organized in collaboration with marketing Board ,	

	market has to be given importance.	Mr. Bhaskar, MOTHER NGO, Sira	Govt. of Karnataka in Sira, Koratagere, Tumakuru, C.N.Halli taluks of Tumakuru District were covered.	
11.	Programmes related to Drought mitigation and Post harvest technologies need be given more focus		NICRA Project, CA Project and focus on Drought mitigation-A book published on Implementation of TDC of NICRA- A case study from D. Nagenahalli village of Tumakuru district. FLD on Value Addition and Processing of Ragi is being conducted and under this Training programme was also conducted on 10.9.2015	
12.	High density planting in banana is a good technology, where farmers are to be given full package.	Dr. Prakash Patil, IIHR, Bengaluru	FLD was initiated on HDP in Banana with minimal critical inputs. A Field day was conducted on 07.11.2015	
13.	Mass media approach has to be adopted for dissemination of the technologies	Dr.Krishnamurthy , JD of Agriculture	KMAS, Radio and TV Programmes, Social Media, (Facebook, Whats App) Coverage in Local News papers are given due importance for dissemination of the technologies.	
14.	The cooperation of Line department & NGO has to be taken to achieve the objective of the demonstration, training, etc.,		The Cooperation of All Line Departments – Agricultural , Horticultural and NGOs like MOTHER, AWARE, AVISHKAR, SKRDP, WLARS, ORDER , DHAN etc., is kept in good spirit for demonstration, training, etc.,	
15.	Exposure visit for farmers have to be arranged.	Ms .Jayalaxmi, WLARS NGO, Madhugiri	Exposure visits were arranged as detailed below. **Particulars** | **Date** ICAR Foundation Day- IIHR, | 16.07.2014	

<table>
<tr><td></td><td></td><td></td><td><table>
<tr><td>Bengaluru</td><td></td></tr>
<tr><td>D.Nagenahall iNICRA village</td><td>31.10.2014</td></tr>
<tr><td>Panchavatti Organic farm</td><td>14.11.2014</td></tr>
<tr><td>International Exhibition at IIHR and BIEC, Bengaluru</td><td>9-10 January 2015</td></tr>
</table></td><td></td></tr>
<tr><td>16.</td><td>New varieties have to be included in the farmer's participatory seed production programmes.</td><td>Dr.B.T.Rayudu, Principal Scientist, ATARI, Zone VIII, Bengaluru</td><td>Onion- Arka Kalyan, French bean- Arka Suvidha and Okra- Arka Anamika Seed Production is being implemented in selected villages of Tumakuru District.
Onion Seed Production in farmers field-3 Acre</td><td></td></tr>
<tr><td>17.</td><td>Compiling the outcome of technologies disseminated through OFT's and FLD's is important.</td><td></td><td>A book on Activities and Achievements of KVK Hirehalli Tumakuru 2010 - 2015 (outcome of technologies disseminated through OFT's and FLD's) released on 7th August 2015 during Kharif Awareness Programme.</td><td></td></tr>
<tr><td>18.</td><td>Tumakuru is a major district growing Coconut, where water management is crucial. Technologies pertaining to this have to be demonstrated.</td><td>Dr.Sairam, Principal Scientist, ATARI, Zone VIII, Bengaluru</td><td>Water management related topics are covered in Coconut Friends Training.<table>
<tr><th>Date</th><th>Particulars</th></tr>
<tr><td>13.10.14</td><td>Soil and Water Management in Coconut- KVK, Tiptur</td></tr>
<tr><td>06.11.14</td><td>Drip Irrigation & Water use efficiency in Coconut - KVK, Tiptur</td></tr>
<tr><td>10 to 15th Nov,2014</td><td>Drip Irrigation & Soil, Water use efficiency in Coconut - KVK, Hirehalli</td></tr>
<tr><td>26.11.15</td><td>CHD on coconut development DOH at</td></tr>
</table></td><td></td></tr>
</table>

			Karadigere	
19.	New technologies of horticulture has to be established especially in Mango, Guava, etc.,	Dr.L.B Naik, IIHR , Bengaluru	Efforts were taken to introduce new technologies like HDP in Mango (360 plants) under CHD Programme, Guava -Arka Rashmi (20 Nos) Arka Kiran (25 Nos), Graviola (40 Nos) block, four Tuberose varieties (5000 Nos.) and Protected cultivation in Vegetables and Flower Crops (160m2) were demonstrated in KVK Farm. Healer cum Sealer-384 kg, Fruit Fly Traps- 4000& Mango Special - 1422 kg	
20.	Seedlings of various fruits and plantation crops should be developed in KVK.		Around 105915 Nos. Seedlings of Fruit Crops, Flower Crops and Plantation crops were produced and sold to the 649 Nos. of Farmers.	
21.	Animal component has to be included in the KVK Programme including fisheries.	Dr. M.R.Hegde, Chairman, RPME Cell, IIHR, Bengaluru	One Jercy, Four Hallikar breeds of Cattle , Five Bunnur breeds of Sheep, Poultry breeds like Aseel, Kaveri, Chabro and local, 500 Nos. of common carps were introduced in farm under various schemes.	

