

PRE – KHARIF 2015

DAC- ICAR INTERFACE

**GROUP
RECOMMENDATIONS**

MARCH 24, 2015



**DIRECTORATE OF EXTENSION
MINISTRY OF AGRICULTURE
GOVERNMENT OF INDIA
NEW DELHI**

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1. CROPS

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A. Technical recommendations to the issues identified for Pre-Kharif DAC-ICAR Interface Group meeting 2015-16

Sl. No	Issues	Recommendations of ICAR			
1.	Crop Calendar for cyclone-prone areas in the country including the states of Andhra Pradesh, Tamil Nadu, Odisha and West Bengal.	The crop Calendar for cyclone-prone areas in the country including the states of Andhra Pradesh, Tamil Nadu, Odisha and West Bengal is given at Annexure-I			
2.	Suitable varieties of paddy and sugarcane for coastal areas which can withstand surge waters, floods and cyclone winds without damaging the seeds, its colour and straw.	Rice varieties suitable for coastal areas which can withstand different stresses in coastal areas are as under:			
		Sl No.	Variety Name	Tolerance	Year of release
		1.	Swarna Sub1	Submergence, Flash flood	2009
		2.	Varshadhan	Water logging	2006
		3.	CR Dhan 500	Water logging	2011
		4.	Jalamani	Water logging	2012
		5.	CR Dhan 505	Water logging	2014

6.	Luna Sampad	Coastal salinity	2010
7.	Luna Suvarna	Coastal salinity	2010

Several other varieties are also developed and released for deep water ecologies in different states which also resist inundation due to heavy rainfall and cyclones are as under:

States/Central	Name of the Rice Variety
CVRC	CR Dhan 505
CVRC	Jitendra
CVRC	CR Dhan 500
Odisha	JayanthiDhan (CR Dhan 502)
Odisha	Jala Mani (CR Dhan 503)
Odisha	Durga
Manipur	Eriemaphou
Assam	Padmanath
Bihar	Sudha (T)
WB	Neeraja
WB	Jalaprabha (T)
WB	Hanseswari
WB	Dinesh
WB	Jaladhi 1 (T)
WB	Jaladhi 2 (T)
Karnataka	Hemavathi

Note: Normally in all rice varieties, the colour of seed coat and also straw change due to microbial attack under heavy moisture.

Coastal areas of the states have marginal soils with problems of salinity, Hence rice varieties tolerant to salinity viz., CST-7-1, DRR Dhan 39, Jarava, Lunishree, Bhutnath and Sumati may also be recommended to farmers.

Sugarcane varieties suitable for coastal areas are given at **Annexure-II**

3. Suitable varieties of pulses viz. Pigeonpea, Blackgram, Moongbean etc. for growing in acidic soil of Eastern and North-eastern

i) Eastern States

State	Varieties Recommended
Bihar	DA 11 (Pre-rabi), Bahar(L), Pusa 9(L), NDA1(L), Rajendra Arhar-1(L), IPA 203(L)

Region of India.	Uttar Pradesh (Eastern)	UPAS 120 (E), Bahar (L), NDA 1 (L), NDA 2 (Pre-rabi), Amar (L), MA 6 (L), MAL13 (L) and IPA 203 (L)																													
	Jharkhand	UPAS 120 (E), Bahar (L), Asha (ICPL 87119) (M), MA 3 (M)																													
E=Early, M=Medium, L=Long Duration																															
<p>(ii) North Eastern States: UPAS 120, Pusa 992, VLA 1, PA 29, AL 201 and PAU 881</p> <p>Mungbean:</p> <table border="1"> <thead> <tr> <th colspan="2">State</th> <th>Varieties</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Assam & other NE states</td> <td>Kharif</td> <td>SG 1 (Pratap), Pant moong 2, Pant Moong 4, Narendra moong 1, IPM 2-3</td> </tr> <tr> <td>Spring/Summer</td> <td>PDM 139, Pusha Vishal, Meha, Pant moong 5, TMB 37, HUM-16, HUM 12</td> </tr> <tr> <td rowspan="2">Bihar & Jharkh and</td> <td>Kharif</td> <td>Pant moong 2, Pant Moong 4, Narendra moong 1, Sunaina, .PDM139,MH2-15, HUM-1, IPM 2-3</td> </tr> <tr> <td>Spring/Summer</td> <td>PDM 139, Pusha Vishal, Meha, Pant moong 5, TMB 37, HUM-16, HUM 12</td> </tr> <tr> <td rowspan="2">West Bengal</td> <td>Kharif</td> <td>Narendra Moong 1, Pant Moong 4, Pant Moong 5, MH 2-15, Srekumar</td> </tr> <tr> <td>Spring/Summer</td> <td>PDM 139, Pusha Vishal, Meha, Pant moong 5, TMB 37, HUM-16</td> </tr> </tbody> </table> <p>Urdbean:</p> <table border="1"> <thead> <tr> <th colspan="2">State</th> <th>Varieties</th> </tr> </thead> <tbody> <tr> <td>Assam & other NE states</td> <td>Kharif</td> <td>Pant U 30, WBU 108, IPU 94-1 (Uttara), WBU 108</td> </tr> <tr> <td rowspan="2">Bihar & Jharkhand</td> <td>Kharif</td> <td>IPU 94-1 (Uttara), Birsa Urd 1, Pant U 30, Pant U 31, WBU 108</td> </tr> <tr> <td>Spring</td> <td>KU 92-1 (Azad Urd 1), WBU-109, Pant U 31</td> </tr> </tbody> </table>			State		Varieties	Assam & other NE states	Kharif	SG 1 (Pratap), Pant moong 2, Pant Moong 4, Narendra moong 1, IPM 2-3	Spring/Summer	PDM 139, Pusha Vishal, Meha, Pant moong 5, TMB 37, HUM-16, HUM 12	Bihar & Jharkh and	Kharif	Pant moong 2, Pant Moong 4, Narendra moong 1, Sunaina, .PDM139,MH2-15, HUM-1, IPM 2-3	Spring/Summer	PDM 139, Pusha Vishal, Meha, Pant moong 5, TMB 37, HUM-16, HUM 12	West Bengal	Kharif	Narendra Moong 1, Pant Moong 4, Pant Moong 5, MH 2-15, Srekumar	Spring/Summer	PDM 139, Pusha Vishal, Meha, Pant moong 5, TMB 37, HUM-16	State		Varieties	Assam & other NE states	Kharif	Pant U 30, WBU 108, IPU 94-1 (Uttara), WBU 108	Bihar & Jharkhand	Kharif	IPU 94-1 (Uttara), Birsa Urd 1, Pant U 30, Pant U 31, WBU 108	Spring	KU 92-1 (Azad Urd 1), WBU-109, Pant U 31
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4.	Cuscuta management in pulses.	<ul style="list-style-type: none"> • Cuscuta (weed) may be managed by using Cuscuta free crop seeds, harrowing in crop rows before it parasitizes the host, cultural practices like tillage, planting time, crop rotation and intercropping and use of selective herbicides like pendimethalin, fluchloralin and pronamide.If the infestation is in patches or away from cultivated crop, it can be easily controlled by spraying non-selective herbicides such as glyphosate and paraquat. • Post-emergence application of imazethapyr @100 g a.i./ha on 10-15 DAS (2-3 leaf stage of weed) + one hand weeding at 50 DAS had relatively more weed control and increased the pigeonpea yield. 										
5.	Short duration arhar varieties suitable for intercropping with soybean for MP	Following short duration varieties of pigeonpea are suitable for intercropping with soybean: TJT 501, TT 401 and ICPL										
6.	Suitable varieties and crop management of arhar grown on rice bunds	Management: Varieties grown in flat field/ridges can be grown well on rice bunds also. In rice areas,pigeonpea is grown on bunds to save the crop from excess water or flood to which rice can withstand. Cultural practices followed for normal crop is also applicable for bund cultivation but fertilizer application in case of bund cultivation should be done during bund preparation.										
7.	Suitable varieties of Jute and Mesta having high quality fibre as well as yield	<table border="1"> <thead> <tr> <th>Name of new crop variety registered and released</th> <th>Crop type and traits*</th> <th>Year of notification</th> <th>Registered at PPV&FR Authority</th> </tr> </thead> <tbody> <tr> <td>2009-10 1.RRPS-27-C-3 (Monalisa)</td> <td>1.White jute 2.White</td> <td>Notified for central release</td> <td>1.Six varieties of white jute-JRC -80,</td> </tr> </tbody> </table>			Name of new crop variety registered and released	Crop type and traits*	Year of notification	Registered at PPV&FR Authority	2009-10 1.RRPS-27-C-3 (Monalisa)	1.White jute 2.White	Notified for central release	1.Six varieties of white jute-JRC -80,
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		2.NDC0200 8(Ankit) 3.C- 532(Sashi) 4.C- 517(Sidhart ha) 5.CO- 58(Sourav)	jute 3.White jute 4.White jute 5.Tossa jute		JRC- 698,Molalisa, BibhanPat- 1,Bidhan Pat- 3 and Four varieties of tossa jute-S- 19, JRO-8432, JRO-128, JRO-66 has been registered in PPV &FR authority.
		2010-11 1.JBO- 1(Sudhangs u) 2.JBC- 5(Arpita)	1.Tossa jute 2.White jute	Notifie d for central release	
		2011-12 1.JRO- 2407(Samap ti) 2.KJC-9 3.AMV-7	1.Tossa jute 2.White jute 3.HS mesta	Notific ation by Centra l Variety Releas e Comm ittee	2. Two new varieties of tossa jute-CO- 58 & JRO-204 have also been registered in PPV & FR authority.
		2013-14 1.JRC- 9057(Ishani)	1.White jute	Releas e propos al furnis hed to CVRC	
8.	Suitable cotton varieties/hybrids for mechanical picking	North Zone: H 1300, F 2036, P 1752, RS 2553, P 1750, F 2383, MRC 7017, Bio 6488, MRC 6304, MRC 7031 Central Zone: NH 615, CNH 120, KH 134, NISC 50, Bunny Bt, MallikaBt, RCH 2, RCH 20 South Zone: CCH 724, TCH 1608, NH 653, L 761, RACH, KC 3, Anjali, Sura, MallikaBt, RCH 2 Bt, Jai Bt, JK 5839			
9.	Excessive moisture tolerant varieties of soybean	Soybean varieties have been developed to tackle excessive soil moisture conditions. The varieties that are tolerant to excessive moisture conditions are: JS 97-52, NRC 37, GS 2, MACS 58 . The characteristic features of prominent moisture tolerant varieties are			

		as follows:																		
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		<ul style="list-style-type: none"> Planting of soybean on BBF system has been recommended for mitigating the adverse impact of high and low rainfall 																		
10.	Short duration and drought tolerant groundnut varieties for different ecologies	Early maturing, drought tolerant Spanish and Virginia groundnut varieties suitable for major groundnut growing states are given below:																		
11.	High yielding varieties of Niger	<table border="1"> <thead> <tr> <th>Variety</th> <th>Characteristics</th> </tr> </thead> <tbody> <tr> <td>IGPN 2004-1</td> <td>Tolerant to <i>Alternaria</i> and powdery mildew</td> </tr> <tr> <td>Utkal Niger 150</td> <td>Moderately tolerant to <i>Alternaria</i> and <i>Cercospora</i>, tolerant to <i>Cucuta</i> infestation</td> </tr> <tr> <td>BNS 10</td> <td>Tolerant to moisture stress</td> </tr> <tr> <td>JNC 1</td> <td>Tolerant to moisture stress</td> </tr> <tr> <td>JNC 6</td> <td>Tolerant to moisture stress</td> </tr> </tbody> </table>	Variety	Characteristics	IGPN 2004-1	Tolerant to <i>Alternaria</i> and powdery mildew	Utkal Niger 150	Moderately tolerant to <i>Alternaria</i> and <i>Cercospora</i> , tolerant to <i>Cucuta</i> infestation	BNS 10	Tolerant to moisture stress	JNC 1	Tolerant to moisture stress	JNC 6	Tolerant to moisture stress						
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12.	Management of foot rot, sheath blight and false smut of rice	<p><u>BAKANAE/FOOT ROT</u></p> <p>Economic impact: The disease may cause a yield loss up to 20% in outbreak cases. Under favourable disease development conditions it is known to cause</p>																		

