Krishi Vigyan Kendra

Hirehalli, Tumkur-572 168

ICAR-Indian Institute of Horticultural Research
Hessaraghatta, Bangalore

AGENDA NOTES

5TH SCIENTIFIC ADVISORY COMMITTEE MEETING

Date: Tuesday, 30th September, 2014

Krishi Vigyan Kendra
NH-4, Hirehalli,
Tumkur - 572 168, Karnataka
Ph: 0816-2243175/77, Email: iihrkvk@gmail.com

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TENTATIVE TABLE AGENDA FOR
SCIENTIFIC ADVISORY COMMITTEE MEETING

Date: 30th Sep, 2014, Venue: KVK, Hirehalli, NH-4, Tumkur – 572 168

Agenda Item No.	Particulars	Persons-in-charge	Time
	Invocation		10.30 AM
	Welcome		10.35 AM
01	Chairman's opening remarks about KVK	Chairman	10.45 AM
02	Constitution of SAC and self introduction by SAC members and invitees	Programme Coordinator	10.50 AM
03	Action Taken Report on the previous SAC meeting	Programme Coordinator	11.00 AM
04	Overall progress report and action plan for forthcoming season	Programme Coordinator	11.30 AM
05	Salient technical achievements in detail	Individual Subject Matter Specialists	12.00 Noon
06	Interaction and discussions	Members and invitees	1.00 PM
07	Finalization of action points	Chairman	1.30 PM
08	Any other agenda with the permission from Chairman		1.45 PM
	Vote of Thanks		2.00 PM
	National Anthem		2.05PM
	Lunch		

AGENDA NOTES

Agenda Item No. 01

Chairman's Opening Remarks about KVK

a) Establishment details

S. No	Particulars	Details
01	Name of the KVK	Tumkur-A
02	Postal address of the KVK	**KRISHI VIGYAN KENDRA**, HIREHALLI, NH-4, TUMKUR-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.iihr.ernet.in**
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, Bangalore-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

S. 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. HanumantheGowda	SMS	Plant Protection	M.Sc. Agri.	15600 - 39100+5400	02.12.2009	Permanent
06	SMS	SmtRadhaR.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	Vacant	Supporting Staff			5200 - 20200+1800		

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) Zonal Project Director Zone VIII Bangalore - 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. T.Manjunath Rao , Director, IIHR , Bangalore - Chairman
2) Dr. Srinath Dixit , Zonal Project Director, Zone VIII Bangalore - Member
3) Dr. N. Nagaraja, Director of Extension, UAS-B - Member
4) Dr. Raghvendra Bhatta, Director, NIANP, Bangalore - Member
5) Dr. Nuthan,D., Assistant Director of Research, UAS-B - Member
6) Officials from State Department - Members
    1. Dr. R. Krishna Murthy, JDA, Department of Agriculture
    2. Dr. Savitha, DDH, Horticulture, Tumkur
    3. Dr. R. Narayan, DD, Animal Husbandry, Tumkur
    4. Dr. Dayanand, SAD, Fisheries Dept, Tumkur
    5. Sri M.V.Chndra, DD, Sericulture, Tumkur
    6. Sri S. Lakshman, DWDO, Soil Conservation, Tumkur
    7. Sri H. Gopal Singh DCF, Social Forestry and Agro-forestry, Tumkur
    8. Sri T.Subramanyan, AGM, Karnataka Small Scale IDC , Tumkur
    9. Sri Nanjegowda ,DD, Department of Women and Child Welfare , Tumkur
7) Dr. Krishna Murthy, PD, ATMA
8) Sri Jayaramaiah, Chief Manager, Lead Bank Official, Tumkur - Member
9) Sri J.S. Veerabhadran, DDM, NABARD, Tumkur - Member

10) Sri Shivaji Ganeshan, PC, Radio Siddhartha, Tumkur - Member
11) Sri Suresh, DD Official from Doordarshan, Tumkur - Member
12) Two representatives from farmers - Members
    1. Sri Mahesh,N.M, D.Nagenahalli, Koratagere Taluk, Tumkur
    2. Sri Prabhakar, PanchvatiFarm, Udigere Hobli, Tumkur
13) Two representatives from farm women - Members
    1. Smt Mangalagowramma, Srirangabadavane, Tumkur
    2. Smt Gowramma, Pemanahalli, Tumkur
14) Dr. Loganandhan,N., Programme Coordinator - Member Secretary

Other invitees:

1. Sri Kumar Nagaraj, ICAR GB Member, Karnataka.
2. Dr. G. Karibasappa, Head, CHES, Hirehalli
3. Dr. M.R.Hegde, Chairman, RPMEC, IIHR, Bangalore
4. Dr. L.B.Naik, Head, Seed Section IIHR, Bangalore
5. Dr. T.Vasanthkumar, Head, Medicinal & Aromatic Plants, IIHR, Bangalore
6. Dr. A.B. Patil, Director of Extension, UHS, Bagalkote.
7. Dr. B.T.Rayudu, Prl. Scientist, ZPD, Zone VIII, Bangalore
8. Dr. L.G.K. Naidu, Head, NBSS & LUP, RC, Bangalore
9. Dr. B.K. Ramachandrappa, Chief Scientist, AICRPDA, UAS, Bangalore
10. Dr. Feroze Khan, Officer-In-charge, Bangalore Research Centre of CIFRI, Bangalore
11. Dr. Prakash Patil, Project Coordinator, AICRP (Tropical Fruits), IIHR, Bangalore
12. Dr. K. Hima Bindu, Pr. Scientist, Medicinal & Aromatic Plants, IIHR, Bangalore
13. Dr. Tejaswini, Pr. Scientist, Div. of. Ornamental Crops, IIHR, Bangalore
14. Dr. Suryanarayna, Pr. Scientist, Medicinal & Aromatic Plants, IIHR, Bangalore
15. Dr. Chandrashekhar, MD, KMF, Tumkur
16. Dr G. Karunakaran, Sr. Scientist, CHES, Hirehalli
17. Dr Saju George, PC, KVK, Gonikoppalm
18. Dr. Sukanya, PC, 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, Tumkur
22. Sri Santosh Kumar, Project Director, SKRDP, NGO, Tumkur
23. Sri G.Raghu, Project Director, ORDER, NGO, Tumkur
24. Mrs. Jayalakshmi, WLARS, NGO, Madhugiri
25. Mr. Shivanna, Director, RUDSET, Bangalore
26. Sri Bhaskar, PD, Mother NGO, Sira
27. Sri Manjunath Patil, IRIDS, NGO, Tumkur