Agenda Item No.04

Overall progress report and action plan for forthcoming season

a) Agricultural scenario

i) Major farming systems/enterprises

Dry Land Agriculture
Dry Land Horticulture
Dairy

ii) Details of Problems and Thrust Areas

S. No	Name of the Operational Village	Crop/ Enterprise	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions implemented
1	**Tumakuru Taluk** Haraluru, Hirehalli, Kolihalli, Anupanahalli, Yallapura Urdigere,	Groundnut, Maize, Paddy,Ragi, Redgram,Tomato, Brinjal,Mango,Sapota, Arecanut, Coconut, Banana Aster	Water Scarcity, Low Yield ,Old varieties, Poor Soil Management, Brinjal Shoot and Fruit Borer, Mono cropping	1.Integrated Crop Management 2.INM and Soil Test based Fertilizer application 3.Integrated Pest & Disease Management 4.Post harvest technology in Vegetables and Fruits	02- OFT 14 - FLD Trainings, Field days
2.	**Koratagere Taluk** D.Nagenahalli, Baichenahalli, Vadderahalli, Kollala	Maize, Paddy, Ragi, Redgram, Tomato, Banana, Groundnut, Mango, Aster, Frenchbean, Brinjal &Marigold	Water scarcity, low yield, local variety, Delayed monsoon, Monocropping	1. Integrated Crop Management 2. INM and Soil Test based Fertilizer application 3. Integrated Pest & Disease Management 4. Post harvest technology in Vegetables and Fruits	3- OFT 9–FLD Training, Field days
3.	**Madugiri Taluk** Hanumanthapura Siddapura, Midigeshi	Groundnut, Ragi, Arecanut, Maize, Pomegranate, Tomato, Mango , Aster, Frenchbean, Brinjal, Marigold			
4	**Pavagada Taluk** Arasikere, Mangalavad, Madde	Groundnut, Pomegranate, Ragi, Maize, Tomato, Redgram ,Tamarind, Mango	Water Scarcity, Low yield, Local varieties, Low Soil Fertility, Monocropping, Bacterial Blight and wilt in Pomegranate	1. Integrated Crop Management 2.INM and Soil test based fertilizer application 3.Integrated Pest & Disease Management	01-OFT 05 - FLD Trainings Field days
5	**Sira Taluk** Kataveeranahalli, Kallambela Sakshihalli, Kumbarahalli, Ganadahunase	Groundnut, Papaya, Toamto, Ragi, Maize,Redgram, Arecanut, Brinjal, Pomegranate, Mango,Aster, Frenchbean, Marigold	Local Variety, Tikka Disease in Groundnut, Low Yield, Pest and Disease in Redgram , Water Scarcity	1.Varietal Evaluation 2.Integrated Crop Management	02-OFT 05 - FLD Trainings, Field days

Target and achievements of mandatory activities (2014-15)

OFT				**FLD**			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
04	03	12	09	16	16	119	81
Training				**Extension Programmes**			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
76	48	2075	1868	353	1172	9330	39242

Seed Production (Qtl.)		Planting materials (Nos.)	
Target	Achievement	Target	Achievement
16.80	13.47	59350	45580
Livestock, poultry strains and fingerlings (No.)		**Bio-products (Kg)**	
Target	Achievement	Target	Achievement
-	-		Neem Soap- 2110
			Pongamia Soap-924
			Arka Microbial Consortium – 2686
			Mango Fruit Fly Traps- 8763 Nos.
			Mango Fruit Fly Lures-13570 Nos.
Value added products		**Foliar Micronutrients (Kg)**	
Target	Achievement	Target	Achievement
-	Amla Squash –68 litres	-	
-	Amla Candy- 15 kg	-	Banana Special - 4345
-	Mushroom Spawn- 276 kg	-	Veg. Special -2066
-	Vegetable Seed Kit-2000 No,s	-	Mango Special-1422
			Citrus Special-1100

b) Major outcome of Technology Assessment and Refinement

1. Assessment of Areca nut -French bean intercropping system for high soil fertility and higher income: TO3 treatment i.e. Areanut + Frenchbean intercropping System has been recorded highest biomas production and income per ha per unit area (Rs. 2.18 lakhs) with high BC ratio 3.47 as compared to Farmers practice with BC ratio 3.02

2. Assessment of Groundnut Varieties: Among the tested varieties, KCG-6 (7.82 qt/ha) found to be superior than other two varieties KCG-2 (7.08 qt/ha) and TMV 2(5.71 qt/ha).This KCG-6 (12.2%) Variety was also tolerant to foliar diseases compared to others (15.4% and 28.6%). BC ratio for KCG-6, KCG-2 and TMV-2 were 2.11, 1.90 and 1.53 respectively.