		<p>up to 70% yield loss.</p> <p>Occurrence and distribution: Bakanae, caused by <i>Fusarium moniliforme</i> is one of the oldest known diseases of rice which was identified in Japan by Ito and Kamura (1931). In India, bakanae or foot rot is known to cause severe damage in the states of Tamil Nadu, Assam, Andhra Pradesh, Jammu & Kashmir, Manipur, eastern districts of Uttar Pradesh, West Bengal, Punjab and Haryana.</p> <p>Symptoms: In nursery, the affected seedlings are pale yellowish green, thin and abnormally elongated (several inches taller than the normal plants; known as foolish seedling). Many affected seedlings die before transplantation and those survive produce plants which at the tillering stage are taller than the normal plants and are yellowish. On the outside of dead leaf sheaths, just above water level, a white or pink bloom of fungal mycelium develops. The root system is not affected and the dead plants, when pulled up, tend to snap at the collar. Also typical symptom of the disease is the production of adventitious roots from one or more nodes above water level.</p> <p>Epidemiology: The disease is mainly seedborne; infection taking place at flowering stage. The disease can also be soil-borne. There may also be carryover of the disease in rice straw and stubble. The optimum temperature for the growth of the fungus is about 27 to 30°C whereas 35°C is the temperature suitable for seedling growth and for fungal infection.</p> <p>Management of Foot Rot Disease of Rice</p> <ul style="list-style-type: none"> • Use of disease-free seeds • Use salt water to separate lightweight, infected seeds from seed lots, thus reducing seed borne inoculum. • Seed dressing with captafol 80% @ 4 g/kg or mancozeb 75 WP @ 2.75 g/kg or carbendazim @ 2g/kg can reduce the disease incidence. Propiconazole found to be effective against strains that are resistant to Benomyl and combination of Thiram and Benomyl. Spraying of
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		<p>carbendazim 50 WP @ 1 g/l in nursery or main field will reduce the disease incidence.</p> <ul style="list-style-type: none"> • Avoid draining fields, as the aerobic fungus may reproduce rapidly in the presence of oxygen. <p><u>SHEATH BLIGHT</u></p> <p>Distribution: It is major production constraint in Punjab, Haryana, Eastern UP, Bihar, West Bengal, Orissa, Assam, Tripura, Andaman Islands, Coastal Andhra Pradesh, Coastal Tamil Nadu, Kerala, parts of Karnataka and Chhattisgarh.</p> <p>Symptoms: On the leaf sheath oval or elliptical or irregular greenish grey spots are formed. As the spots enlarge, the centre becomes grayish white with an irregular blackish brown or purple brown border. Lesions on the upper parts of plants extend rapidly to cover entire tillers up to the flag leaf. The infection spreads to the inner sheath and resulting in death of the entire plant. Plants heavily infected in the early heading and grain filling growth stages produce poorly filled grain.</p> <p>Pathogen: The fungus <i>Rhizoctoniasolani</i> (<i>Thanetophorus cucumeris</i>) produces usually long cells of septate mycelium which are hyaline when young, yellowish brown when old.</p> <p>Favorable condition: High relative humidity (96-97 %), high temperature (30-32°C), closer planting and heavy doses of nitrogenous fertilizers.</p> <p>Mode of Spread and Survival: The pathogen is soil borne, but it can also infect seeds and transmit through infested seed source. The pathogen has a wide host range and occurs on all grasses and broad leaved weeds grown on rice bunds causing similar symptoms and producing sclerotial bodies.</p> <p>Management of Sheath Blight Disease of Rice</p> <ul style="list-style-type: none"> • Use healthy seeds. Adopt deep summer ploughing so that sclerotia remaining inside the soil are brought to hot sunlight. • Choose the tolerant varieties like Swarnadhan,
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		<p>Radha, Pankaj and Vikramarya.</p> <ul style="list-style-type: none"> • Seed treatment with <i>Pseudomonas fluorescens</i>@ of 10g/kg followed by seedling dip @ of 2.5 kg or products (<i>P. fluorescens</i>) /ha dissolved in 100 liters of water and dipping for 30 minutes. Soil application of <i>P.fluorescens</i> @ of 2.5 kg/ha after 30 days of transplanting (This product should be mixed with 50 kg of FYM/Sand and then applied). • Spray Validamycin 3L @2.5 ml/l or Propiconazole 25 EC @ 1 ml/l or Hexaconazole 5EC @2 ml/l or Carbendazim 5WP @ 1g or Thifluzamide 24SC @ 30 gai/ha, Chlorothalonil 1 kg/ha or Azoxystrobin 96% TC @ 1.0 ml/l. • Combination product such as Filia 52.5 SE (tricyclazole and propiconazole combination) @ 2.5 ml/l or Nativo 75 WG or (trifloxitrobin and tebuconazole combination) @ 0.4g/l or Luster 37.5 SE (flusilazole+carbendazim) 300 a.i.g/have also been found very effective against the disease. • Avoid applying higher dose of nitrogen when symptom appears. <p><u>FALSE SMUT</u></p> <p>In the recent years, false smut has become a serious threat to rice cultivation because the disease affects the grain development and causes direct economic loss to farmers.</p> <p>Economic impact: In India, the disease has been reported to occur in moderate to severe intensity from the year 2000 onwards. The yield losses in different states of the country have been estimated to vary between 0.2% to 49% depending on the disease intensity and rice varieties grown in those. Disease infection on one spikelet may also cause sterility on the neighbouringspikelets.</p> <p>Symptoms: The smut balls are initially yellow in colour and are covered by membrane. Later, the membrane bursts and the colour changes to yellowish green, olive green and finally greenish black. Usually only a few grains are affected in a panicle and may increase up to 100 in case of severe disease incidence.</p> <p>Pathogen: The disease is caused by a fungus</p>
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		<p><i>Ustilaginoideairens (Cooke) (Takahashi)</i>. Sclerotia are the major source of primary inoculum. In nature, over wintered sclerotia germinate and produce ascospores and coincides with the anthesis of early sown rice crop. Air-borne chlamyospores play an important role in the secondary infection which is a major part of disease cycle.</p> <p>Factors favouring the disease development: High relative humidity, low temperature and rainfall accompanied by cloudy days during flowering favored disease. Application of excessive dose of nitrogenous fertilizer particularly at flowering stage also play important role in increasing the susceptibility of the plant against false smut.</p> <p>Management of False Smut Disease of Rice</p> <ul style="list-style-type: none"> • Avoid using sclerotia and chlamyospore contaminated seeds. Grow tolerant varieties e.g. Savitri, Panidhan, Gayatri. • Sclerotia of false smut admixture with seeds and along with seeds may cross geographic boundaries. Use healthy seeds collected from disease free crop. As water logging is favorable for false smut hence raised nurseries are preferred. Drain out water from the field after grain formation. • Application of Tilt (propiconazole) @ 1 ml/l or Nativo 75WG (trifloxystrobin 25% + tebuconazole 50%) @ 0.4 g/l at 50 % panicle emergence is effective in reducing the disease intensity. To escape severe damage, sowing date and heading period could be planned in such a way that flowering should not coincide with rainy period. • Avoiding the following favorable factors reduces the disease incidence significantly: <ul style="list-style-type: none"> ○ Water logging, direct sowing, heavy dose of nitrogen, weeds at bunds, carbofuran application. • Fish and snails feed on false smut balls. These are good bio-control agents.
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B. Statewise Varieties Recommended

State	Varieties recommended	
	Spanish bunch (Duration: 100-105 days)	Virginia bunch (Duration: 110-120 da
Andhra Pradesh	K 134, Kadiri 6, Narayani, Kadi Tirupati 4, ICGV 91114, Greeshr	ICGS 76
Gujarat	GG 2, GG 5, GG 7, ICGS 37	GG 20, Somnath
Karnataka	Dh 3-30, K 134, ICGV 91114	ICGS 76
Tamil Nadu	K 134, VRI Gn 6, TMV (Gn) 13	ICGS 76
Maharashtra	GG 3, TAG 24, AK 159, JL 220 501	ICGS 37
Rajasthan	TG 37 A, Pratap Mungphali-2	CSMG 84-1, CSMG 8 GG 14
Uttar Pradesh	ICGS 1, TG 37 A	CSMG 84-1, CSMG 88
Orissa	OG 52-1, ICGV 91114	ICGS 76
Punjab	TG 37 A	HNG 10, CSMG 8 CSMG 884, GG 14

C. Technical recommendations to the issues identified for Pre- Kharif DAC-ICAR Interface Group meeting 2014-15 was circulated to all the States/UT's for necessary action.

Annexure-I**Crop Calendar for cyclone-prone areas in the country including the states of Andhra Pradesh, Tamil Nadu, Odisha and West Bengal.****Rice**

	State	Season	Sowing Months	Harvesting Months
1	Andhra Pradesh	Kharif	May-June	November- December
		Rabi	November-December	March- April
4	Tamil Nadu	<i>Kar</i>	April- May	July-August
		<i>Kuruvai</i>	May-June	August
		<i>Early Samba</i>	July-August	January-February
		<i>Samba</i>	September-October	January-February
		<i>Late Samba</i>	October -November	February-March
		<i>Thaladi</i>	September-October	February-March
		<i>Navari/ Kodai</i>	November-December	February-March
7	Odisha	<i>Beali</i>	May - June	September - October
		Kharif (<i>Sarad</i>)	June - July	November - December
		Rabi (Summer)	December-January	April-May
8	West Bengal	Aus/Bhadri (autumn rice)	April-May	August-September
		Aman (Winter rice)	June-July	November-December
		Boro (summer rice)	December-January	April-May

Pulses**Pigeonpea:**

States	Period	Early &Mid- early Arhar/Tur	Medium Arhar/Tur	Long Duration Arhar/Tur
Andhra Pradesh	Sowing	June (B)-June (M)	Jun (M)- July (M)	-
	Harvesting	Nov(M).- Dec (E).	Dec (M)-Jan.(M)	-
	Harvesting	Dec(M).-Jan (M).	Dec. (M)- Feb. (M)	-
Tamil Nadu	Sowing	June (B)-June(M)	Jun (M)-July (M)	-
	Harvesting	Nov (M). -Dec (M)	Jan (M).- Feb.. (M)	-
Orissa	Sowing	June (B)-June (M)	Jun (M)- July (M)	-
	Harvesting	Nov (M). - Dec (M).	Jan(M)-Feb (M)	-
West Bengal	Sowing	-	-	July
	Harvesting	-	-	April-May

B= Beginning, M=Middle, E=End

Mungbean & Urdbean:

State	Sowing time (Mungbean&Urdbean)
Andhra Pradesh	October to December
Orissa	October to December and Jan. to Feb.
Tamil Nadu	October to December and Jan. to March
West Bengal	June - July and Feb. - March

Cotton (for Tamil Nadu)