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>Useful messages through local radio can be disseminated, where entire farming community will be covered</td><td>Dr. A.B.Patil, Director of Extension, University of Horticultural Science, Bagalkote</td><td>The technologies were disseminated through FM Radio Siddhartha, Tumkur and AIR, Bangalore station at regular intervals.
<table>
<tr><th>Date</th><th>Event</th></tr>
<tr><td>26.4.14</td><td>Mushroom Cultivation</td></tr>
<tr><td rowspan="4">17.6.14</td><td>Management of Soil, Water and Nutrient in drought situation.</td></tr>
<tr><td>Dryland Horticulture Technologies</td></tr>
<tr><td>Integrated Pest and Disease Management in Horticultural Crops of Tumkur District</td></tr>
<tr><td>Seed Production Technology and important activities during drought condition.</td></tr>
</table></td><td></td></tr>
<tr><td>2.</td><td>At least one field day should be conducted during FLD’s in the farmers’ field.</td><td>Dr. A.B.Patil, Director of Extension, University of Horticultural Science, Bagalkote</td><td>Four Field days were conducted in the respective FLDs
<table>
<tr><th>Date</th><th>Crop</th><th>Place</th></tr>
<tr><td>11.10.13</td><td>Ragi ML-365</td><td>Sira</td></tr>
<tr><td>19.10.13</td><td>Brinjal</td><td>Kolihalli</td></tr>
<tr><td>23.11.13</td><td>Aerobic Paddy MAS-26</td><td>Hirehalli</td></tr>
<tr><td>10.01.14</td><td>Banana</td><td>Mulkunte</td></tr>
</table></td><td></td></tr>
<tr><td>3.</td><td>Apart from yield, data on other characters should also be included in the FLD’s and OFT’s during the presentation by each SMS.</td><td>Dr. A. B. Patil, Director of Extension, University of Horticultural Science, Bagalkote</td><td>Action was initiated for collecting all related parameters like
Soil Test (NPK, Organic carbon & Micro nutrients)
Pest and Disease related parameters apart from Growth and yield parameters.</td><td></td></tr>
<tr><td>4.</td><td>Vermi-wash should be produced at KVK, for the benefit of small farmer.</td><td>Dr.A.B.Patil, Director of Extension, University of Horticultural Science, Bagalkote</td><td>Basic infrastructure was developed.
Production unit is started at KVK, Hirehalli</td><td></td></tr>
<tr><td>5.</td><td>Action plan of ATMA should be prepared</td><td>Dr.A.B.Patil, Director of Extension, University of</td><td>SREP plans for Tumkur & Hanumanthapura,</td><td></td></tr>
</table>

	involving SMS's of KVK.	Horticultural Science, Bagalkote	Madhugiri taluks were prepared involving SMS-SS & SMS-Ext. Date: 9.1.2014	
6.	Animal husbandry related activities need to be given importance.	**Dr.A.B.Patil,** Director of Extension, University of Horticultural Science, Bagalkote	Two Animal Health Camps were organized at KVK, Hirehalli on 12.11.13 and D. Nagenahalli on 13.11.13 especially focusing on FMD.	
7.	Base line data should be there for IFS programmes by KVK.	**Dr. Srinivas Reddy**, Principal Scientist, ZPD Bangalore	Baseline data of Five IFS farmers were collected & documented.	
8.	Value addition should be included in all FLD's.	**Dr. Srinivas Reddy**, Principal Scientist, ZPD Bangalore	Value addition was included in Ragi & Mango related FLD's. Training on Ragi Value addition at D.Nagenahalli on 23.11. 13 Mango Low Cost Ripening Chamber – DDK programme Telecasted on 05.06.14	
9.	Technologies should be disseminated to other line departments of the district to help large number of farmers.	**Dr. Srinivas Reddy**, Principal Scientist, ZPD Bangalore	Three Field days were conducted involving line department extension functionaries. Ragi ML -365(500 kg), Vegetable Seed Kits-2200 Nos. Mango Special-2250 kg Vegetable Special-2300 kg Banana Special - 6500 kg Citrus Special -50 kg Mango Fruit Fly Traps-20000 Nos. Neem Soap-500kg Pongamia Soap-300 kg AMC -500 kg	
10.	Standardize Popularization for local Betelvine variety of Pavagada	**Dr.D.Nuthan,**Associate Director of Research, UAS, GKVK, Bangalore	Pavagada Betelvine farmers were invited for Betelvine Interaction Meet at KVK, Hirehalli 30.1.2014 and National Meet on Betelvine at IIHR, Bangalore on 22-23 Feb 2014 to share their views in this regard.	
11.	KCG-2, a suitable variety of Groundnut	**Dr.D.Nuthan,**Associate Director of	KCG-2 is included in the OFT (2014-15)	