3. Evaluation of Technology for Management of Pomegranate Wilt: T3 treatment comprises of application of Actinobacteria consortium was found very effective with least wilt incidence (9.50%) and highest plants recovered (84.21 %) when compared to farmers practice which recorded highest wilt incidence of 11 % and less recovery percentage (27.27%).The BC ratio of improved practice was recorded 1:7.93 when compared to farmers practice(1:7.93).

c) Major outcome of Frontline Demonstrations

1. Addressing Drought Vulnerability by Drought tolerant Ragi ML -365: The yield of Drought tolerant Ragi ML -365 (26.44 q/ha) has increased to the extent of 36.2 %.
2. Combating drought vulnerability by Aerobic Paddy Cultivation: The performance of Aerobic paddy MAS-26 was found suitable for drought condition with an advantages like 43.75 % water saving, 80 % savings on seed material with no need of puddling and increased yield of 13.1 %. Farmers' feedback was that there was a drastic reduction of damage caused by rodents attack (due to dry field condition and free movement of cats).
3. Enhancement of Red gram yield through demonstration of BRG-4 variety: Demonstration of BRG-4 Red gram variety is recommended for higher yield which shown an increase of yield

of 12.12% compared to the local check. This variety recorded an average of 9.74 qt/ha (BCR-2.27) compared to local check 7.83qt/ha (BCR-1.82).

4. Demonstration of High yielding variety Arka Prabhat in Papaya**:** Through cultivation of improved Papaya variety Arka Prabhat farmer got 9.8 % more yield and the disease tolerance for Ring spot virus was almost same.
5. Demonstration of High density planting of Banana: HDP in Banana (G9) recorded highest yield (752 q/ha) with increased yield to the tune of 38.7% as compared to the farmers practice. HDP yields higher B:C ratio of 3.43 than that of check (3.01).
6. Demonstration of Dry land Horticulture Crop: Jamoon variety Dhoopdal has been introduced in Tumakuru and Koratagere taluk. The average height of plant is 9.2 feet. average number of branches per plant is 7.2
7. Cost effective eco friendly management of fruit fly through Pheromone traps in Mango: The maximum fruit infestation was recorded in farmers practice (47.80 %) when compared to demo plot (10.20%). The highest yield was recorded in demo plot (12.86 t / ha) with BC ratio of 1:3.71.
8. Management of Mango stem borer by Sealer cum Healer: The average of 6.20 grubs were reported before the treatment with Sealer cum Healer and 28.50 cm hole due to stem borer was fully healed up to 12.60 cm after the treatment.
9. Mango Harvester, Ripening chamber and Packing: Through adoption of Mango harvester, ripening chamber and packing mango fruits, farmers got Rs.44000/- additional income by investing Rs.4500/- for above mentioned inputs.
10. Demonstration of Seedpro – A microbial plant growth promoter against soil borne pathogens in Solanaceous Vegetable Crops: Demonstration of Seed Pro a microbial plant growth promoter : 9.55 % damping off was recorded in demo plot compared to check plot (28.64 %) with net increase in yield of 24.20 %.The maximum BC ratio was recorded in demo plot was 1:2.36.
11. Bio intensive Management of Brinjal Shoot and Fruit borer: Effective control of fruit and shoot borer in Brinjal through integration of pheromone trap, Release of *T.chilonis* and Bt spray. It was evident that 5.32 % shoot infestation was recorded in demo plot compared to check plot (30.11 %) and fruit infestation of 11.89 % compared to control plot (33.95%) with net increase in yield of 43.76 %. The maximum BC ratio was recorded in demo plot was 1:3.36.
12. Seed production of French bean Var. Arka Suvidha: Through French bean seed production, the income level was more with BC ratio of 3.12 compared to 2.26 if grown as vegetable purpose.
13. Demonstration of Arka Rakshak F1 resistant to Leaf Curl, Bacterial Wilt and Early Leaf Blight in Tomato gave an yield of 29 ton/ha compared to local check 17.30 ton/ha. BCR ratio for Demo hybrid was 3.35 compared to local check 1.70.
14. Use of Polythene mulch in Tomato: Tomato with polymulch technology yields more no of fruits, fruit weight per plant (48 & 97.5 g), with an average yield of 76.25 t/ha with B:C ratio of 4.62 compared to check 3.48. Labour saving on weeding and water saving nearly 50%. Additional yield of 10 t/ha worth of Rs. 40000 /- compared to check.
15. Cost effective Arka Microbial Consortium for Tomato production: Use of Arka Microbial Consortium in Tomato reduced the Chemical Fertilizer up to 25 per cent and also increased the yield 18.42 %.

16. Management of Nut Splitting in Arecanut: Nut splitting and nut dropping in Arecanut was reduced by demonstrating CPCRI technology with increase in crop yield to an extent of 12.50 %.

d) Details of Training Programmes conducted (2014-15)