Period (DAS)	Operations	Activities of Rice fallow
January (First week)	Land preparation	<p>i) If the soil is in waxy condition, instead of Zero tillage, the seed rows may be tilled and the seed dibbled .</p> <p>ii) If the soil is dry and not in condition to take up sowing, let in water and then allow the soil to dry till soil comes to waxy condition.</p> <p>iii) At the lower level of the field dig a trench 15 cm wide and connect this trench to the outside channel to drain off the excess water</p>
January (Second week)	Sowing& herbicide application	<p>Seed rate of 7.5 kg of delinted seeds sowing and dibble the seeds at a depth of 3-5 cm with 45 X 15 cm</p> <p>Pre-emergence application of Pendimethalin @ 1.0 kg ai/ha ensures weed free condition for 40 – 45 days</p>
January(Third week)	Gap filling & thinning	<p>Fill up gaps on the 10th day of sowing. & dibble 2 to 3 acid delinted seeds</p> <p>Thin out seedlings on the 20th day of sowing and leave only one healthy and vigorous seedling per hill.</p>
January(Fourth week)	Spraying, Inter-cultivation& basal application	<p>Spraying for sucking pests of cotton</p> <p>If soil is in condition, give a hoeing with spade and form ridges and incorporate the fertilizer in the soil around the plants between 30th day of sowing.</p> <p>First irrigation is applied</p> <p>Blanket recommendation of 30:30:150 kg NPK/ha as first dose</p>
February (second fortnight)	Spraying& top dressing	<p>Spraying for sucking pests of cotton</p> <p>Top dressing of 30:15 kg N&K/ha</p> <p>Spray 40 ppm of NAA at 40/45th day using high volume spray.</p>

March (First fortnight)	Irrigation	Irrigation depending on the soil moisture Arrest terminal growth by nipping the terminal 15 th node for controlling excessive vegetative growth. (70-75 DAS) Irrigation is followed
March (Second fortnight)	Irrigation & boll worm control	Boll worm control Irrigation
April (First fortnight)	Irrigation & boll worm control	Boll worm control Irrigation
April (Second fortnight)	Irrigation	Irrigation
May (Second fortnight)	Harvesting	Picking of <i>kapas</i>

Jute and Allied Fibre

Jute (*Tossa jute: Corchorusolitorius* and *White jute: C. capsularis*)

SL. NO	Operation	Time (Week/Month)	Details of operation
1.	Land preparation	First to second week of March	Soil is pulverized with tractor or bullock drawn plough followed by laddering. At the time of final ploughing fertilizer to be mixed with the soil; FYM or compost @ 5-6 t/ha. Depending on the degree of acidity, lime @ 2-4 t/ha may be applied in the soil once in 3-4 years (Lime should be applied one month before sowing) NPK for (<i>Tossa jute</i>): 60:40:40 kg/ha NPK For (<i>White jute</i>): 60:50:50 kg/ha Full P&K and half of the N to be added during final ploughing
2.	Sowing	For <i>Tossa jute</i> : 3 rd Week of March to 2 nd week of April For <i>White Jute</i> : Mid March	Tossa Jute variety: JRO 204 (Suren) – First week of March CO-58 (Sourav): First fortnight of March JRO 2407 (Samapti): Second week of March onwards JBO 2003H (Ira): Last week of March JRO-128 (Surya)- Mid March to End April S-19: First week of March JRO-8432 (Shakti Tossa)- Mid March to end April JRO-66 (Golden Jubilee Tossa)- Mid April

			<p>JRO-524 (Navin)- Third week of March to end of April</p> <p>White jute variety:</p> <p>JRC 517- mid March (North Bengal Assam, Bihar, Odisha and UP)</p> <p>JRC 532- mid March mid March (North Bengal Assam , Bihar, Odisha and UP)</p> <p>NDJ (Ankit) – mid February (Bihar, Odisha, UP, Assam)</p> <p>JBC (Arpita) – mid March ((Bihar, Odisha, UP, Assam)</p> <p>Seed rate: Tossa jute: 3-4kg / ha (for line sowing), White Jute: 4-5kg/ ha (for line sowing), for broadcasting seed rate is 7-8kg and 8-10 kg/ha respectively</p> <p>Seed Treatment: Before sowing the seed should be treated with Carbendazim @ 2 g kg⁻¹ or Mancozeb @ 5 g kg⁻¹ or Trichoderma viride (formulated product @ 10 g kg⁻¹</p>
3.	1 st Weeding and thinning	1 st Week of April to 4 th week of April - 15 Days After Sowing (DAS)	<p>In row crop, weeds between rows can be smothered by a wheel hoe fitted with scrappers or tines.</p> <p>In order to reduce weeding cost on labour, post-emergence application of Quizalofop ethyl (5 EC) at 1.5-2 ml/lit of water has been found effective in controlling the grassy weeds.</p> <p>Recently CRIJAF has developed two weeding implement namely Nail weeder and Herbicide brush which can be used for better weed management.</p>
4.	2 nd Weeding and thinning	2 nd week of April to 5 th week of April (21 DAS)	<p style="text-align: center;">-Do-</p> <p>First thinning at three weeks after sowing and second or final thinning is to be done 10-15 days later. 45-50 plants per sq. m. should be assured after final thinning</p>
5.	Top dressing	2 nd week of April to 5 th week of April (21 DAS and 35 DAS)	30 kg nitrogen/ha to be applied
6.	Irrigation	2 nd week of April to 5 th week of April (21 DAS and 35 DAS)	Jute is basically a rain-fed crop but irrigation is essential for early sowing in jute based multiple cropping. The total water requirement of jute crop is at 495 mm/ha.
7.	Pesticide application	April to June (as and when	i) For yellow mite incidence, spray fenazaquin 10 EC @2 ml/lit. or spiromesifen 240 SC @ 0.7 ml/lit of

		required)	<p>water as and when mite population exceeds above 50 mites/sq. cm on second unfolded leaf.</p> <p>ii) For Bihar hairy caterpillar and semilopper, spray lamdacyhalothrin 5 EC @ 0.7 ml/lit. or profenophos 50 EC @2.5 ml/lit of water as and when damage exceeds above 10%.</p> <p>iii) For mealybug, spray profenophos 50 EC @2.5 ml/lit or chlorpyrifos 20 EC @2.5 ml/lit of water as and when exceeds 10%.</p> <p>iv) If stem rot disease appears in patches: spray copper oxychloride @ 5 g/lit or carbendazim @ 2 g /lit in affected patches only. If disease exceeds 2% and spread all over the field: Same application may be repeated.</p>
8.	Harvesting	15 th July to end of July	<p>Jute plants are harvested/cut close to the ground. After harvesting plants are left in the field for 3-5 days for shedding of leaves. Thick and thin plants are to be sorted out and then tied in bundles of 15-20 cm diameter. Jute bundles should then be taken to the retting tank and kept standing 30-60 cm deep in water for 2-3 days before the entire bundles are steeped / immersed into water. Water in retting tank should be clear and immersion of bundles should be maintained with heavy materials like stone/bricks/etc.</p>
9.	Retting and extraction	1 st week of August to 15 th August	<p>Water in the retting tank should be slow flowing for better quality fibres. For completion of retting in stagnant water about 15-20 days period is required, whereas, it takes a few days more in flowing water. In stagnant water use of CRIJAF microbial retting consortium @ 3-4 kg talc based formulation / <i>bigha</i> of land may be used for better quality fibre. Extraction is normally done by hand.</p>

Mesta (*H. sabdariffa* and *H. cannabinus*)

Sl. No.	Operation	Time (Week/ Month)	Details of operation
1	Land preparatio	Just before	Land is to be ploughed with pre-monsoon shower

	n	monsoon	<p>followed by laddering to obtain fine tilth.</p> <p>Fertilizer application: FYM @ 5-6 t/ha is to be applied during land preparation. In medium fertile soil, the recommended dose of fertilizer is 40:20:20 (N: P₂O₅: K₂O, kg/ha). P and K will be applied as basal while N is to be splitted as – 1/3rd at sowing, 1/3rd at time of first weeding (21 DAS) and 1/3rd at second weeding (35 DAS). For drier tracts, if soil moisture is not favourable, foliar application of urea (1.0%) may be done.</p>
2	Sowing	2 nd week of June to 1 st week of July	<p>Variety: <i>H. sabdariffa</i>: AMV-1, 2, 3, 4 (AP), HS-4288 and HS 7910 (W.B., Bihar, Assam, Tripura, Meghalaya)</p> <p><i>H. cannabinus</i>: HC 583 (for West Bengal)</p> <p>Method: Broadcasting but line sowing with the help of seed drill is preferable as yield increases by 15 – 20 %.</p> <p>Seed rate: <i>H. cannabinus</i>– 15-17 kg/ha for broadcasting and 13-15 kg for line sowing; <i>H. sabdariffa</i>: 13-15 kg/ha for broadcasting and 11-13 kg for line sowing</p> <p>Seed treatment with Mancozeb @ 3 g/kg of seed is desirable before sowing. In flea beetle and mealybug endemic areas seed treatment with thiamethoxam 70 WS @ 5g/kg of seed or clothianidin 50 WDG @ 3g/kg of seed.</p> <p>Spacing: Optimum plant population for mesta is around 4 – 5 lakh/ha. For broadcasted crop, plant to plant spacing of 12-15 cm is to be maintained by thinning. For line sown crop, 25-30 cm row to row and 7-10 cm plant to plant spacing is required</p>
3.	Intercultural operation	1 st week of July to 3 rd week of July (15 DAS)	<p>In general, two weedings - 1st at 21 DAS and 2nd at 35 DAS is sufficient. In case of heavy weed infestation, three weeding – 1st at 14-21 DAS, 2nd at 28-35 DAS and 3rd at 42-49 DAS is recommended. Light thinning during 1st weeding and final thinning during 2nd weeding is recommended.</p>

	Top Dressing	First week of June and Third week of July	1/3 rd at time of first weeding (21 DAS) and 1/3 rd at second weeding (35 DAS). For drier tracts, if soil moisture is not favourable, foliar application of urea (1.0%) may be done.
4.	Irrigation	Mainly Rainfed (irrigation as an when required)	Mesta is raised in India as a rainfed crop. The water requirement of mesta is about 50 cm. One to two irrigations at the early stage of growth gives better germination and crop stand.
5.	Pesticide application	As an when required	<ol style="list-style-type: none"> 1. For mealybug, spray profenophos 50 EC @2.5 ml/lit or chlorpyriphos 20 EC @2.5 ml/lit of water as and when exceeds 10% plant damage. 2. Among the diseases, foot and stem rot is the major one. Proper drainage, crop rotation, seed treatment with Mancozeb @ 3g/kg seed, soil drenching with Mancozeb @ 2g/l of water or growing resistant varieties like AMV-3 can help in managing the disease effectively.
6.	Harvesting	Last week of November to 3 rd week of December	Kenaf (<i>H. cannabinus</i>) is harvested at 120-25 days after sowing while roselle (<i>H. sabdariffa</i>) is harvested at 140-45 days after sowing
7.	Retting and Fibre extraction	15 th December to 1 st week of January	<p>The plants are to be cut at the base, bundled into convenient size, kept in standing position in 50-60 cm depth in flowing water for 3-4 days. After that, the bundles are to be immersed into flowing water (10cm depth) with the help of weight (tannin and iron free material). The volume of water : retting material should be 20 : 1. The optimum temperature of retting water should be around 34°C while the optimum pH should be 6.5-7 under which retting is completed in about 12-15 days. In stagnant water use of CRIJAF microbial retting consortium @ 3-4 kg talc based formulation/<i>bigha</i> of land</p> <p>Extraction is done by beat – break and jerk method, thoroughly washed in clean water so that no bark or stick remains with the fibre. After cleaning the fibre is to be dried under sun for 2-3 days.</p>