<table>
<tr><td></td><td>for zone 4 & 5, released for cultivation by UAS (B) – popularization.</td><td>Research,UAS, GKVK, Bangalore</td><td></td><td></td></tr>
<tr><td>12.</td><td>BRG-10-1 (BRG-4) should be included in the Redgram FLD</td><td>Dr.D.Nuthan,
Associate Director of Research,UAS, GKVK, Bangalore</td><td>BRG-4 is included in the FLD (2014-15)</td><td></td></tr>
<tr><td>13.</td><td>Development of fodder banks for sustaining sheeps and goats under stall feeding. Popularize the available technology.</td><td>Dr.D.Nuthan,
Associate Director of Research, UAS, GKVK, Bangalore</td><td>Fodder seed bank (Cactus, Guinea Grass, Napear Fodder Sorghum and Cowpea) is established under NIFTD at KVK, Hirehalli Farm</td><td></td></tr>
<tr><td>14.</td><td>Promotion of season employment to farm families through.
Mushroom cultivation.
Value added products of Ragi and other millets.</td><td>Dr.D.Nuthan,
Associate Director of Research, UAS, GKVK, Bangalore</td><td>12 Training programmes were conducted on Mushroom & Ragi, Amla value addition<table><tr><td>Mushroom-6</td><td>152</td><td>12.6.13, 12.9.13, 29.11.13, 10.12.13, 8.1.14, 25,2,14</td></tr><tr><td>Ragi--3</td><td>51</td><td>7.9.13 , 28.1.14, 24.2.14</td></tr><tr><td>Amla-3</td><td>69</td><td>16-4.13, 13.6.13, 12-9.13</td></tr></table></td><td></td></tr>
<tr><td>15.</td><td>Minor Millets related programmes need to be promoted at KVK, as Tumkur District falls under dry zones.</td><td>Mr.J.S.Veerabhadra
DDM NABARD</td><td>Seed production in Foxtail Millet : 50 kg , Ragi ML-365: 188 kg & Bajra: 30 kg are initiated, In collaboration with DHAN Foundation a Walkathon on Minor Millets was organized on 25.01.14</td><td></td></tr>
<tr><td>16.</td><td>Convergence programmes of different sponsored agencies are being carried out in selected Five VDP villages in Sira Taluk supported by NABARD. Some more programmes can be included in this line.</td><td>Mr. J.S.Veerabhadra
DDM , NABARD</td><td>FLDs on Papaya and Red gram, Fodder Crops were taken in these selected five VDP villages in Sira taluk in collaboration with ORDER NGO</td><td></td></tr>
<tr><td>17.</td><td>Importance of Ready to fruit bags in Tumkur district need to be</td><td>Mr. Nagaraju. R.
AHO, Dept of Horticulture, Tumkur</td><td>About 60 RTF bags from IIHR were procured and supplied to interested</td><td></td></tr>
</table>

	promoted for mushroom consumption and cultivation		farmers of Tumkur district, Mushroom Production @ 50 kg/month is planned.	
18.	Progressive farmer expressed the need to produce the VAM and other related organic manures at the KVK itself.	**Mr.Prabhakar**, Progressive farmer	Steps were taken to produce VAM (@ 10 tonnes per year), Arka Microbial Consortium (@ 25 tonnes per year), Bio digester liquid and other organic products.	
19.	Radio Siddhartha (90.8 F.M) said that information can be disseminated through Radio Siddhartha, since it covers almost four taluks of Tumkur district.	**Mrs.Rashmi,** Radio Shiddhartha, Tumkur	Radio Siddhartha was invited to cover proceedings of District level Food Processing workshop on 31.10.13 and Betelvine interaction meet on 30.01.14.	
20.	Intervention has to be taken to manage/control bacterial blight in pomegranate	**Dr.D.Nuthan,** Associate Director of Research, UAS, GKVK, Bangalore	Proposal on Demonstration to Manage /Control Bacterial Blight in Pomegranate has been submitted to NHB, an OFT has been taken for Wilt Management	

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	**Tumkur Taluk** Nagasandra, Udigere Hirehalli, Haraluru, Sangapura,	Groundnut, Maize, Paddy, Ragi, Redgram, Tomato, Brinjal, Mango,	1.Use of local varieties and low yield. 2. No Seed Treatment 3.Poor Soil and Nutrient Management 4. Tikka disease, root grub, Red and hairy	1.Popularization of HYV / hybrids 2. Seed production techniques in vegetables and field crops 3.Integrated Nutrient Management and Soil test based fertilizer	02- OFT 19 - FLD Trainings, Field days

	Kolihalli, Chikkahalli, Hebburu Belgumba, Hiregundagal, Anupanahalli, Yallapura, Honnudike	Sapota, Arecanut, Coconut, Banana Aster,Dairy	caterpillar in Groundnut. 5.Zinc (Zn), Iron (Fe)deficiency in Maize and Zn in Paddy 6. Pod borer and sterile mosaic disease in red gram. 7.Shoot and fruit Borer in Brinjal 8. Powdery mildew and hoppers in Mango. 9. Lack of skill in Nursery Technique & Management, 10.Lack of knowledge about importance of Soil & Water Testing 11. Lack of knowledge in pre and post harvest technology management. 12. Lack of knowledge for income generating activities, malnutrition and unhygienic practices. 13.Dropping and splitting of Areca nuts	application 4.Integrated Pest & Disease Management 5.Propagation techniques in fruits and vegetables 6.Income generating activities, 7.Value added products 8.Nutrition education and hygiene 9. Post harvest technology in Vegetables and Fruits	
2.	**Koratagere Taluk** D,Nagenahlli, Hosapalya, Baichanahalli, Vaddarahalli, Eairaksandra, Haronahalli Mallasandra, Balenahalli	Maize, Paddy, Ragi, Redgram, Tomato, Sunflower, Banana, Groundnut, Mango, Sapota, Arecanut, Coconut, Aster, Dairy, Frenchbean, Brinjal & Marigold	1. Use of local varieties and low yield. 2. No Seed Treatment 3. Poor Soil and Nutrient Management 4. Tikka disease, root grub, Red and hairy caterpillar in groundnut. 5. Zn, Fe deficiency in Maize and Zinc in Paddy 6. Pod borer, and sterile mosaic disease in red gram. 7. Flower and Fruit dropping, Powdery mildew and hoppers in Mango. 8, Low yield in Banana 9. Dropping and splitting of Areca nuts. 10. Lack of skill in nursery technique & management 11.lack of knowledge about importance of soil & water testing, 12. Lack of knowledge regarding pre and post harvest technology management. 13. Lack of knowledge in income generating activities,	1.Popularization of HYV / hybrids 2.Seed Production Techniques in vegetables and field crops 3.Bud necrosis in sun flower 4.Management of saline soil in Paddy. 5.Integrated Nutrient Management and Soil test based fertilizer application 6.Integrated Pest & disease Management 7.Propagation techniques and post harvest in fruits and vegetables 8.Income generating activities, 9.Value added products 10.Nutrition education and hygiene 11.Drudgery reduction	1- OFT 11 –FLD Training, Field days
3.	**Madugiri Taluk** Budavanhalli, Siddapur, Shridragallu, Vadderahalli				