Category	Major thematic areas covered	No. of courses	No. of participants
1. Farmers & farm women	Cropping Systems	2	67
	Integrated Farming	1	22
	Off Season Vegetable Production	1	27
	Dryland Horticulture	3	142
	Integrated Crop Management	2	145
	Soil and Water Testing	8	244
	Soil fertility management	1	19
	Organic Farming	1	33
	Production and management technology in Plantation Crops	5	331
	Animal Nutrition Management	1	101
	Women empowerment	1	37
	Post Harvest Technology	1	45
	Mushroom production	2	24
	Feed and Fodder Technology	2	65
	Bio-fertilizer production	4	224
	Integrated Disease Management	1	31
2. Rural youth	Mushroom Production	1	10
3. Extension personnel	Integrated Pest Management	1	25
	Integrated Nutrient Management	1	18
	Production and Use of Organic Inputs	2	48
	Live stock Feed and Fodder Technology	1	33
4.Sponsored programmes	Commercial Production of Vegetables	1	27
	Crop Production and Management	1	22
	Post Harvest Technology and Value Addition	2	82
5.Vocational programmes	Coconut Friends	1	20
	Honeybee Keeping	1	26
Total		**48**	**1868**

e) Extension Programmes Conducted (2014-15)

f) Major Extension Activities

Extension Activity	No. of activities	Participants		
		Farmers	Extension Functionaries	Total
Advisory Services	552	2774	123	2897
Animal Health Camp	2	65	8	73
Special Day Celebration	8	235	72	307
Diagnostic Visits	99	209	17	226
Exhibition	14	25853	3267	29120
Exposure Visits	4	171	9	180
Farmers Visit to KVK	397	1713	126	1839

Field Day	5	491	29	520
Film Show	11	189	36	225
Kisan Mela	4	215	17	232
Lecture delivered	47	3301	109	3410
Scientists' visit to farmers field	26	75	23	98
Self Help Group Conveners meetings	3	113	2	115
Others if any (Pl. specify)	-	-	-	-
Total	**1172**	**35404**	**3838**	**39242**

g) Other Extension Activities

Particulars	Number
Animal health camps	02
Leaflets / folders	02
News letter –E News Letter	04
News paper coverage	20
Radio Talks	05
Technical Articles	-
Technical Bulletins	-
Technical Reports	04
TV talks	03
Research Articles	03
Others if any (Pl. specify)Publications Abstracts	-
Total	**43**

h) Production and Supply of Technology Products :2014-15

Category	Major crops /livestock/fisheries strains / bio-products produced and supplied	Quantity	Value (Rs.)	Number of farmers
Seed Materials –Varieties (Quintals)	Arka Varieties and UAS-B Varieties	13.47	1042100	285
Vegetable Seed Kit-Nos.	All IIHR varieties	2000	200000	1800
Planting Materials –Varieties (Numbers)	IIHR Varieties and UAS-B	45580	318200	152
Bio Products				
Bio-pesticide(Kg)	Neem Soap	2110	309025	1238
	Pongamia Soap	924	115500	464
Foliar Spray(Kg)	Banana Special	4345	651750	1512
	Vegetable Special	2066	300900	852
	Mango Special	1422	213000	820
	Citrus special	1100	16500	52
Bio-Fungicide (Kg)	Arka Microbial Consortium	2686	201450	110
Bio Agents (Nos.)	Mango Fruit Fly Traps-Nos.	8763	175260	730
	Mango fruit fly lures- Nos.	13570	271400	862
Others	Mushroom Spawn (Kg)	276	16560	123
Value Added Products	Amla Candy (Kg)	15	3750	35
	Amla Juice (Litres)	68	6800	60

i) Convergence and Linkages

Sl. No.	Name of organization	Nature of linkage
1.	State Department of Horticulture	Trainings, FLD, Joint Diagnostic Survey
2.	State Department of Agriculture	Trainings, FLD, Joint Diagnostic Survey
3.	Watershed Department	Training and Collaborative Activities
4.	Department of Animal Husbandry and Fisheries	Trainings and Technical Information
5.	Department of Women and Child Development	Trainings
6.	BAIF NGO, Tiptur	Trainings and Technical Information
7.	ORDER NGO, Tumakuru	Trainings, FLD's and Technical Information
8.	AWARE NGO, Tumakuru	Trainings
9.	APART NGO, Tumakuru	Organic Farming and Group Approach
10.	MOTHER NGO, Tumakuru	Seed Village Concept
11.	UAS, Bengaluru	Trainings and FLDs
12.	UAS, Dharwad	Trainings and FLDs
13.	UHS, Bagalkote	Trainings and FLDs
14.	Veterinary University, Bidar	Trainings and FLDs

j) Soil Water and Plant Analysis

Category	No. of Samples		No. of Farmers	Amount realized (Rs.)
	Farmers in whose fields OFT/FLD were implemented during the reported period	Other Farmers		
Soil	20	603	610	62300
Water		414	408	20200
Plant		112	43	11200
Total	**20**	**1129**	**1061**	**93700**

k) Human Resources Development

S. No.	Name of the Staff	Number of training programmes attended	Institutions under which trained	Major areas of knowledge gained	Programmes planned based on knowledge gained
1.	Dr. N.Loganandhan	**2**	NAARM, Hyderabad 9-11 June 2014	Technology Management in Agriculture for KVK Professionals	NABARD project, CA Project by CRIDA
			NAARM, Hyderabad 10th Nov to 6th Dec. 2014	Management Development Programme	OFT and FLDs in new areas
2.	Sri K.N.Jagadish	1	KVK Erode,	Participatory Impact	PRA Activities and