Sugarcane varieties suitable for coastal areas:

Name of variety	Year of release	State (s) for which recommended	Maturity	Cane Yield (t/ha)	Biotic & abiotic tolerance
CoC 01061	2006	Coastal Tamil Nadu & Andhra Pradesh and Odisha	Early	110.8	MR to red rot
CoOr 03151	2011	-do-	Early	105.28	-do-
CoC (SC) 24	2009	Coastal Tamil Nadu and Puducherry	Early	133.00	MR to red rot & smut and tolerant to drought & waterlogging
TNAU (SC) Si 7	2010	-do-	Early	155.00	MR to red rot and tolerant to drought & waterlogging
TNAU (SC) Si 8	2012	-do-	Midlate	146.00	-do-
CoOr 03152	2010	Odisha	Early	110.00	MR to red rot
CoOr 04152	2012	-do-	Midlate	120.00	-do-
CoOr 05346	2012	-do-	Early	105.00	-do-
Co 6907	-	-do-	Early	95.00	-do-
93A145	2006	Andhra Pradesh	Early	125.00	Tolerant to waterlogging & drought
97A85	2010	-do-	Early	120.00	MR to red rot and tolerant to moisture stress & waterlogging
2000V59	2010	-do-	Early	130.00	Tolerant to waterlogging and drought
2003V46	2010	-do-	Early	130.00	MR to red rot and tolerant to waterlogging
2001A63	2012	-do-	Early	130.00	MR to red rot and tolerant to moisture stress

2. HORTICULTURE

1. Group Participants

1. Dr. S.K. Malhotra, Horticulture Commissioner-in-Chair
2. Dr. Janaki Ram, ADG (Hort.-I) ICAR
3. Dr. M. Tamil Selvan, ADC (Hort.) DAC
4. Dr. Naveen Patle, DC (Hort.) DAC

Name of the officer to present the Recommendations: **Dr. Janaki Ram, ADG (Hort-I)**

2. Action taken Report

2.1 Action Completed

Sl. No.	Recommendations	Action Taken Report
1	Protected cultivation protocol for vegetables crops (tomato, capsicum, cucurbitaceous vegetables, papaya etc.	The Protocol for vegetables crops have already been developed and are being disseminated.
2	IPM schedule for mango, sapota, pomegranate and grapes.	IPM schedule for fruits crops have been worked out by ICAR and they have been standardised.
3	Integrated nematode management technologies using bio pesticides for banana, acid lime, tomato, capsicum, okra, gladioli and tuberose.	The integrated nematode management for tomato, capsicum and okra has already been standardised but for banana and tuberose, it is under process.

2.2 Action in Progress

Sl. No	Recommendations	Action Taken Report
1	ICAR must work on micronutrient deficiency management in important fruits & vegetables crops to improve the productivity.	ICAR has started one Network program on Micronutrient Management in horticulture crops with ten centres shall function from lead centre IIHR Bangalore to work out deficiency of micro nutrient to improve productivity in important horticulture crops.

Issues to be flagged for incoming Kharif:

1. Production Technology of hybrid varieties of vegetables crops.
2. Planting material production of turmeric and ginger.
3. Biological control for pests & diseases in mango, brinjal and cucurbits
4. Site specific nutrient management in citrus, apple, pear, mango and banana.
5. Production of potato in *Kharif* season

3. PLANT PROTECTION (PP)

Issues for consideration during DAC-ICAR interface 2015

1. Management of fruit flies through non-chemical methods in Mango and major cucurbits without compromising with the quality of the produce for export.
2. Management of thrips through non-chemical methods in bitter gourds and other exportable vegetables.
3. Eco-friendly and economical alternative to Methyl Bromide for the management of pests of stored grains and wooden logs/ pallets.
4. Management of quarantine pests such as bacterial sheath brown rot, seedling rot, halo blight in rice bulk seed for import/ export.
5. Development of molecular diagnostic tool for early detection of brown rot in potato.
6. Development of effective IPM package for the management of bacterial wilt in major solanaceous crops.
7. Effective management strategy for early leaf fall in Apple at the time of fruit development due to *Alternaria spp.* and *Marsonina sp.* in J&K state.
8. Management strategy for Root and Shoot borer complex in Apple crop in J&K state.
9. Area and crop specific strains of bio-control agents to be developed for different crops.
10. Development and Validation of cow urine/dung based pest management strategy through multi-locational trials.
11. Organic management strategies for the management of snail problem on maize and vegetable crops in Sikkim state.
12. Management of vertebrate pests such as Blue Bull, Wild Boar, Monkeys etc. in agricultural fields.
13. Development of mechanical device for live pest infestation.

4. INTEGRATED NUTRIENT MANAGEMENT (INM)

1. Group Participants:

- (i) Smt. I Rani Kumudini, Joint Secretary (INM) ---- In Chair
- (ii) Dr. S. K. Chaudhari, ADG (SWM) ICAR
- (iii) Dr. P. P. Biswas, Principal Scientist (NRM), ICAR
- (iv) Dr. Vandana Dwivedi, Additional Commissioner (INM), DAC
- (v) Sh. J. P. Chaudhary, Assistant Commissioner (INM), DAC
- (vi) Smt. Neerja Joshi, AD(M), DAC
- (vii) Dr. D. S. Yadav, JSO, DAC

2. Action Taken Report:

2.1 **Action Completed:** For use of slow releasing nitrogenous fertilizers, the cap on production on neem coated urea has been removed. Thus, action completed.

2.2 Action in Progress:

S.No.	Recommendation	Action Taken
1.	Preparation of digitized district level soil fertility maps including micronutrients	IISS Bhopal has completed all 171 district level soil fertility maps in phase -I. For taking up phase II nd a meeting with ICAR will be held to discuss with ICAR to integrate soil health card and fertility map programmes.
2.	Organic Agriculture- Preparation of crop/area specific package of practice of organic farming & technology of different sources of nutrients and disease/ pest management.	ICAR has developed 18 Organic Package of Practice for Crops / Cropping systems. ICAR will communicate Organic Package of Practices (PoP) to DAC for circulation to States.

2.3 Action yet to be initiated:

2.4 Issues to be flagged:

- i) ICAR agreed to provide manual / booklet on trainers training for soil testing staff.
- ii) ICAR agreed to provide package on practices fertigation to DAC for communication to States.

5. MECHANIZATION AND TECHNOLOGY (M&T)

1. Group Participants:

- (i) Smt. I. Rani Kumudini, Joint Secretary (M&T), DAC – in Chair
- (ii) Dr. R P Misra, Principal Scientist, ICAR
- (iii) Shri A N Meshram, Deputy Commissioner (M&T), DAC
- (iv) Shri P K Chopra, Assistant Commissioner (M&T), DAC
- (v) Shri Rajiv Thakur, Agricultural Engineer (M&T), DAC

2. Action taken report:

2.1. Action completed:

S.No.	Recommendation	Action Taken
1	Custom hiring services for precision machines are to be promoted on large scale	<ul style="list-style-type: none"> (i) Custom hiring machinery package for about 25 agro-climatic regions have been developed. (ii) Business model for identified machinery package has been developed. (iii) Decision support system software (DSS) has been developed by CIAE to suggest/ select custom hiring package for different crops and agro-climatic conditions. <p>Power point presentation was made before the officials of State Governments during Zonal Conference 2013.</p>
2	List of machines & Post Harvest Technologies developed by ICAR	<p>(a) <u>Equipments developed at Central Institute of Post Harvest Engineering & Technology (CIPHET), Ludhiana</u></p> <ul style="list-style-type: none"> 1. Machine for splitting of seed coriander 2. Aonla Processing pilot plant 3. Automatic Custard Apple Pulper 4. Automatic Litchi Peeler 5. Automatic blender-cum-mixer 6. Basket Centrifuge 7. Ber Fruit Grader 8. Castor Depodder and Decorticator 9. CIPHET-Aonla Pricking machine 10. CIPHET- Banana-comb/hand Cutter 11. CIPHET-Cryogenic spice grinding system 12. CIPHET- Tomato Grader 13. CIPHET-Pomegranate Aril Extractor

		<p>14. CIPHET Fruit collector cum grader for saving of fruits</p> <p>15. Composite mini dal mil for Pigeon pea</p> <p>16. Fish Descaling Machine</p> <p>17. Fish Processing Table cum Retail Sales Unit</p> <p>18. Low cost Flour mixer unit</p> <p>19. Low cost fruit and vegetables firmness tester</p> <p>20. Guar Seed De-hulling Machine and Process for De-hulling</p> <p>21. Groundnut pod grader</p> <p>22. Groundnut pod Decorticator</p> <p>23. Groundnut de-skinner</p> <p>24. Hand Tool for Easy Separation of Arils from Pomegranate</p> <p>25. Indigenous meat cutter</p> <p>26. Lac scrapping cum grading machine</p> <p>27. Lotus seed decorticator</p> <p>28. Low cost fish descaling hand tool</p> <p>29. Low Cost Tray Dryer Having a Unique Design of Plenum Chamber</p> <p>30. Mechanized System for popping and decortications of Makhana seeds (Gorgon Nut, Euryale ferox)</p> <p>31. Microencapsulator with multiple air jet droplet generator for production of microcapsule</p> <p>32. Mobile iced fish storage and transport chamber</p> <p>33. Mobile agro processing unit suggested for cleaning, grading, destoning of food grains</p> <p>34. Mustard dehulling pilot plant</p> <p>35. Ohmic heating system for thermal treatment of food products of non flowable nature</p> <p>36. Pilot Scale Millet Mill</p> <p>37. Poultry Processing Table for poultry butchers and small poultry meat entrepreneurs and Poultry Slaughter Cone</p> <p>38. Mechanical Device for Detection of Insects in stored grains</p> <p>39. Sausage filler</p> <p>40. Small Capacity Maize Degermer for dry degerming of Maize</p> <p>41. Sunflower Dehuller</p> <p>42. Vendor's vegetable cabinet</p> <p>43. Rotary maize cob sheller</p>
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		<p>44. Roller based chapati rolling machine</p> <p><u>(b) Equipments developed at Indian Institute of Natural Resins and Gums (IINRG), Ranchi</u></p> <ol style="list-style-type: none"> 1. Small Scale Lac Processing Unit (capacity – 100 kg/day) for primary processing at village level consisting of (a) Lac crusher (b) Lac washing machine (c) Lac winnower and (d) Lac grader and can be operated manually or using electric motor. 2. Wooden solar dryer (capacity –15/18 kg), for drying of gum karaya. 3. Evaporative cooled room (2 ton) 4. Evaporative Cooled structure (5-7 tons) <p>Number of value addition processes and products have also been developed by CIPHET Ludhiana and IINRG, Ranchi</p>
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2.2 Action in Progress:

S.No	Recommendation	Action in Progress
1.	Development of Briquette Urea Applicator	Prototype design for application of granular Urea has been developed. Easy availability of briquette Urea is the critical factor in propagating the technology.
2.	Skill development training programme at specified field at various workshop of ICAR	<p>The following skill development courses are being organised by ICAR-CIRCOT</p> <ol style="list-style-type: none"> 1. Quality Evaluation of cotton at the HQ, Mumbai 2. Training on Double roller Ginning Technology & Cotton Quality Evaluation at GTC, Nagpur 3. Instrumental and Manual cotton Classing at GTC, Nagpur 4. Cotton Processing, Classical and Marketing at GTC, Nagpur 5. Cotton spinning at the HQ, Mumbai 6. Application of nanotechnology in textile finishing at GTC, Nagpur 7. Scientific cotton seed processing at GTC, Nagpur <p>Following Crops based Skill Development Plans have also been proposed at CIPHET</p>