			malnutrition and unhygienic practices. 14.Drudgery 15.Shoot and fruit Borer, Bacterial blight in Brinjal.		
4	**Pavagada Taluk** Venkatapur, Arasikere, Hanmantahpura	Groundnut, Sunflower, Ragi, Maize, Paddy, Redgram, Tomato, Brinjal & Dairy,	1. Use of local varieties and low yield. 2. Moisture stress 3. No seed treatment 4. Poor soil and nutrient management 5. Tikka disease, collar rot, root grub in Groundnut. 6. Insufficient water for paddy cultivation 7. Pod borer and sterile mosaic disease in red gram. 8. Shoot and fruit Borer Bacterial blight in Brinjal. 9.Lack of knowledge about importance of soil & water testing, 10. Lack of knowledge in pre and post harvest technology management. 11. Lack of knowledge for income generating activities, malnutrition and unhygienic practices. 12.Drudgery	1.Popularization of HYV / hybrids 2.Soil and water conservation 3.Seed Production Techniques in field crops 4.Management of Bud necrosis in sun flower 5.Aerobic Paddy Cultivation 6.Integrated Nutrient Management and Soil test based fertilizer application 7.Integrated Pest & disease Management 8.Income generating activities, 9.Value added Products 9.Nutrition education and hygiene 10.Drudgery reduction.	1 - FLD Trainings
5	**Sira Taluk** Sakshihalli, Bukkapattana, Tuppadakona, Kumbarhalli, Ramalingapura, Honnagundanahalli,Kallambal, Sakshihalli, Bukkapattana, Tuppadakona, Kumbarhalli, Ramalingapura	Groundnut, Maize, Paddy, Ragi, Cotton, Redgram, Vegetables Mango, Sapota, Arecanut, Coconut, Aster, Dairy & Brinjal	1. Use of local varieties and low yield. 2.No Seed Treatment 3.Poor Soil and Nutrient Management 4. Tikka disease, root grub, Red and hairy caterpillar in Groundnut. 5. Zn, Fe deficiency in Maize and Zn in Paddy 6. Pod borer, and sterile mosaic disease in red gram. 7. Powdery mildew and hoppers in Mango. 8. Lack of skill in nursery technique & management, 9.Lack of knowledge about importance of soil & water testing, 10. Lack of knowledge regarding pre and post harvest technology management. 11. Lack of knowledge in income generating activities, malnutrition and unhygienic	1. Popularization of HYV / hybrids 2. Seed Production Techniques in vegetables and field crops 3.Integrated Nutrient Management and Soil test based fertilizer application 4.Integrated Pest & Disease Management 5.Propagation techniques and post harvest in fruits and vegetables 6.Income generating activities, 7.Value added Products 8.Nutrition education and hygiene 9. ICM in Cotton	6 - FLD Trainings, Field days

			practices. 12.Dropping and splitting of areca nuts 13. Shoot and fruit Borer in Brinjal. 14. Leaf reddening, flower drop, Black arm, Sucking pest problem in cotton		

b) Target and achievements of mandatory activities (2013-14)

OFT				**FLD**			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
03	02	9	6	19	18	120	115
Training				**Extension Programmes**			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
64	47	2220	2021	680	1232	10850	5721
Seed Production (Qtl.)				**Planting materials (Nos.)**			
Target		Achievement		Target		Achievement	
19.60		11.68		1.5 Lakh numbers		1.36 Lakh numbers	
Livestock, poultry strains and fingerlings (No.)				**Bio-products (Kg)**			
Target		Achievement		Target		Achievement	
-		-				Neem Soap- 1947 kg	
						Pongamia Soap-1323 kg	
						Arka Microbial Consortium – 745 kg	
						Mango Fruit Fly Traps-20000 Nos.	
Value added products				**Foliar Micronutrients (Kg)**			
Target		Achievement		Target		Achievement	
-		Ragi Malt – 100 kg		-			
-		Amla Juice – 568 litres		-		Banana Special -8801 kg	
-		Amla Candy- 115 kg		-		Veg. Special -5039 kg	
-		AmlaSupari – 20 kg		-		Mango Special-3280 kg	
		Mushroom Spawn-108 kg				Citrus Special-110 kg	

c) 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. 1.54 lakhs) with high BC ratio 3.11 as compared to Farmers practice with BC ratio 2.7
2. **Assessment of Red gram: Green gram (1:4) as a intercrop in Mango orchard for climate resilient agriculture:** TO3 treatment i.e. Mango + Redgram + Greengram intercropping System has been recorded highest biomas production and income per ha (Rs. 0.72 lakhs) with high BC ratio 2.3 as compared to Farmers practice with BC ratio 1.8

d) Major outcome of Frontline Demonstrations

1. The yield of Drought tolerant Ragi ML -365 (24.3 q/ha) has increased to the extent of 30 %.
2. The performance of Aerobic paddy MAS-26 was found suitable for drought condition with an advantages like 50 per cent water saving, 80 per cent savings on seed material with no need of puddling and increased yield of 12.69 %.. 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. Nut splitting and nut dropping in Arecanut was reduced by demonstrating CPCRI technology with increase in crop yield to an extent of 10.66 %.
4. Use of Arka Microbial Consortium in tomato reduced the Chemical Fertilizer up to 25 per cent and also increased the yield 15.07 %t.
5. Demonstration of BRG-1 Red gram variety is recommended for high yield which increases yield up to 12.12 % compared to the local check.
6. Demonstration on wilt resistant Arka Anand hybrid resulted in 12.08 % increased yield over control with more number of fruits per plant (28) compared to control (18 Nos) with higher BC ratio (3.33) as of Check (2.66). Farmers' feedback was that harvesting the fruits at right maturity will retain the lush green colour to fetch better price in the market.
7. Demonstration of Dry land Horticulture crop –Jamoon variety Dhoopdal has been introduced in Tumkur and Koratagere taluk.
8. Use of Polythene mulch in tomato : Arka Smarat with polymulch technology yields more no of fruits , fruit weight per plant (48 & 97.8 g), with an average yield of 30.5 t/ac with B:C ratio of 4.5 compared to check 3.4. Labour saving on weeding and water saving nearly 50%. Additional yield of 4.0 t worth of Rs. 40000 /- compared to check.
9. Demonstration of High density planting of Banana: HDP in Banana (G9) recorded highest yield (748 q/ha) with increased in percentage of yield to the tune of 43.3 as compared to the farmers practice. HDP yields higher B:C ratio of 3.58 as of check (3.10)
10. Through French bean seed production, the income level was more with bc ratio of 3.86 compared to 3.54 if grown as vegetable purpose.
11. Through cultivation of improved Papaya variety Arka Prabhath farmer got 33 % more yield and the disease tolerance for Ring spot virus was almost same.
12. Through adoption of Mango harvester, ripening chamber and packing mango fruits, farmers got 9% more income than traditional practice.
13. Value addition to Amla: farmer got more income compared to fresh fruit sale. Value added products were amla juice and candy. He got 42 % more income through value addition to amla fruits.
14. Value addition, Labeling & Branding of Ragi Products: Self Help Groups involved in value addition, Labeling & Branding of Ragi Products got 30% more income and also generated employment to the group of ten women.
15. 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 4.89 % shoot infestation was recorded in demo plot compared to check plot (28.9 %) and fruit infestation of 12.65 % compared to control plot (33.65%) with net increase in yield of 58.52 %.