			Arepalayam Campus 19-24 Nov. 2014	Monitoring and Assessment (PIMA)	impact assessment of FLD and OFT. A book published and released on Kharif 2015
3.	Sri B. Hanumanthe Gowda	1	GBPUA &T, Pant Nagar, Uttarakhand 2-22 Oct.2014	Innovative approaches in Plant Disease Management	Plant Disease Management based on the advanced technologies of IT

l) Action Plan in brief for the next season(s):- 2015-16

S. No.	Name of the Operational Village	Crop/ Enterprise	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
1	D, Nagenahlli, Vaddarahalli, Sakshihalli, Baichenahalli	Ragi	Drought, Use of local varieties and low yield. Lack of knowledge on Processing, value addition and branding of Ragi products	ICM	FLD's, Trainings & Field days
2	Vaddarahalli, Sakshihalli, Midigeshi	Minor Millets	Lower income in Pigeon pea as a sole crop in rain fed condition. Pigeon pea is longer duration crop, prone to Biotic and Abiotic stresses leading to meager income. Interspaces between rows of Pigeon pea underutilized for initial 70 days after sowing.	ICM	FLD, Trainings & Field days
3	Sakshihalli, Midigeshi	Pigeonpea	Delayed Monsoon and Pod borer and sterile mosaic disease in Red gram	Popularization of HYV	FLD's, Trainings & Field days
4	Arasikere, Sakshihalli, Midigeshi	Groundnut	Tikka Disease , leaf minor, low income	Popularization of HYV /	OFT, Trainings
5	Balaenahalli,, Vaddarahalli , Belgumba	Tomato	Poor Soil and Nutrient Management, Water scarcity, Low keeping quality	ICM	FLD, Trainings & Field days
6	Midigeshi, Sakshihalli	Onion	Use of local low yielding varieties. Most of the farmers are using substandard local available seeds.	ICM	FLD, Trainings & Field days

7	Vadarahalli, Balenahalli, Arasikere	Mango	Mono cropping, Stem Borer Powdery mildew, Fruit fly and hoppers in Mango, lack of knowledge on PHT in Mango.	Integrated Pest & Disease Management and PHT	OFT, FLD's, Trainings & Field days
8	Balenahalli, Vaddarahalli	Banana	Low plant Density, poor nutrient management & lack of pre and post harvest technology management.	ICM	FLD, Trainings & Field days
9	Balenahalli, Vaddarahalli	Arecanut	Monocropping, Low soil fertility, Anabe Roga & Nut splitting	Cropping Systems	OFT, Trainings
10	Arasikere, Midigeshi	Pomegranate	Indiscriminate use of Fertilizers, Wilt & Bacterial Blight, Low yield	IPDM	OFT, FLD & Trainings
11	Balenahalli, Vaddarahalli	China Aster	Small size flowers, less shelf life and low yield Current yield- 8.6 t/ha Potential yield- 12.5 t/ha**.**	Popularization of HYV /	FLD, Trainings
12	Balenahalli, Midigeshi	Betelvine	Poor Soil aeration and nutrient Management, Low quality & yield	Nutrient Use efficiency	FLD , Trainings & Field days

Details of Training Programmes conducted 2015-16 (Apr - Dec)

Category	**Major thematic areas covered**	**No. of courses**	**No. of participants**
Farmers and farm women	Commercial Floriculture	2	60
	Commercial Pomology	1	55
	Dryland Horticulture	3	125
	Production Technology in Pomegranate	1	52
	Sheep and Goat rearing	1	25
	Soil ,Water Testing and their importance	12	392
	Income Generating Activity	2	46
	Organic Farming	8	272
	Production Management in Ragi and Redgram	1	15
	Soil, Water Conservation	1	17
	IPM in Tomato	1	25
	Processing and Value Addition	4	107
	IDM in Horticultural Crops	4	109
	Offseason Vegetables	1	45
	ICM in Onion	1	27

	ICM in Banana	1	17
	ICM in Coconut	1	42
	Production Technology in Coconut & Arecanut	1	12
	IDM in Redgram	1	40
	Seed Treatment	1	70
Rural youth	Mushroom Cultivation	2	49
	IIHR Technologies	2	58
	ICM in Coconut	1	20
Sponsored programmes	Post Harvest Technology	1	38
Total		**54**	**1718**

Major Extension Activities 2015-16 (Apr - Dec)

Extension Activity	No. of activities	Participants		
		Farmers	Extension Functionaries	Total
Advisory Services	212	1176	140	1316
Special Day Celebration	6	641	405	1046
Diagnostic Visits	39	114	7	121
Exhibition	6	17698	3357	21055
Exposure Visits	2	50	4	54
Farmers Visit to KVK	196	1409	107	1516
Field Day	5	228	25	253
Film Show	3	127	16	143
Group meeting	5	435	111	546
Kisan Mela	4	2849	792	3641
Lecture delivered	17	931	11	942
Soil health Camp	6	243	6	249
Total	**501**	**25901**	**4981**	**30882**

Other Extension Activities 2015-16 (Apr - Dec)

Particulars	Number
Books	04
Electronic media	01
News letter –E News Letter	04
News paper coverage	04
Radio Talks	05
Technical Articles	01
Technical Bulletins	01
Technical Reports	04
TV talks	04
Total	**28**