		<ol style="list-style-type: none"> 1. Processing of (i) Tomato; (ii) Paddy/Rice (iii) Wheat and (iv) Pulses at Ludhiana campus 2. Processing of (i) Kinnow and (ii) Guava at Abohar campus.
3	Framework to assess farm mechanisation in the country, duly incorporating parameters such as mechanization level in various operations, usage, footprints and benchmarking with other countries	During XII plan, the All India Coordinated Research Projects on Farm Implements and Machinery (AICRP on FIM) have been mandated to carry out mechanization related studies through all its centres.
4.	Burning of the straw needs to be discouraged and use of straw combine be advocated by all the state departments of Agriculture	Equipments for Residue management/Hay and Forage Equipments such as Sugarcane thrash Cutter, Coconut Frond Chopper, Rake, Balers, Straw reaper, Rice Straw Chopper, Wood chippers, Cotton stalk uprooter, Rotavator, Happy Seeder, Rotaslasher etc are commercially available. The use of such equipments will have to be promoted by the State Governments through the Custom Hiring Centres
5.	Equipment needed for Horticultural and hilly areas are identified so that these can be developed for use by the farmers	<p>The CIPHET Ludhiana has developed following post harvest management equipments for fruits and vegetables for use in hill areas</p> <ol style="list-style-type: none"> 1. Ber Fruit Grader 2. CIPHET-Aonla Pricking machine 3. CIPHET- Banana-comb/hand Cutter 4. CIPHET- Tomato Grader 5. Hand Tool for Easy Separation of Arils from Pomegranate 6. Low Cost Tray Dryer Having a Unique Design of Plenum Chamber 7. Vendor's vegetable cabinet
6.	Popularisation of machinery such as planters, power weeders and threshers	Central Institute of Agricultural Engineering (CIAE) is conducting demonstrations of various equipment and technologies through front-line demonstration (FLD), prototype feasibility testing (PFT) and custom hiring activities.
7	Development machinery for cotton picking, mulching of rice straw,	Tractor drawn single row cotton picker has been introduced by M/s John Deere, Pune. ICAR has coordinated field trials of this machine at

	sugar cane harvester	<p>various locations. The machine has also undergone confidential testing at Northern Region Farm Machinery Training & Testing Institute (NRFMTTI), Hisar. Based on the feedback, further improvements are being carried out by the manufacturers. Self Propelled Sugarcane Harvesters have also been introduced by M/s John Deere, Pune, New Holland, Noida and Tirth Agro Technology Pvt. Ltd. Rajkot. These machines are undergoing commercial testing at NRFMTTI, Hisar and CFMTTI, Budni.</p> <p>Following machines have also been developed by ICAR-Central Institute for Research on Cotton Technology (CIRCOT)</p> <ol style="list-style-type: none"> 1. Portable ginning machines – CLOY gin, Liliput Gin, Laboratory model DR gin 2. Axial Flow cotton Precleaner 3. CIRCOT – Bajaj Precleaner 4. Miniature spinning machine 5. CIRCOT-Phonix Charka 6. Raspador for extraction of banana fibres
8.	Updated information on status of farm mechanisation operation wise, crop wise and state wise in terms of kW/Ha	ICAR will update the information with the help of AICRP of FIM and updated data will be shared in due course of time.

3. Issues to be flagged in the forthcoming Pre-Rabi/Kharif Interface:

- (i) Discourage burning of crop residue and straw by the farmers. Use of commercially available equipments for residue management/hay and forage equipments may be promoted by the State Governments through the Custom Hiring Centres.
- (ii) Networking of the identified testing institutions and development of test codes/ procedures for testing and evaluation of imported equipment
- (iii) Skill development training programmes on farm machinery and equipment, Testing and Evaluation of agricultural machines and entrepreneurship development to establish custom hiring agro-service centres.

6. NATURAL RESOURCE MANAGEMENT (NRM) & RAINFED FARMING SYSTEM (RFS)

1. ACTION TAKEN REPORT

1.1 ACTION COMPLETED: NIL

1.2 ACTION IN PROGRESS:

Sl. No.	Recommendations	Action Initiated
1	Model watersheds should be developed with special emphasis on drought mitigation, adaptation to climate change and sustainability covering different agro-ecological regions/sub regions in the country.	<p>Nine model watersheds selected from states of Uttarakhand, Haryana, Uttar Pradesh, Madhya Pradesh, Orissa, Rajasthan, Gujarat, Tamil Nadu and Karnataka. This work was assigned to the Central Soil and Water Conservation Research & Training Institute (CSWCRTI), Dehradun of ICAR to develop nine model watersheds during XI Plan. As per DPR, 4927.36 ha area have to be developed with an expenditure of Rs. 590.22 lakh in a period of 5 years (2009-10 to 2013-14).</p> <p>So far, an amount of Rs. 397.08 lakh has been released to Central Soil and Water Conservation Research & Training Institute (CSWCRTI), ICAR, Dehradun from Rashtriya Krishi Vikas Yojana (RKVY) of DAC AND 99.8 % of the released amount has been utilized. So far, a total of 3682 ha area has been treated. Presently, no physical development activity is being carried out in these selected watersheds due to non availability of funds from sponsoring agency. However, watershed monitoring is in progress.</p>
2	Finalization of District wise Contingency Plans for all 126 Agro-Ecological Zones.	CRIDA, Hyderabad is in the process of developing the contingency plan and so far contingency plan of 580 districts have been finalized and uploaded on DAC websites (upto December, 2014).

2. ACTION YET TO BE INITIATED: Package for salinity and acid soil reclamation with special reference of Climate Change may be finalize by ICAR so that same could be adopted under CSS scheme for reclamation of problem soil.

3. ISSUES TO BE FLAGGED FOR INCOMING KHARIF:

1. Boro rice cultivation induces more arsenic residues due to frequent irrigation by arsenic contaminated water. Dwarf variety of rice and cultivation of leafy vegetables are more prone to arsenic contamination. In view of this, research studies on pilot basis need to be carried out to assess the extent of its flow/accumulation in the plants and food chain and result of arsenic contamination so that the above practices could be discouraged.
2. Development and identification of arsenic tolerant crop varieties.
3. Development of Models for Green House Gases (GHGs) emission for identified indicators of National Mission for Sustainable Agriculture.

7. SEEDS

1. ACTION TAKEN REPORT

2. ACTION IN PROGRESS

S.No	Recommendations	Action Initiated
1.	Seed standards of Jatropha need to be developed. (Kharif, 2008)	A seed standard of Jatropha is in progress at JNKVV- Jabalpur. ICAR has not provided the standards to DAC.
2.	Seed Testing Manual of Horticulture crops such as spices, plantation crops, tube crops, fruit crops, ornamental and flower crops are to be prepared by ICAR.	IIHR after going through the manual that seed testing procedures in general for seed crops and specific requirements for some important seed spices are already mentioned in the manual. The general seed testing procedures are same for all seed propagated crops. The specific information as to sample size, germination requirement, physical purity analysis, genetic purity analysis, moisture estimation for each seed propagated flower and medicinal crops need to be given. But the information on these crops is limited and scattered. It needs sufficient time; at least one year, to collect and compile all available information on important seed propagated flower and medicinal crops. Action is awaited from ICAR.
3.	2.2.3 During the 12 th Technical Committee meeting on CSCB, it has been decided to formulate the Seed Certification Standards for hybrid papaya.	The seed certification standard for hybrid papaya has been formulated by IIHR, Bangalore. There is no field standard, eligibility requirement, land requirement and isolation distance maintained for the seed crop has not been prescribed by ICAR.

ISSUES FLAGGED FOR KHARIF, 2015

Development of hybridism (genetic purity) standards for hybrid Rapeseed/Mustard

8.

8.RASHTRIYA KRISHI VIKAS YOJANA

Pursuant to the resolution adopted on 29-05-2007 by the National Development Council (NDC), to reorient the current agricultural development strategies to meet the needs of the farmers and for fresh efforts by the Central and State Governments to rejuvenate the agricultural sector so as to achieve 4% annual growth during the 11th Five Year Plan, a new State Plan Scheme of Additional Central Assistance (ACA) for agriculture and allied sectors, namely, RashtriyaKrishiVikasYojana (RKVY) was launched during 2007-08 with an envisaged outlay of Rs. 25,000 crore for the Plan period.

2. The scheme requires the States to prepare District and State Agriculture Plans for creation of such infrastructure, which are essential to catalyse the existing production scenario for achieving higher production. Additional Central Assistance (ACA) is made available to the States as 100% grants.

3. The RKVY Guidelines recognize and build on the need for convergence and integration of the various programmes implemented at District/State level into District Agriculture Plans (DAPs) and State Agriculture Plan (SAP). Each district is required to formulate a District Agriculture Plan by including the resources available from other existing schemes, District, State or Central Schemes such as Backward Region Grant Fund (BRGF), Swarnajayanti Gram SwarozgarYojana (SGSY), National Rural Employment Guarantee Scheme (NREGS), Bharat Nirman and tied and untied grants from the Central and State Finance Commissions etc. The District Agriculture Plans are not to be the usual aggregation of the existing schemes but would aim at moving towards projecting the requirements for development of agriculture and allied sectors of the district. These plans present the vision for agriculture and allied sectors within the overall development perspective of the district. The District Agriculture Plans would reflect the financial requirement and the sources of financing the agriculture development plans in a comprehensive way. The DAP will include animal husbandry and fishery, minor irrigation projects, rural development works, agricultural marketing schemes and schemes for water harvesting and conservation, keeping in view the natural resources and technological possibilities in each district. Each State is further required to prepare a comprehensive State Agricultural Plan (SAP) by integrating the DAPs. The State will have to indicate resources that can flow from the State to the district.

4. During XII Plan, RKVY funding will be provided through three streams viz. production growth (35%), infrastructure & Assets and sub-schemes (20%). The remaining 10% will be is provisioned as flexi fund from which states can undertake either production growth or infrastructure & assets projects depending upon States needs & priorities. Subsequently, it has been decided to waive off the requirement of minimum allocation of RKVY fund (35% at Central Level or 43.75% at State Level) to

“Production Growth Stream”. Accordingly, State will be able to allocate their entire RKVY Normal allocation to Infrastructure & Assets stream.

5. The States have been provided flexibility and autonomy in the process of selection, planning, approval and execution of schemes to make investments in interventions as per their priorities and agro-climatic requirements so that the outcomes are as envisaged in the RKVY objectives. The projects of the State Governments are approved by the State Level Sanctioning Committees (SLSCs) under the Chairmanship of Chief Secretary of the respective States. The funds are routed through the State Agriculture Department, which is the nodal Department for the scheme.