16. Demonstration of Seed Pro a microbial plant growth promoter :8.2 % damping off was recorded in demo plot compared to check plot(34.5 %) with net increase in yield of 19.05 %
17. Cost effective eco friendly management of fruit fly through Pheromone traps in Mango : 37 adult male fruit flies trapped per trap which were erected in the Demo plot
18. Management of Mango stem borer by Sealer cum healer: 9 grubs were reported before the treatment with Sealer cum Healer and 28cm hole due to stem borer was fully healed up after the treatment.
19. Management of Basal Stem Rot(*Ganoderma* Wilt) in Coconut : 29.31% increased yield in demonstration field over check plot

e) i. Details of Training Programmes conducted (2013-14)

Category	**Major thematic areas covered**	**No. of courses**	**No. of participants**
1. Farmers & farm women	Cropping Systems	1	64
	Integrated Farming	2	67
	Integrated Crop Management	5	171
	Soil and Water Conservation	3	103
	Soil fertility management	1	53
	Production and productivity of crops	1	58
	Protective cultivation	2	95
	Plant propagation techniques	1	23
	Commercial floriculture	1	76
	Production and management technology	2	128
	Animal Disease Management	1	22
	Women empowerment	1	31
	Processing and value addition	1	25
	Post Harvest Technology	2	47
	Mushroom production	1	22
	Cultivation of Fruit	2	75
	Micro nutrient deficiency in crops	2	171
	Balanced use of fertilizers	1	36
	Bio-agents production	1	23
	Bio-fertilizer production	1	54
	Integrated Pest Management	1	35
	Integrated Disease Management	1	21
	Value addition	1	27
	Nutrient Use Efficiency	1	56
	ICT	1	58
	Mushroom production	2	62
2. Rural youth	Soil fertility and water management	1	33
3. Extension personnel	Agri Silvi culture	1	26
4.Sponsored programmes	Soil health and fertility management Balance use of fertilizers	1	38
	Processing and value addition	1	25
	Women and child care	1	234
5.Vocational programmes	Coconut Friends	3	60

ii. Details of Training Programmes conducted 2014 (Apr - Aug)

Category	Major thematic areas covered	No. of courses	No. of participants
Farmers and farm women	Commercial Floriculture	1	25
	IDM	1	31
	Cultivation of Fruit		
	Production and Management Ttechnology	3	95
	Post Harvest Technology	1	51
	INM	2	52
	Mushroom production	1	12
Rural youth	Productivity Enhancement in Horticulture Crops	1	17
	Nutritional Gardening	1	23
Extension personnel	Natural Resources Management	1	17
	Fodder Production Technology	1	10
	IPDM	1	33
	Organic Farming	1	25
	Use of Biofertilizers in Horticultural Crops	1	10
Sponsored programmes	Plantation Crops Management	1	17
	Coconut Production practices	1	134
Vocational programmes	Honeybee Keeping	1	16

f) Extension Programmes Conducted (2013-14)

g) Major Extension Activities

Extension Activity	No. of activities	Participants		
		Farmers	Extension Functionaries	Total
Advisory Services	325	426	14	440
Agri mobile clinic	-	-	-	-
Animal Health Camp	2	98	4	102
Awareness Campaign (Walkathon)	1	6000	80	6080
Celebration of important days	4	180	0	180
Special Day Celebration	2	88	0	88
Diagnostic Visits	29	66	1	67
Exhibition	6	3104	23	3127
Exposure Visits	1	23	0	23
Ex-trainee Sammelana	-	-	-	-
Farm Science Club	-	-	-	-
Farmers rally	-	-	-	-
Farmers Visit to KVK	290	519	0	519
Field Day	4	157	31	188
Film Show	1	32	2	34

Group discussion	4	62	2	64
Group meeting	-	-	-	-
Kisan Ghosthi	1	65	9	74
Kisan Mela	1	588	7	595
Lecture delivered	-	-	-	-
Mahila Mandal conveners' meeting	-	-	-	-
Method Demonstration	4	76	0	76
Scientists' visit to farmers field	4	22	2	24
Seed treatment/replacement campaign	-	-	-	-
Self Help Group Conveners meetings	-	-	-	-
Seminar	-	-	-	-
Soil health Camp	-	-	-	-
Farmers Seminar/Workshop	3	158	20	178
Technology Week	-	-	-	-
Others if any (Pl. specify)	-	-	-	-
Total	**681**	**5664**	**115**	**5779**

h) Other Extension Activities

Particulars	Number
Animal health camps	-
Booklets	-
Books	-
Electronic media	-
Extension Literature	02
Leaflets / folders	02
News letter –E News Letter	06
News paper coverage	22
Popular articles	01
Radio Talks	17
Soil health camps	-
Technical Articles	-
Technical Bulletins	01
Technical Reports	06
TV talks	11
Women Health Camps	-
Research Articles	04
Others if any (Pl. specify)Publications Abstracts	-
Total	**72**

i) Production and Supply of Technology Products

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	11.68	411250	415
Seed Materials –Hybrids (Kg)	Nil	-	-	-