Production and Supply of Technology Products: 2015-16 (Apr - Dec)

Category	Major crops /livestock/fisheries strains / bio-products produced and supplied	Quantity	Value (Rs.)	Number of farmers
Seed Materials – Varieties (Quintals)	Arka Varieties and UAS-B Varieties	9.46	66944	98
Vegetable Seed Kit-Nos.	All IIHR varieties	1942	194200	133
Planting Materials – Varieties (Number)	IIHR Varieties and UAS-B	105915	420640	649
Livestock Materials (Number)	Fodder seeds CO Grass cutting NB cuttings	39.5 kg 2650 Nos.	19750 2650	22
Bio Products				
Bio-pesticide(Kg)	Neem Soap	2374	356100	86
	Pongamia Soap	3266	408250	39
	Sealer cum Healer	795	119250	14
Foliar Spray(Kg)	Banana Special	6317	947550	129
	Vegetable Special	4090	613500	111
	Mango Special	2708	406200	47
	Citrus special	1144	171600	26
Bio-Fungicide (Kg)	Arka Microbial Consortium	2005	190150	83
Bio Agents (Nos.)	Mango Fruit Fly Traps-Nos.	505	13900	24
Others	Mushroom Spawn (Kg)	159	12020	36
	Egg (Nos)	50	150	6
	Milk (Lits)	97	2910	6
Value Added Products	Amla candy (Kg)	98.8	29640	179
	Amla Squash (Nos)	287	37310	154
	Ragi Malt (Nos)	145	6750	58

Soil Water and Plant Analysis 2015-16 (Apr - Dec)

Category	No. of Samples		No. of Farmers	Amount realized (Rs.)
	Farmers in whose fields OFT/FLD were implemented during the reported period	Other Farmers		
Soil	20	716	419	93550
Water		454	374	26650
Plant		10	8	950
Total	**20**	**1180**	**801**	**121150**

m) Revolving Fund Status :-

Year	Opening balance as on 1st April of previous year (Rs.)	Income during the year (Rs.)	Expenditure during the year (Rs.)	Net balance in hand as on 1st April of current year (Rs.)
April 2014 to March 2015	2436261	4960840	3934815	3462286
Apr 2015- till date	3462286	4028543	3203754	4287075

n) Utilization of KVK funds during the Previous Year 2014-15 (Rs. in lakh)

Sl. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	8315000	8315000	8314575
2	**Traveling allowances**	114000	114000	118378
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	50000	50000	49893
B	POL, repair of vehicles, tractor and equipment's	50000	50000	50000
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	20000	20000	20000
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	20000	20000	20000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	215000	215000	215000
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	45000	45000	45000
G	Training of extension functionaries	10000	10000	10000
H	Maintenance of buildings	0	0	0
I	Establishment of Soil, Plant & Water Testing Laboratory	0	0	0
J	Library	0	0	0
K	IFS	10000	10000	10000
L	NIFTD	10000	10000	10000
M	FFS	10000	10000	10000
N	*Extension Activities*	10000	10000	10000
	TOTAL (A)	**8879000**	**8879000**	**8882846**
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipment's including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)		**0**	**0**	**0**
C. REVOLVING FUND		0	0	39,34,815
GRAND TOTAL (A+B+C)		**8879000**	**8879000**	**12817661**

Utilization of KVK funds during the year 2015-16 (Up to Dec. 2015-Rs. in lakh)

Sl. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	8983000		6766437
2	**Traveling allowances**	90000		110606
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	80000		79810
B	POL, repair of vehicles, tractor and equipment's	100000		108915
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	50000		49138
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	25000		25000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	138000		103336
F	NFSM(FLD)	123000		36950
G	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	29000		29000
H	Training of extension functionaries	0		
I	Maintenance of building	0		0
J	Extension Activities	50000		27500
K	Farmers' Field School	0		0
L	Library (Purchase of Journal, Periodicals, News Paper and Magazines)	5000		0
M	NIFTD	0		0
N	Integrated Farming System(IFS)	0		
	TOTAL (A)	**9673000**	**9672468**	**7336692**
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipment's including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)		**0**	**0**	**0**
C. REVOLVING FUND		0	0	3203754
GRAND TOTAL (A+B+C)		**9673000**	**7254218**	**10540446**

Agenda Item No.05

Salient achievements in detail

SMS (Plant Protection)

- **1. Problem identified**: Severe incidence of fruit and shoot borer and heavy pesticide residue in Brinjal
- **Technology Intervention Undertaken**: Bio- intensive Management Brinjal Shoot and fruit borer
- **Mode of Implementation**: Front Line Demonstration
- **Outcome:** : Effective control of fruit and shoot borer in Brinjal through integration of pheromone trap, Release of *T.chilonis* and Bt spray. It was evident that 5.32 % shoot infestation was recorded in demo plot compared to check plot (30.11 %) and fruit infestation of 11.89 % compared to control plot (33.95%) with net increase in yield of 43.76 %. The maximum BC ratio was recorded in demo plot was 1:3.36.
- **Action for up-scaling**: Production of *T.chilonis* eggs started at KVK, Hirehalli for supply to farmers.
- **Recommendation of the outcome:** Erection of pheromone trap @ 1 for 400 sq.m. (Lure changed once in 21 days) ,Release of *T.chilonis* @ 50,000/ha and Bt spray at peak flowering @1ml/L two times