6. Presently, six sub-schemes are being implemented as sub-schemes under RKVY during 2014-15. These sub-schemes and their allocations are:-

- i. Bringing Green Revolution to Eastern Region:** - This programme was initiated in 2010-11 targeting the improvement in the rice based cropping system of Assam, West Bengal, Orissa, Bihar, Jharkhand, Eastern Uttar Pradesh and Chhattisgarh. Allocation for this scheme in 2010-11 & 2011-12 was Rs. 400 crore each, which has been enhanced to Rs. 1000.00 crore in 2012-13 & 2013-14. The allocation for the year 2014-15 is Rs.1000.00 crore.
- ii. Initiative on Vegetable Clusters:** - Growing demand for vegetables was proposed to be met by a robust increase in the productivity and market linkage. For the purpose, an efficient supply chain needed to be established, to provide quality vegetables at competitive prices. The allocation for this sub-scheme was Rs.300.00 crore each in 2011-12 & 2012-13. The allocation for the year 2013-14 was Rs. 200.00 crore and 2014-15 is Rs. 175.00crore.
- iii. National Mission for Protein Supplements:** - National Mission for Protein Supplements was launched with an allocation of Rs.300 crore during 2011-12 to take up activities to promote animal based protein production through livestock development, dairy farming, piggery, goat rearing and fisheries in selected blocks. During 2012-13 & 2013-14 an amount of Rs. 500 crore & Rs. 400.00 crore were allocated for 2014-15, Rs. 300.00 crore has been earmarked for this scheme.
- iv. Saffron Mission:** - The Scheme was initiated in 2010-11 with an overall Government of India budgetary support of Rs.288.06 crore over four years. Allocation has been Rs. 39.44 crore in 2010-11, Rs.50.00 crore each in 2011-12 & 2012-13. The mission was meant to bring economic revival of J&K Saffron. Outlay for the year 2013-14 was Rs. 100.00 crore. An amount of Rs.100.00crore is earmarked for 2014-15.
- v. Vidharbha Intensive Irrigation Development Programme:** - The Scheme was initiated in 2012-13 which seeks to bring in more farming areas under protective irrigation. The allocation for the year 2012-13 & 2013-14 was Rs. 300.00 crore each. For 2014-15 Rs. 150.00 crore has been allocated for VIIDP.

- vi. Crop Diversification:** - The original Green Revolution States have the problem of stagnating yields and over-exploitation of water resources. The answer lies in crop diversification. An amount of Rs.500.00 Crore was allocated for 2013-2014 to the start a programme of crop diversification that would promote technological innovation and encourage farmers to choose crop alternatives. For 2014-15 Rs. 250.00 crore has been allocated for this scheme.

7. The details of funds allocated, released and utilized under RKVY (including sub-schemes) from the year 2007-08 to 2014-15 is as under: -

(Rs in crore)

YEAR	ALLOCATION	RELEASE	UTILIZATION
2007-08	1489.70	1246.89	1246.79
2008-09	3165.67	2886.80	2880.89
2009-10	3806.74	3760.93	3756.53
2010-11	6722.00*	6720.06	6719.02
2011-12	7810.87*	7794.09	7716.83
2012-13	9217.00*	8400.00	8353.92
2013-14	9954.02*	7052.51	6560.08
2014-15	9954.00*	7851.64 (As on 31.12.14)	2584.23

*Including sub-schemes.

Planning Commission has approved an outlay of Rs.63,246 crore for implementation of RKVY for XII Plan. For the year 2014-15, allocation under the scheme is Rs. 9954.00 crore.

9.CREDIT & COOPERATION

INITIATIVES TAKEN BY THE GOVERNMENT FOR INCREASING FLOW OF AGRICULTURE CREDIT

(i) Farm credit package: Government of India in their Farm Credit Package announced in June 2004, advised banks to double credit to agriculture sector in three years, i.e. by 2006-07. Since then flow of agricultural credit has consistently exceeded every year. In 2003-04 agriculture credit flow was Rs.86981 crore and in the year 2013-14, Scheduled Commercial Banks, Cooperative Banks and Regional Rural Banks together have disbursed agricultural credit of Rs.711,621.47 crore forming 106.66% against the target of Rs.700,000 crore. A statement showing the achievement of agriculture credit flow during the last few years is given below:

(Rs. Crore)

Year	Commercial Banks		Cooperative Banks		Regional Rural Banks (RRBs)		Total	
	No. of A/cs. (Lac)	Amount	No. of A/cs. (Lac)	Amount	No. of A/cs. (Lac)	Amount	No. of A/cs. (Lac)	Amount
2008-09	202.45	228,951.31	178.18	46,191.81	75.47	26,765.68	456.10	301,907.80
2009-10	205.30	285,799.73	203.92	63,496.85	73.08	35,217.62	482.30	384,514.20
2010-11	233.94	345,877.29	242.21	78,121.94	73.45	44,293.05	549.60	468,291.28
2011-12	255.23	368,616.30	308.97	87,962.79	82.37	54,450.00	646.57	511,029.09
2012-13	307.32	432,490.92	311.28	111,203.30	84.97	63,681.400	703.57	607,375.62
2013-14	379.04	509,004.96	321.37	119,963.79	99.27	82,652.72	799.68	711,621.47

Source: NABARD. For 2014-15, agriculture credit target has been fixed at Rs.8,00,000 crore and achievement is Rs.5,45,744.12 crore (prov) upto December, 2014.

(ii) Interest subvention to farmers: Government of India announced an interest subvention scheme in 2006-07 to enable banks to provide short term credit to agriculture (crop loan) up to Rs.3 lakh at 7% interest to farmers. In 2009-10, Government of India introduced an additional interest subvention of 1% to those farmers who repay their short term crop loans within the period of interest subvention i.e. within one year of disbursement of such loans. This additional subvention was raised to 2% in 2010-11 and 3% in 2011-12 onwards. Interest subvention has also

been extended to private sector scheduled commercial banks (in respect of short term crop loans disbursed by their rural and semi-urban branches) from the year 2013-14. The effective rate of interest payment by the farmers who repay their loans in time is presently 4%.

As a special case, Government had provided interest subvention of 2% on full restructured amount of loan to the farmers of affected areas which received deficient rainfall in the year 2011-12. This special concession has also been extended to the areas affected by hailstorm in the current year.

(iii) Extension of interest subvention scheme to post harvest loans: In order to encourage farmers to store their produce in warehouses against negotiable receipts, the benefit of interest subvention scheme has been extended to small and marginal farmers having Kisan Credit Card for a further period of upto six months post harvest on the same rate as available to crop loan against negotiable warehouse receipt.

(iv) Collateral free loans: The limit of collateral free farm loan has been increased from Rs.50,000 to Rs.1,00,000.

(v) Kisan Credit Card Scheme: In order to ensure that all eligible farmers are provided with hassle free and timely credit for their agricultural operation, Kisan Credit Card Scheme for farmers was introduced in 1998-99 to enable the farmers to purchase agricultural inputs such as seeds, fertilisers, pesticides, etc. The Kisan Credit Card Scheme is in operation throughout the country and is being implemented by Commercial Banks, Cooperative Banks and Regional Rural Banks. The scheme has facilitated in augmenting credit flow for agricultural activities. The scope of the KCC has been broad-based to include term credit and consumption needs. All farmers including small farmers, marginal farmers, share croppers, oral lessee and tenant farmers are eligible to be covered under the Scheme. The card holders are covered under Personal Accident Insurance Scheme (PAIS) against accidental death/permanent disability. KCCs have now been converted into a Smart Card cum Debit Card. Some of the major features of revised KCC Scheme are:

- Assessment of crop loan component based on the scale of finance for the crop plus insurance premium x Extent of area cultivated + 10% of the limit towards post-harvest/ household/consumption requirements + 20% of limit towards maintenance expenses of farm assets.
- Flexi KCC with simple assessment prescribed for marginal farmers.
- Validity of KCC for 5 years.
- For crop loans, no separate margin need to be insisted as the margin is in-built in scale of finance.
- No withdrawal in the account to remain outstanding for more than 12 months; no need to bring the debit balance in the account to zero at any point of time.

- Interest subvention /incentive for prompt repayment to be available as per the Government of India and / or State Government norms.
- No processing fee up to a limit of Rs.3.00 lakh.
- One time documentation at the time of first availment and thereafter simple declaration (about crops raised/ proposed) by farmer.
- KCC cum SB account instead of farmers having two separate accounts. The credit balance in KCC cum SB account to be allowed to fetch interest at saving bank rate.
- Disbursement through various delivery channels, including ICT driven channels like ATM/ PoS/ Mobile handsets.

The State Governments have been advised to launch an intensive branch/village level campaign to provide Kisan Credit Card to all the eligible and willing farmers in a time bound manner. State Governments may monitor the progress in this regard.

(vi) Financing Agricultural Investments in the Eastern Region – Concessional Refinance Support:

NABARD has introduced a concessional refinance scheme in the year 2011-12, with the objective of accelerating investments in agriculture to enhance production and productivity of crops in the Eastern region (Assam, Bihar, Jharkhand, Chhattisgarh, Odisha, West Bengal and Eastern Uttar Pradesh). Under the scheme, NABARD provides 100% refinance to banks at a concessional rate of 7.5% p.a. provided certain minimum targets are achieved by the bank in financing these key investments. Four activities viz, Water Resources development, Land development, Farm Equipments (including tractor financing on group mode basis) and Seed Production are covered. Concessional refinance is provided subject to condition of minimum 70% lending against credit potential for the identified activities assessed on the basis of projections made in the Potential Linked Plans. The commercial banks are required to achieve the minimum lending level of 70% while the RRBs and Co-operative Banks are required to achieve the minimum lending level of 50% of the Overall lending Target / Potential assessed. The norms were revised during 2011-12 being the first year of the scheme, to 50% in case of Commercial Banks and 25% in case of RRBs and Co-operative Banks. Support to the banks for (a) Forming and linking of Joint Liability Groups (JLGs) (b) Awareness programmes for promoting the scheme (c) Organizing sensitization meets for the branch officials of implementing banks and (d) Training and capacity building of identified entrepreneurs is also offered under the scheme. In partial modification of the Scheme, Tractor Financing under group mode to Self Help Groups (SHGs) / Joint Liability Groups (JLGs) were also considered for concessional refinance by the banks, provided tractors are financed to:

- a) An existing Self Help Group (SHG) which is at least two years old
- b) A new Joint Liability Group (JLG), provided the number of land owning farmers in the group is not less than five and every member is a Small Farmer (SF) or a Marginal Farmer (MF).

2. Important announcements made by the Hon'ble Finance Minister in his Budget Speech 2014-15.

Agriculture Credit

Banks are providing strong credit support to the agriculture sector. A target of Rs.8 lakh crore has been set for agriculture credit during 2014-15.

Interest Subvention Scheme for Short Term Crop Loans

Under Interest Subvention Scheme for short term crop loans, the banks are extending loans to farmers at a concessional rate of 7%. The farmers get a further incentive of 3% for timely repayment.

Rural Infrastructure Development Fund

NABARD operates the Rural Infrastructure Development Fund (RIDF), out of the priority sector lending shortfall of the banks, which helps in creation of infrastructure in agriculture and rural sectors across the country. An additional Rs. 5000 crore from the target given in the Interim Budget to Rs.25,000 in the current financial year has been allocated.

Warehouse Infrastructure Fund

Increasing warehousing capacity for increasing the shelf life of agriculture produces and thereby the earning capacity of the farmers is of utmost importance. Keeping in view the urgent need for availability of scientific warehousing infrastructure in the country, allocation of Rs.5,000 crore for the fund has been made in the Budget for the year 2014-15.

Creation of Long Term Rural Credit Fund

The share of long term investment credit in agriculture is going down as compared to short term crop loan. This is severely hampering the asset creation in agriculture and allied activities. In order to give a boost to long term investment credit in agriculture, a "Long Term Rural Credit Fund" has been set up in NABARD for the purpose of providing refinance support to Cooperative Banks and Regional Rural Banks with an initial corpus of Rs.5,000 crore.

Bhoomiheen Kisan

As a very large number of landless farmers are unable to provide land title as guarantee, institutional finance is denied to them and they become vulnerable to money lenders' usurious lending. It has been decided to provide finance to 5 lakh

joint farming groups of “**Bhoomi Heen Kisan**” through NABARD in the current financial year.