Planting Materials – Varieties (Number)	IIHR Varieties and UAS B	61405	1092675	287
Planting Materials – Hybrids (Number)	Nil	-	-	-
Livestock Materials (Number)	Nil	-	-	-
Fingerlings (Number)	Nil	-	-	-
Bio Products				
Bio-pesticide(Kg)	Neem Soap	1947	292050	278
	Pongamia Soap	1323	165375	221
Foliar Spray(Kg)	Banana Special	8801	120150	1466
	Vegetable Special	5039	629875	1259
	Mango Special	3280	492000	328
Bio-Fungicide (Kg)	Arka Microbial Consirtium	745	55875	125
Bio Agents (Nos.)	Mango Fruit Fly Traps	20000	1100000	3350
Others	Mushroom Spawn (Kg)	108	8480	98
Value Added Products	Amla Candy (Kg)	115	28750	315
	Amla Juice (Litres)	568	56800	408
	Amla Supari (Kg)	20	5000	246
	Ragi Malt (Kg)	100	15000	257

j) Convergence and Linkages

S. No.	Organization	Type of linkages
1.	State Department of Horticulture, Tumkur	Trainings, FLD, Joint Diagnostic Survey
2.	State Department of Agriculture, Tumkur	Trainings, FLD, Joint Diagnostic Survey
3.	Watershed Department, Tumkur	Training and Collaborative Activities
4.	Coconut Development Board, Bangalore	Trainings
5.	Department of Animal Husbandry and Fisheries, Tumkur	Trainings and Technical Information
6.	KMF, Tumkur	Trainings
7.	Department of Women and Child Development, Tumkur	Trainings
8.	NBSS & LUP, Bangalore	NRM and Survey
9.	BAIF NGO, Tiptur	Trainings and Technical Information
10.	ORDER NGO, Tumkur	Trainings, FLD's and Technical Information
11.	AWARE NGO, Tumkur	Trainings
12.	APART NGO , Tumkur	Organic Farming and Group Approach
13.	MOTHER NGO , Tumkur	Seed Village Concept
14.	SKRDP, NGO , Tumkur	Trainings
15.	WLARS, NGO , Madhugiri	Trainings
16.	UAS, Bangalore	Trainings and FLDs
17.	UAS, Dharwad	Trainings and FLDs
18.	UHS, Bagalkote	Trainings and FLDs
19.	Veterinary University, Bidar	Trainings and FLDs

k) Soil Water and Plant Analysis

Category	No. of Samples		No. of Farmers	No. of Villages	Amount realized (Rs.)
	Farmers in whose fields OFT/FLD were implemented during the reported period	Other Farmers			
Soil	12	165	167	42	17700
Water	2	70	62	53	3600
Plant		90	19	9	9000
Manure					
Others					
Total	**14**	**325**	**339**	**104**	**30300**

l) 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. Loganandhan. N	**2**	IIHR Bangalore (Dec 2013)	Training on EDP on high value vegetables under protected condition	Extension activities will be conducted in the related topic.
			NAARM, Hyderabad (9-11 June 2014)	Technology Management in Agriculture for KVK professionals	Knowledge gained on topics like EDP, ICT, and FPO will be further imparted through training for stakeholders.
2.	P.R.Ramesh	3	IIHR Bangalore (Aug 2013)	Production of Arka Microbial Consortium	Technologies purchased from IIHR and mass production started.
			IIHR Bangalore (Sept 2013)	Production of Mango Special & Citrus Special	
			IIHR Bangalore (Nov 2013)	Use of Pheromon Traps to monitor Mango Fruit Fly	
3.	Dr.Somashekar	**1**	NIFTD, MPKV, Rahuri (Dec 2013)	National Initiative on Fodder Demonstration Technology	NIFTD Programme has been initiated during 2014-15 and fodder seed bank established in KVK, Hirehalli
4.	J.M.Prashanth	1	IWS, Bangalore (Jan 2014)	Sandalwood base Agro Forestry Models	Sandalwood growing farmers Database Collected
5.	Jagadish K.N	1	National Institute of	Relevance of Organic Farming in	Extension activities will be conducted in the

			Advance Studies, IISc, Bangalore (3-4 Feb 2014)	India Agriculture	related topic.
6.	B.Hanumanthe Gowda	1	ITMU,IIHR, Bangalore (June 2014)	Sealer cum Healer	Mass production and sale of products

m) Action Plan in brief for the next season(s):- 2014-15

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.Nagenahalli, Kataveeranahalli, Baichenahalli, Balenahalli	Arecanut	Monocropping, Low Soil fertility, Anabe Roga & Nut splitting	ICM	OFT, FLD ,Trainings & Field days
2	D, Nagenahlli, Vaddarahalli, Balenahalli, Hanumanthapura, Arasikere	Paddy	Water Scarcity and low yield	Natural resources management	FLD ,Trainings & Field days
3	D, Nagenahlli, Vaddarahalli, Balenahalli, Hanumanthapura, Arasikere, Baichenahalli, Sri ranga badavane, Arakere, Oorukere	Ragi	Drought, Use of local varieties and low yield. Lack of knowledge on Processing, Value Addition and Branding of Ragi Products.	Popularization of HYV , Income generating activities	FLD's , Trainings & Field days
4	Belagumba, Yallapura, Baichenahalli, Vadderahalli, Sakshihalli, Kumbarahalli, Ganadahunase	Redgram	Delayed Monsoon and Pod borer and sterile mosaic disease in Redgram.	Popularization of HYV / hybrids	FLD , Trainings & Field days
5	Sakshihalli , Arasikere, Mangalavad, Kallambela, Anupanahalli	Groundnut	Tikka Disease , leaf minor, low income, Smaller pod size & Lower yield	Popularization of HYV	OFT , Trainings
6	Haraluru, Vaddarahalli , Belgumba, D, Nagenahalli, Midigeshi	Tomato	Poor Soil and Nutrient Management, Water scarcity, Low keeping quality,	ICM	FLD, Trainings & Field days
7	Haraluru, Vaddarahalli ,Belgumba, D, Nagenahalli, , Midigeshi	Brinjal	Bacterial wilt and Shoot & fruit Borer in Brinjal	Integrated Pest & Disease Management	FLD , Trainings & Field days
8	Belagumba, Vaddarahalli, Anupanahalli Sakshihalli, Kumbarahalli,	French bean	Non availability of quality seed of improved varieties,	Popularization of HYV , Seed	FLD, Trainings & Field days