- **2. Problem identified :** Poor crop stand due to root rot and wilt in Solanaceous Vegetables
- **Technology Intervention Undertaken :** Seed treatment with Seed pro at the rate of 50gms/kg
- **Mode of Implementation :** Front Line Demonstration
- **Outcome:** A microbial plant growth promoter against soil borne pathogens in Solanaceous Vegetable Crops: Demonstration of Seed Pro a microbial plant growth promoter : 9.55 % damping off was recorded in demo plot compared to check plot (28.64 %) with net increase in yield of 24.20 %.The maximum BC ratio was recorded in demo plot was 1:2.36
- **Recommendation of the outcome :** Seed treatment with Seed pro at the rate of 50gms/kg

- **3. Problem identified:** Heavy fruit fly infestation in Mango results in low yield and market value
- **Technology Intervention Undertaken :** Cost effective Eco friendly management of fruit fly through pheromone traps in Mango
- **Mode of Implementation :** Front Line Demonstration
- **Outcome:** The maximum fruit infestation was recorded in farmers practice(47.80 %) when compared to demo plot.(10.20%). The highest yield was recorded in demo plot (12.86 t /ha) with BC ration of 1:3.71.
- **Action for up-scaling**: 6.00 lakh fruit fly trap produced at KVK, Hirehalli for supply to farmers during last year.
- **Recommendation of the outcome:** Erection of Fruit fly traps (IIHR, Bengaluru) @ 15 Nos./ha

- **4. Problem identified :** Incidence of stem borer in Mango
- **Technology Intervention Undertaken :** Removal and cleaning of infested portion and immature stages of stem borer, Swabbing with Dichlorovos@ 0.5% Pasting of Sealer Cum Healer at the infested portion
- **Mode of Implementation :** Front Line Demonstration
- **Outcome:** The average of 6.20 grubs were reported before the treatment with Sealer cum Healer and 28.50 cm hole due to stem borer was fully healed up to 12.60 cm after the treatment.
- **Recommendation of the outcome:** Healer cum sealer Production unit was established and supplied to the farmers.

SMS (Soil Science)

- **1. Problem identified**: Low water use efficiency & Low yield in Paddy.
- **Technology Intervention Undertaken** : Aerobic Paddy Cultivation MAS-26
- **Mode of Implementation** : Front Line Demonstration
- **Outcome** : The performance of Aerobic paddy MAS-26 was found suitable for drought condition with an advantages like 43.75 % water saving, 80 % savings on seed material with no need of puddling and increased yield of 13.1 %. Farmers' feedback was that there was a drastic reduction of damage caused by rodents attack (due to dry field condition and free movement of cats).
- **Action for up-scaling /Recommendation of the outcome**: 30 qt of MAS -26 variety seeds were produced at farmers' field of Vaddarahalli and D.Nagenahalli and supplied to 180 farmers.

- **2.Problem identified**: Delayed monsoon, Moisture stress, Use of low yielding, long duration varieties in Ragi
- **Technology Intervention Undertaken** : Drought resistance variety Ragi ML 365

  The detail characteristics of the variety are
  - Short duration (about 105 days)
  - Medium plant height
  - High yielding (Grain and fodder)
  - Resistant to leaf spot, neck blast disease and lodging
  - Good cooking quality
  - Suitable for dry land agriculture and late sowing
- **Mode of Implementation** : Front Line Demonstration
- **Outcome:** The yield of Drought tolerant Ragi ML -365 (26.44 q/ha) has increased to the extent of 36.2 %.
- **Action for up-scaling /Recommendation of the outcome**: 800kg of ML -365 seeds has produced and supplied to 70 farmers.

- **3.Problem identified :** Severe nut splitting, dropping and yield loss in Arecanut
- **Technology Intervention Undertaken :** Management of nut splitting in Arecanut
- **Mode of Implementation :** Front Line Demonstration
- **Outcome:** Nut splitting and nut dropping in Arecanut was reduced by demonstrating CPCRI technology with increase in crop yield to an extent of 12.50 %.
- **Recommendation of the outcome:** FYM 12 kg/tree, RDF 100: 40: 140 NPK g/tree, Borax -30 g/tree + Zinc Sulphate.

- **4.Problem identified :** Low fertilizer use efficiency and low Soil fertility
- **Technology Intervention Undertaken :** Use of Arka Microbial Consortium in Tomato production
- **Mode of Implementation :** Front Line Demonstration
- **Outcome:** Use of Arka Microbial Consortium in Tomato reduced the Chemical Fertilizer up to 25 per cent and also increased the yield 18.42 %.
- **Action for up-scaling/Recommendation of the outcome:** Use of AMC in Tomato production @ 25gm/ltr or 1 kg in 50 ltrs of Water through drenching/ through drip irrigation.2 tons of AMC were produced and sold to 83 Nos. of Farmers in the district.