Allocation of STCRC (Refinance) Fund

The Short Term Cooperative Rural Credit (STCRC) – Refinance Fund was announced in Union Budget 2008-09 with initial corpus of Rs.5,000 crore. In order to ensure increased and uninterrupted credit flow to farmers and to avoid high cost market borrowings by NABARD, allocation of Rs.50,000 crore for STCRC Fund has been made in 2014-15.

Producers Development and Upliftment Corpus (PRODUCE)

The issue of profitability of small holding based agriculture has assumed importance in view of increasing proportion of small and marginal farmers in the country. To supplement NABARD’s Producers’ Organisation Development Fund for producers’ development and upliftment called PRODUCE, a sum of Rs.200 crore has been allocated which will be utilized for building 2000 producers organisations across the country over the next two years.

Critical issues concerning agricultural credit

1. Slow off take of investment credit in total credit: Flow of credit has increased impressively over the last thirteen years (2000-01 to 2012-13), especially after ‘doubling period’ (2004-07) showing more than 10 fold increase. Around 34 lakh crore have been disbursed during 13 years. As per 12th Plan Period Estimates, Rs.35 to 42 lakh crore is expected to be disbursed. The share of long term credit in overall ground level credit flow has come down from 40 per cent in 2006-7 to 22 per cent in 2012-13. Though the crop loan has been registering high growth, investment credit has been lagging behind. The share of investment credit needs to be increased as financing of agricultural investments results in capital formation in agriculture which in turn induces greater demand for production credit. Investment by the farmer is often constrained because they cannot borrow for asset creation at easy and affordable terms and conditions. Modern agriculture is capital intensive. Investments in equipment, land, and crops like coffee or fruit require long-term financing, and face longer start-up time. It also requires investment in complementary assets such as irrigation structures and devices, farm machinery, storage and processing facilities, etc. Development of infrastructure and adequate backward and forward linkages including efficient extension services to support effective credit delivery and improvement of credit absorption capacity in agriculture sector is required.

Addressing the issues of high interest rate on investment credit, high overall cost of borrowing and complexities in lending procedure assumes critical importance. A farmer has to incur several costs other than the rate of interest for borrowing from

institutional sources. Most of these costs are due to rigid lending systems and procedural complexities, which not only raise the cost of borrowing but also create entry barriers for the farmers. The poor farmer can sustainably service credit only if the asset created out of loan yields more than the total cost of borrowing to repay interest and, eventually, the capital element of the loan.

2. Lower share of small and marginal farmers: The share of small and marginal farmers in operational holdings is around 85%, of which the marginal farmers account for around 62%. The institutional credit sources have covered only around 6 crore farmers (around 45% of the total number of farmers) leaving the rest i.e. around 55% (mostly marginal farmers) at the mercy of informal sources/ moneylenders.

3. Covering all the farmers within institutional credit fold: The banks are required to be more innovative in designing rural credit products and be more flexible in their lending procedures like scale of finance, terms of repayment, margin and collateral/ security requirements to facilitate greater institutionalization of farm credit. Suitable measures need to be evolved for enhancing the level of institutionalization of credit so as to cover all the farmers within institutional credit fold in a time bound manner. State Governments should ensure that all eligible farmers are provided KCC.

4. Imbalance in credit flow among states: Regional inequalities in disbursement of agriculture credit are a cause of concern. These distortions need to be corrected. Special efforts are required to be made by all banks in bringing more farmers under institutional credit fold in the East and North East regions as these regions account for a high ratio of the uncovered farmers in the country.

5. Financing for high value crops: Ministry of Agriculture is placing emphasis on crop diversification to high-value crops such as horticulture, floriculture, vegetables, and mushrooms. The growth of these activities is important for the country in view of their contribution to nutrition and export earnings. High capital cost results in mostly big farmers taking up investment in this sector. The mainstream farming class i.e. SF/MF have been largely bypassed. Limited by the borrowers' ability to offer security/collateral, bank finance is not up to the desired level. High capital cost also increases the risk burden on the farmers and banks hesitate in sanctioning loans for these activities. Credit has a very important role in promoting viable horticultural activity as orchards and plantations are long gestation enterprises, giving benefits over a very long period of time and any mistake in the initial selection of planting material due to shortage of finance would be very difficult to reverse. Suitable loan products will have to be designed which should be based more on the creditworthiness of the project rather than the value of collateral/ security.

6. Marketing Credit: Easy access to markets is a pre-requisite for cultivation of remunerative high value crops. The individual farmer's volume of output grown and

offered to market is too small to afford modern post-harvest techniques and the marketing of their agricultural produce has proved to be a major constraint in many areas. Therefore, encouragement should be given for linkage of production with marketing activities. The lack of good market and the consequent loss of a remunerative price have resulted in inadequate repaying capacity in the hands of farmers. Hence, there is a need to link credit with marketing. This is possible at the cooperative society level but for various reasons the cooperatives have not been able to succeed in this regard in many places. A comprehensive project package involving credit, latest technology inputs and marketing tie up for output needs to be evolved.” Each PACS- One Godown” concept may be adopted and the farmers may be provided pledge loan facility. Government is providing benefit of interest subvention to farmers for storing their agricultural produce in warehouse. However, this is not picking up at desired level. State Government should encourage the farmers.

Crop Insurance Schemes

To provide financial support to the farmers in the event of failure of crops as a result of natural calamities, a Comprehensive Crop Insurance Scheme (CCIS) was introduced in the country with effect from Kharif, 1985. The participation in the scheme was voluntary and the States were free to opt for the scheme. All farmers who availed crop loans from Commercial Banks, Regional Rural Banks and Cooperative Banks for growing wheat, paddy, millets (including maize), oilseeds and pulses were eligible for coverage under the scheme. CCIS remained under implementation till Kharif 1999. An Outlay of Rs. 7810 crore has been provided for crop insurance schemes during XIIth Five Year Plan.

National Agricultural Insurance Scheme (NAIS):

2. To enlarge the coverage in terms of farmers (loanee and non-loanee both), more crops and more risks, ‘National Agricultural Insurance Scheme (NAIS) – (Rashtriya Krishi Bima Yojana)’ was introduced in Rabi 1999-2000 season in the country. The scheme is available to all the farmers – loanee and non-loanee both - irrespective of their size of holding.

3. The NAIS has been implemented by 25 States and 2 Union Territories so far. Under NAIS, during the last thirty crop seasons (i.e. from Rabi 1999-2000 to Kharif 2014) about 2289 lakh farmers have been covered over an area of 3391 lakh hectares insuring a sum amounting to Rs. 347905 crore. There were claims to the tune of about Rs.32885 crore as against the premium of Rs. 10558 crore benefiting about 592 lakh farmers.

4. Year-wise Plan allocation and expenditure during the XI Plan and XII Plan under NAIS are as under:-

(Rs. in crores)

Year	BE/Allocation	R.E.	Expenditure
XI Plan tentative outlay Rs. 3500.00			
2007-08	500.00	718.88	718.88
2008.09	644.00	694.00	694.00
2009-10	644.00	1419.00	1419.00
2010-11	950.00	2662.00	2660.00
2011-12	550.00	330.82	360.00
Total XI Plan			5851.88
XII Plan tentative outlay Rs. 3400.00			
2012-13	400.00	700.00	700.00
2013-14	1200.00	1600.00	1600.00
2014-15	1520.37	1637.23	1386.16
Total as on 18.02.2015			3686.16

5. Scheme is demand driven and therefore, claims are based on the occurrence of natural calamities like drought, flood etc. Scheme was to be discontinued after implementation of National Crop Insurance Programme (NCIP) from Rabi 2013-14 season. However, on the representation of some States NAIS was allowed in few States during Rabi 2013-14. Again NAIS has been allowed at the option of States for the year 2014-15.

Modified National Agricultural Insurance Scheme (MNAIS):

6. To improve further and make the scheme easier & farmer friendly, a Joint Group was constituted by the Government to study the improvements required in the existing crop insurance schemes. Based on the recommendations of the Joint Group and views/comments of various stakeholders, Modified NAIS was approved for implementation on pilot basis in 50 districts during the remaining period of 11th Plan from Rabi 2010-11. The major improvements made in MNAIS are – actuarial premium with subsidy in premium ranging upto 75% to farmers; unit area of insurance reduced to village/village panchayat level; indemnity for prevented sowing/planting risk & for post harvest losses due to cyclone in coastal areas; on account payment up to 25% of likely claims as immediate relief; more proficient basis for calculation of threshold yield; minimum indemnity level of 80% and 90% etc. MNAIS is now being implemented as full-fledged scheme with some improvements as component of National Crop Insurance Programme (NCIP) w.e.f. Rabi 2013-14.

7. From its inception to Kharif 2014, 153 lakh farmers have been covered over an area of 169 lakh hectares insuring a sum amounting to Rs. 31464 crore. Claims to the tune of about Rs. 1738 crore have become payable (of which majority claims have been settled) against the premium of about Rs. 2932 crore benefiting about 18 lakh farmers. Year-wise expenditure under the scheme is as under:-

(Rs. in crores)

Year	BE/Allocation	R.E.	Expenditure
2010-11	50.00	25.00	25.00
2011-12	150.00	63.00	62.15
Total XI Plan			87.15
XII Plan Outlay Rs. 480.00			
2012-13	80.00	195.00	194.12
2013-14	250.00	251.02	251.02
2014-15	808.02	663.98	584.74
Total as on 18/2/2015			1029.98

Weather Based Crop Insurance Scheme (WBCIS):

8. With the objective to bring more farmers under the fold of Crop Insurance, a Pilot Weather Based Crop Insurance Scheme (WBCIS) was launched in 20 States since Kharif/Rabi 2007. WBCIS aims to provide insurance protection to the farmers against adverse weather incidence, such as deficit and excess rainfall, high or low temperature, humidity etc. which are deemed to impact adversely the crop production. It has the advantage to settle the claims within shortest possible time. The WBCIS is based on actuarial rates of premium. During pilot period, premium actually charged from farmers was restricted to at par with NAIS. The Scheme is being implemented on full-fledged basis on actuarial basis upto 50% subsidy in premium as component of NCIP w.e.f. Rabi 2013-14.

9. From its inception till Kharif 2014, 602 lakh farmers have been covered over an area of 784 lakh hectares insuring a sum amounting to Rs. 105402 crore. Claims to the tune of about Rs. 5755 crore have become payable against the premium of about Rs. 10010 crore benefiting about 314 lakh farmers. Financial progress of the scheme is given as under :-

(Rs. in crores)

Year	BE/Allocation	R.E.	Expenditure
2007-08	-	69.19	69.19
2008-09	50.00	100.00	100.00
2009-10	50.00	120.00	120.00
2010-11	100.00	450.00	450.00
2011-12	450.00	631.18	631.18
Total XI Plan			1370.37
XII Plan Outlay 3930.00			
2012-13	655.00	655.00	655.00
2013-14	700.00	700.00	700.00
2014-15	493.61	483.72	383.27
Total as on 18/2/2015			1738.27

Coconut Palm Insurance Scheme (CPIS):

10. Coconut Palm Insurance Scheme (CPIS) was implemented on pilot basis from the year 2009-10 in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Orissa, Tamil Nadu and West Bengal. 50% of premium is contributed by Coconut Development Board (a Central Govt. agency); 25% by the concerned State Govt. and the remaining 25% by the farmer. The Insurance Company i.e. Agriculture Insurance Company of India (AIC) is implementing the scheme and responsible for making payment of all claims. The CPIS is administered by the Coconut Development Board (CDB). The Scheme is now being implemented as component of NCIP w.e.f. Rabi 2013-14. Financial progress is given in following table:

(Rs. in crores)

Year	BE/Allocation	R.E.	Expenditure
2009-10	nil	1.00	0.10
2010-11	1.00	1.00	0.85
2011-12	1.00	1.00	1.00
Total XI Plan			1.95
XII Plan Outlay Rs. 6.00			
2012-13	1.00	0.50	0.50
2013-14	1.00	0.50	0.50
2014-15	1.00	Nil	Nil
Total as on 18/2/2015			1.00

National Crop Insurance Programme (NCIP):

11. Planning Commission while conveying its approval for continuation of on-going crop insurance schemes during the year 2012-13, advised DAC to re-structure the same based on the evaluation thereof. Accordingly, this Department had engaged an Independent Agency i.e. Agriculture Finance Corporation (AFC) to undertake the evaluation and impact assessment of crop insurance schemes. Based on the recommendations of evaluation, experience of implementation and views of stakeholders, farming community, States etc., a restructured scheme in the name of “National Crop Insurance Programme (NCIP)” has been formulated by merging the pilot MNAIS, WBCIS & CPIS with some improvements. NCIP was implemented with effect from Rabi 2013-14 season and NAIS was decided to be discontinued simultaneously. However, based on the representations from some States, NAIS was allowed to such States for implementation during Rabi 2013-14. Again, all State Governments/UT Administrations have been given the option to implement either NAIS or MNAIS for the year 2014-15.