	Ganadahunase		Market price fluctuation if grown as vegetable	Production	
9	Kuruvalu, Sithakallu, ID halli, Yellapur, D.Nagenahalli, Haralur, Nagarjunahalli,	Mango	Mono cropping, Stem Borer Powdery mildew, Fruit fly and hoppers in Mango, lack of knowledge on PHT in mango	Integrated Pest & Disease Management, Post harvest technology, Alternate Cropping Systems	OFT, FLD, Trainings, Field days & Field Visits
10	Yellapura, D.Nagenahalli, Hanumanthpura	Jamoon	Mono Cropping, Water Scarcity , Dry land	Dry land Horticulture	FLD, Trainings & Field Visits
11	Urdigere, Balenahalli, Katveeranahalli, Midigeshi, Hanumathapura	Banana	Low plant Density, poor nutrient management & lack of pre and post harvest technology management.	Crop Management	FLD, Trainings & Field days
12	Sakshihalli, Kumbarahalli, Ganadahunase	Papaya	Low fruit setting, flower dropping, Ring spot virus and low yield	Popularizatio n of HYV / hybrids	FLD, Trainings & Field days
13	Jangaiayanapalya, Hanumathapura, Aresikere, Madde, Karikyathnahalli, Magalawada	Pomogran ate	Wilt & Bacterial Blight, Low yield	IDM	OFT, Trainings & Field days

n) 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.)
Apr 2013-Mar 14	19,88,575	37,35,246	32,87,560	24,36,261
Apr 2014- till date	24,36,261	2847993	832558	44,51,696

o) Utilization of KVK funds during the Previous Year / Current Year (Upto Aug, 2014)

S. No.	Particulars	Sanctioned (Rs. In lakhs	Released (Rs.)	Expenditure (Rs.)
A. Recurring Contingencies				
1	**Pay & Allowances**	6900000		3838597
2	**Traveling allowances**	125000		97103
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of	300000		182732

	News Paper & Magazines)			
B	POL, repair of vehicles, tractor and equipments	22500		142303
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	90000		46922
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	80000		11534
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	250000		41058
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	45000		7950
G	Integrated Farming System(IFS)	50000		0
H	Training of extension functionaries	25000		0
I	Maintenance of building	0		0
J	Extension Activities	50000		0
K	Farmers' Field School	30000		0
L	NIFTD	50000		14000
M	Library (Purchase of Journal, Periodicals, News Paper and Magazines)	5000		
	Total (Contingencies)			
	TOTAL (A)	**8225000**	**27,41,424**	**4382199**
B. Non-Recurring Contingencies				
1	Furniture and furnishing			
a.	Plant Health Diagnostic Facility			
b	Laser Guided Land Leveler			
c	Power tiller			
d	Ground pod striper			
e	Power weeder			
f	Generator			
2	Works			
3	Library			
4	Soil Water Testing Lab			
	TOTAL (B)			
	GRAND TOTAL (A+B)	**8225000**	**27,41,424**	**4382199**

Agenda Item No.05

Salient achievements in detail

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**: French bean Arka Suvidha resulted in, 10% more income
- **Action for up-scaling / Recommendation of the outcome** : Under NHM & RKVY scheme French bean seed production is being taken up for large quantity production

- 2. **Problem identified** : Low yielding papaya varieties

- **Technology Intervention Undertaken**: Demonstration of High yielding Variety Arka Prabhat
- **Mode of Implementation**: Front Line Demonstration
- **Outcome**: HYV Arka Prabhat resulted in 33 % increased in yield compared to local check.
- **Action for up-scaling /Recommendation of the outcome**: Farmers are advised to take up HYV Arka Prabhata / seeds are being produced at KVK Hirehalli.

- 3. **Problem identified** : Low yielding Redgram local varieties
- **Technology Intervention Undertaken**: Demonstration of High yielding Variety BRG-1
- **Mode of Implementation**: Front Line Demonstration
- **Outcome**: HYV BRG-1 resulted in 12.12 % increased in yield compared to local check.
- **Recommendation of the outcome**: Farmers are advised to take up HYV BRG-1

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 4.89 percent shoot infestation was recorded in demo plot compared to check plot (28.9 %) and fruit infestation of 12.65 %t compared to control plot (33.65%) with net increase in yield of 58.52 %.
- **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:** 8.2 % damping off was recorded in demo plot compared to check plot (34.5 %) with net increase in yield of 19.05 %.
- **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:** 37 adult male fruit flies trapped per trap which were erected in the Demo plot
- **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, Bangalore) @ 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:** Nine grubs were reported before the treatment with Sealer cum Healer and 28cm hole due to stem borer was fully healed up after the treatment.
- **Recommendation of the outcome:** Use of Healer cum sealer developed by IIHR

- **5.Problem identified :** Management of Basal Stem Rot(*Ganoderma* Wilt) in Coconut
- **Technology Intervention Undertaken :** Root feeding of 3% Hexoconazole for every 3 months + addition of 5kg Neem Cake and 50 gms of *Trichoderma viridae* with 10 kg of FYM/Palm (UASB)
- **Mode of Implementation :** Front Line Demonstration
- **Outcome:** 29.31% increased yield in demonstration field over check plot
- **Action for up-scaling /Recommendation of the outcome:** Several extension programmes viz. Method Demonstrations, Mass media in coordination with Horticulture Department for effective management of the diseases.