SMS (Horticulture)

- **1.Problem identified** : Inefficient use of land, Weed menace , Low Soil Fertility and Low Income
- **Technology Intervention Undertaken** : Assessment of Arecanut Fenchbean Intercropping System for high Soil fertility and Higher income
- **Mode of Implementation** : On Farm Testing
- **Outcome** : Areanut + Frenchbean intercropping System has been recorded highest biomas production and income per ha per unit area (Rs. 2.18 lakhs) with high BC ratio 3.47 as compared to Farmers practice with BC ratio 3.02
- **Recommendation of the outcome**: Farmers are advised to take up Intercropping System as French bean for high Soil Fertility and additional income.

- **2. Problem identified** : Less population and low yield in Banana
- **Technology Intervention Undertaken** : High Density planting in Banana
- **Mode of Implementation** : Front Line Demonstration
- **Outcome:** HDP in Banana (G9) recorded highest yield (752 q/ha) with increased in percentage of yield to the tune of 38.7 as compared to the farmers practice. HDP yields higher B:C ratio of 3.43 as of check (3.01)-
- **Recommendation of the outcome**: Spacing1.2 x 1.2x 2.0m with paired row Zigzag method.

- **3. Problem identified** : Water Scarcity , Weed menace , Labors scarcity , pest & diseases and Low yield
- **Technology Intervention Undertaken** : Use of Polythene mulch in Tomato
- **Mode of Implementation** : Front Line Demonstration
- **Outcome:** Tomato with polymulch technology yields more no of fruits, fruit weight per plant (48 & 97.5 g), with an average yield of 76.25 t/ha with B:C ratio of 4.62 compared to check 3.48. Labour saving on weeding and water saving nearly 50%. Additional yield of 10 t/ha worth of Rs. 40000 /- compared to check.
- **Recommendation of the outcome**: Farmers are advised to take up Poly mulching Technology with drip irrigation in Tomato production.

- **SMS (Home Science)**
- **1. Problem identified**: Post harvest loss in Mango .
- **Technology Intervention Undertaken** : Demonstration of mango harvester, Ripening Chamber and Packing
- **Mode of Implementation** : Front Line Demonstration
- **Outcome**: By using Harvester, less damage during harvesting, right time ripening with ripening chamber, and got better price by packing in boxes so overall higher return. Through adoption of Mango harvester, ripening chamber and packing mango fruits, farmers got Rs.44000/- additional income by investing Rs.4500/- for above mentioned inputs.
- **Recommendation of the outcome**: by use of these scientific technologies farmers are able to get more additional income with better market price..

SMS (Plant Breeding)

- 1.**Problem identified**: Market rate fluctuation of vegetables including French bean, during huge quantity production in same season, rate of French bean of vegetables comes down, there by huge loss to farmer.
- **Technology Intervention Undertaken**: Seed Production in French bean
- **Mode of Implementation** : Front Line Demonstration
- **Outcome**: Through French bean seed production, the income level was more with BC ratio of 3.12 compared to 2.26 if grown as vegetable purpose.
- **Action for up-scaling / Recommendation of the outcome** : Under RFS scheme
  French bean seed production is being taken up for large quantity production in KVK farm as well as in Farmers Field.

- 2. **Problem identified** : Low yielding Papaya varieties
- **Technology Intervention Undertaken**: Demonstration of High yielding Variety Arka Prabhat
- **Mode of Implementation**: Front Line Demonstration
- **Outcome**: Through cultivation of improved Papaya variety Arka Prabhat farmer got 9.8 % more yield and the disease tolerance for Ring spot virus was almost same.
- **Action for up-scaling /Recommendation of the outcome**: Farmers are advised to take up HYV Arka Prabhat and seeds are being produced at KVK Hirehalli.

- 3. **Problem identified** : Low yielding Redgram local varieties
- **Technology Intervention Undertaken**: Demonstration of High yielding Variety BRG-4
- **Mode of Implementation**: Front Line Demonstration
- **Outcome**: Demonstration of BRG-4 Red gram variety is recommended for higher yield which shown an increase of yield of 12.12% compared to the local check. This variety recorded an average of 9.74 qt/ha (BCR-2.27) compared to local check 7.83qt/ha (BCR-1.82).
- **Recommendation of the outcome**: Farmers are advised to take up HYV BRG-4

- 4**. Problem identified**: Lack of suitable variety for Tumakuru Dist. For sustainable yield.
- **Technology Intervention Undertaken** : Assessment of Groundnut varieties KCG-6
- **Mode of Implementation** : On Farm Testing
- **Outcome**: Among the tested varieties, KCG-6 (7.82 qt/ha) found to be superior than other two varieties KCG-2 (7.08 qt/ha) and TMV 2(5.71 qt/ha).This KCG-6 (12.2%) Variety was also tolerant to foliar diseases compared to others (15.4% and 28.6%). BC ratio for KCG-6, KCG-2 and TMV-2 were 2.11, 1.90 and 1.53 respectively.
- **Recommendation of the outcome**: KCG-6 variety can be promoted through front line demonstration.

Agenda Item No.06
Interactions and discussions

Agenda Item No.07
Finalization of action points

Agenda Item No.08
Any other agenda with the permission from the Chairman