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 advantages like 50 per cent water saving, 80 per cent savings on seed material with no need of puddling and increased yield of 12.69 per cent.
- **Action for up-scaling /Recommendation of the outcome**: 10 qt of MAS -26 variety seeds were produced at farmers' field of Vaddarahalli and D. Nagenahalli and supplied to 200 farmers.
- **Success Stories :**
  The demonstration was conducted at the field of farmer Mr. Venkateshappa, Vaddarahalli, Tumkur taluk in 1 ha. The performance of the MAS-26 was found suitable for drought condition with yield of 38.6 q/ha compared to that of local 34.1 q/ha. The yield could be increased to an extent of average 13.1 per cent. The main advantage of the drought tolerant aerobic paddy MAS 26 are: direct sowing, no need of puddling, resistance to pest and diseases, reduces the pollution, medium duration, 48 - 60 tillering per seed with 50 % water saving along with 80 % seed saving.

- **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 (24.3 Quintal/ha) has increased to the extent of 30per cent.
- **Action for up-scaling /Recommendation of the outcome**: 800kg of ML -365 seeds has produced and supplied to70 farmers.
- **Success Stories :**

The finger millet Cv. ML365 is demonstrated at farmers' field in 20 ha. The performance of the variety is significantly superior over its local variety. While the local variety was wilting due to moisture stress, ML 365 was with fully developed fingers with grains in milky stage. Ragi ML365 showed maximum yield (24.3 Quintal/ha) compared to that of local gutte Ragi (18.7 Quintal/ha). The yield of the Ragi ML365 could be increased to an extent of average 29.9 %.

- **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 and their crop yield increased to an extent of 13.54 per cent.
- **Recommendation of the outcome:** FYM 12 kg/tree, RDF 100: 40: 140 NPK g/tree, Borax -30 g/tree + Zinc Sulphate.

- **Success stories**

  In Tumkur district Arecanut is considered as one of the important profitable plantation crops growing in an area of 22058 ha. It is grown under irrigated situation. The problem of crop is nut splitting and nut dropping. The demonstration was implemented at Progressive farmer Mr. Manjunath, D.Nagenahalli, Koratagere taluk field in 0.4 ha. KVK Hirehalli made an effort to mitigate the problem by demonstrating the CPCRI technology Viz., RDF + Borax (30g/plant) + Zinc Sulphate. The technology increased their crop yield (10.9 q/ha) to an extent 13.54 per cent with higher B:C ratio of 4.8 compared to control 4.34

  Performance indicators:

Treatments	Yield (q/ha)	% increase in yield
Demonstration Micro Nutrient Application	11.2	7.7
Control	10.4	-

- **4.Problem identified :** Low fertilizer use efficiency and low Soil fertililty
- **Technology Intervention Undertaken :** Use of Arka Microbial Consortium in Tomato production
- **Mode of Implementation :** Front Line Demonstration
- **Outcome:** Increased the fertilizer use efficiency and reduced 25% of fertilizer application and their crop yield increased to an extent of 16.25 %.
- **Recommendation of the outcome:**
- **Success stories**

  The demonstration was conducted at the field of farmer Mr. Devadas V, Vaddarahalli, Tumkur taluk in 1 ha. The performance of the Arka Microbial Consortium treated Tomato had yield of 520 q/ha compared to that of control 451 q/ha. The yield could be increased to an extent of average 15.3 %.

  Performance indicators:

Treatments	Yield (q/ha)	% increase in yield
Arka Microbial Consortium in Tomato	520	15.3
Control	451	-

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. 1.54 lakhs) with high BC ratio 3.11 as compared to Farmers practice with BC ratio 2.7
- **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** : Bacterial wilt and low yield in Brinjal
- **Technology Intervention Undertaken** : ICM in Brinjal – Arka Anand
- **Mode of Implementation** : Front Line Demonstration
- **Outcome:** Arka Anand f1 hybrid recorded more no of fruits and fruit yield per plant (26 & 2.8 kg) with an average yield of 204 q/ha with B:C ratio of 3.33 compared to check 2.66
- **Recommendation of the outcome**: Farmers are advised to take up Arka Anand F1 Hybrid.
- **3. Problem identified** : Less population and low yield in Banana
- **Technology Intervention Undertaken** : High Density planting in Banana
- **Mode of Implementation** : Front Line Demonstration
- **Outcome:** High density planting in Banana (G9) recorded highest yield (748 q/ha) with increased in percentage of yield to the tune of 43.3 as compared to the farmers practice. HDP yields higher B:C ratio of 3.58 as of check (3.10)
- **Recommendation of the outcome**: Spacing1.2 x 1.2x 2.0m with paired row Zigzag method.

- **4. 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:** Arka Samrat with polymulch technology yields more no of fruits, fruit weight per plant (48 & 97.8 g), with an average yield of 30.5 t/ac with B:C ratio of 4.5 compared to check 3.4. Labour saving on weeding and water saving nearly 50% . Additional yield of 4.0 t worth of Rs. 40000 /- compared to check.
- **Recommendation of the outcome** : Farmers are advised to take up Poly mulching Technology in Tomato

- **5. Problem identified** : Water Scarcity , Labors scarcity , Dryland and low income
- **Technology Intervention Undertaken** : Demonstration of Dryland Horticulture Crop -Jamoon
- **Mode of Implementation** : Front Line Demonstration
- **Outcome:** Ongoing
- **Recommendation of the outcome** : -

- **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
- **Recommendation of the outcome**: by use of these scientific technologies farmers are able to get 9% more additional income with better market price..

- **2**.**Problem identified** : Post harvest loss in Amla
- **Technology Intervention Undertaken** : Amla value addition, branding and market linking
- **Mode of Implementation** : Front Line Demonstration
- **Outcome**: Through value addition farmers are able to get 42 % more income compared to direct sale in the form of fresh fruits.
- **Recommendation of the outcome**: Amla value added product like Amla Juice, Candy, etc., fetches more price compared to direct sale of fresh fruits. So farmers can adopt the technologies of value addition

- **3**.**Problem identified** : Low income without value addition, unemployment
- **Technology Intervention Undertaken** : Value addition , Labeling & Branding of Ragi Products **Mode of Implementation** : Front Line Demonstration
- **Outcome**: Self Help Groups involved in value addition, Labeling & Branding of Ragi Products got 30% more income and also generated employment to the group of ten women.
- **Recommendation of the outcome**: Ragi value added product like Ragi Malt, Biscuits etc., fetches more price compared to direct sale of Ragi. So farmers can adopt the technologies of value addition in Ragi

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