12. NCIP has the following salient features:-

- Component schemes of NCIP i.e. MNAIS, WBCIS & CPIS will be implemented on full-fledged basis throughout the country. Implementation is made compulsory for loanee farmers.
- Two higher indemnity levels of 80% & 90% would be available instead of three i.e. 70%, 80% & 90% under pilot MNAIS.
- If, states are unable to implement MNAIS at village/village panchayat level initially then such states may be allowed to implement it at higher unit area level (upto a cluster of maximum 15 villages) with prior approval of DAC for first 3-5 years.
- States implementing MNAIS at Village/Village Panchayat level are entitled for 50% reimbursement of incremental expenses of CCEs from GOI with the cap provision based on the annual budget.
- Under WBCIS, provision for add-on/index plus products for horticultural crops for compensating losses due to perils of hailstorm, cloudburst etc.
- For successful implementation of WBCIS, 5000 AWS will be set-up in the country through the model of Public Private Participation mode for which GOI shall share with the states provision of viability gap funds in the ratio of 50:50.

- Pilots for use of Remote Sensing Technology (RST)/Satellite imageries to supplement the yield assessment through CCEs.
- Under Coconut Palm Insurance Scheme (CPIS), insurance eligibility condition of having at least 10 healthy palms has been reduced to 5 palms, increased Sum Insured; loss intimation time has been increased from 7 days to 15 days.

13. With a view to better serve the interest of farmers, Government of India is desirous to develop a new Crop Insurance Scheme to protect them against both yield and price fluctuations. Consultations with all stakeholders are going on for the purpose. Based on the views/suggestions of the States/UTs and other Stakeholders, a suitable decision would be taken by the Government for implementation of a new crop income insurance scheme during 2015-16 on pilot basis in selected districts/States.

Issues/Challenges:

- Low level of penetration, only about 30% farmers/crops are being insured so far.
- Under MNAIS, No. of CCEs increased manifold (from 5 to 25 lakh approx) due to reduction in insurance unit area to village/village panchayat, which requires more infrastructure & power. Therefore, States hesitate to take up MNAIS.
- Delay by States in furnishing the yield data.
- Delay by States in providing the share of funds.
- Under WBCIS, poor density of Automatic Weather Stations(AWS).
- Difficulties in designing & development of suitable area-based weather products.
- Inadequate publicity/awareness about crop insurance schemes.
- Complaint/representation about high rates of premium.
- Incidence of coverage of more area under insurance than area sown.
- Making effective Remote Sensing for estimation of crop yields.

10.EXTENSION

1. GROUP PARTICIPANTS:

Sh. Sanjeev Gupta	Joint Secretary (Extn./IT) - in the Chair
Dr. P.Adhi Guru	Principal Scientist (Agrl. Extn.), ICAR
Dr. Y.R. Meena	Addl. Commissioner (Extension)
Sh. Virendra Singh	Addl. Commissioner (Extension)
Dr. K.P. Wasnik	Addl. Commissioner (Extension)
Sh. P.K. Gupta	Director (IT)
Dr. R.K. Tripathi	Director (Extension Management/IT)
Sh. Prashant Armorikar	Director (ET)
Smt. V. Natarajan	Consultant (ER)
Dr. R.G. Hatwar	Joint Director (Extn.)
Sh. D.K. Tiwary	Joint Director (Extn.)
Sh. Balram Singh	Joint Director (Extn.)
Sh. Sajith Kumar	Joint Director (Extn.)
Kunhalath	
Sh. Shankar Baboo	Joint Director (Extn.)
Smt. Renu Chauhan	Extension Officer
Smt. K. Gayatri Devi	Extension Officer
Sh. S. Banerjee	Photo Officer

2. ACTION TAKEN REPORT

2.1 ACTION IN PROGRESS ON MAJOR AREAS OF CONCERN

S. No.	Group Recommendation	Action Taken Report
1.	The successful Community Radio Stations (CRS) run by SAUs/KVKs may be studied for assessing the contribution factors for successful running of CRS. Centres with adequate backup for content development by the SAU may be shortlisted for establishing CRS.	Out of 179 commissioned CRSs in the country, 58 are broadcasting regular Agriculture Programmes (only 17 under KVK/SAUs/NGOs - only 8 supported by ATMA. Out of 114 applications of KVKs/SAUs for CRS submitted to Ministry of I & B (MiB), 17 have been approved and commissioned, 31 LOI/WOL issued (20 cancelled due to no further action taken by the applicants & 11 pending with them for signing of GOPA/setting of CRS), 49 rejected (48 by MiB

		<p>& 1 by MoD) and 17 under process (15 cleared by ICAR and 2 pending with them)Annexure-I.</p> <p>While giving its clearance for KVKs, ICAR has clarified that the SMS in KVKs shall be used only for technical support and not for management tasks of CRS. The funds allocated for CRS under ATMA have adequate provisions for supporting the CRSs.</p> <p><i>All the rejected and LOI cancelled cases were reviewed by a committee of DAC/DOE, MiB and ICAR officials. It has been recommended that all 11 applicants where LOI/WOL has been issued shall be called for further guidance and handholding. The 68 rejected cases (20 due to LOI cancelled and 48 due to other reasons could apply afresh for reconsideration of their application.</i></p>
2.	Kisan Call Centers (KCCs) need to be owned by State Departments with support from SAUs/ICAR.	<p>In order to ensure greater involvement of the States/ICAR in implementation of KCC repeated communications have gone to APCs/ PS/ Secretary/ Commissioner/ Director (Agriculture) of States, status detailed at Annexure-II.</p> <p>DG, ICAR was also requested for directing all the ICAR Institutes/ KVKs to identify scientists/SMSs (with different specializations) to act as Call Conferencing experts for the KVKs and keep updating the roster of experts at fortnightly/monthly intervals to make sure that they received the calls of farmers when redirected to them.</p> <p>For implementation of the revised escalation matrix of KCC (whereby the farmers query is routed to block/district/State level designated officers) KVKs are also on of the respondents. For creation of their login Ids</p>

		and passwords respective ZPDs have been proposed to be authorised. DDG (AE) ICAR has been requested to advise all the ZPDs to extend the needed support in the matter.
3.	<p>The Krishi Vigyan Kendra (KVK) Scientists (SMSs) can be included Block Technology Team (BTT) as co-opted Members to have better coordination and effective R-E-F linkages.</p> <p>In view of the limited number of technical faculty available in KVKs, it was decided that each Scientist of the KVK may serve as nodal officer for one or two Blocks, so that KVK presence is ensured in all the BTT-FAC meetings and activities.</p> <p>The training needs of Block Technology Team may be identified by Project Director, ATMA and communicated to KVK for its inclusion in their Training Plan. The same may also be communicated to the concerned Zonal Project Director (ICAR) for the purpose of monitoring its implementation.</p>	<p>ICAR has already issued specific instructions to all KVKs to attend the BTT meetings for its technical backstopping. This was also already happening in many States</p> <p>As regards streamlining the funding to KVKs for undertaking local research projects and other extension related activities under ATMA, there was an issue with the SAU based KVKs wherein all the fund releases are to be routed through the Comptrollers of the Universities. However, general concern was that if the Comptrollers of SAUs are informed about the details of funds released to KVKs, there may not be any issue involved. A general communication needs to go from ICAR to all the SAUs, emphasizing this arrangement.</p> <p>In order to ensure regular review of ATMA activities by SAU scientists , PC KVK, PD/DPD ATMA and State Agriculture Department, as stipulated in the convergence guidelines, an amount of Rs 24,000 per district per year has been provided under ATMA towards mobility and communication expenses. It was recommended to enhance this amount to Rs 60,000 per district per year to be distributed amongst district head of State Agriculture Department, SAU scientist, PC KVK and PD ATMA @ Rs 1000 per month and to DPD ATMA @ Rs. 500/- per month for compensating their mobile expenses in contacting the farmers.They would also be designated as call conferencing experts for the KCC of concerned States If any of the incumbents gets reimbursement of phone charges from his department the above</p>

		amount may be reduced to the extent difference between the two.
4.	<p>The package of practices and crop/technology-based technical books/pamphlets/leaflets/folders etc. developed by SAUs appear to be highly technical and hence not easily understood by the farmers. Often the technical material written in English is subjected to literal translation into regional languages resulting in difficult-to-understand words and phrases. However farmers generally prefer these books in easy-to-read format, preferably in their day-to-day usage language. ICAR may take up this matter with the SAUs. At the state level, the concerned development departments will take up the matter with the State Agricultural Universities. The issue may also be flagged for discussion in the Vice-chancellors conference being organized by ICAR.</p>	<p>It was decided that the PoPs pertaining to all the States will be uploaded on the Farmer Portal. Variety-wise PoPs brought out by Seeds Division of DAC for few crops may be extended to other crops also and get the same uploaded by respective States on the Farmer Portal.</p> <p>So far only 19 States have uploaded the PoPs (except Assam, Bihar, Delhi, Goa, Haryana, J&K, Manipur, Odisha, Tripura, Uttarakhand and West Bengal) - status available at the url http://farmer.gov.in/dataentryreport.aspx</p> <p>So far 28 States have uploaded their Farmer Friendly Hand Book which can be accessed at the url http://farmer.gov.in/handbooks.html</p> <p>ICAR could also upload PoPs of different crops available with them on the Farmer Portal. However, it was suggested by ICAR that the Farmers' Portal should also have search facility for retrieving PoPs of selected crops.</p>
5.	<p>States are required to focus attention to improve the performance of ACABC scheme in other States through appropriate mechanism at State/District level. The SAUs can sensitize the graduates in agriculture and allied disciplines for undergoing training programmes and establish ventures.</p>	<p>Maharashtra has maximum number of candidates trained with the success rate in establishment of agri-ventures by trained candidates to 42.71%. Success rate in States like Tamil Nadu and Uttar Pradesh are 51.03% and 44.67% respectively. Other States exhibiting a better success rate are Bihar (35.73%), Rajasthan (35.99%) and Karnataka (39.91%). <i>Progress in North-Eastern States, especially in Tripura, Sikkim, Meghalaya, Arunachal Pradesh and Mizoram needs to improve.</i></p> <p>All the States have been requested to involve SAMETIs as Nodal Agency in the State for</p>

		<p>implementation of ACABC Scheme. Thereby these SAMETIs may take up the role of MANAGE at the State level and funds may go from MANAGE to SAMETI for implementing ACABC within State.</p> <p>SAUs may also regularly organise awareness programmes on ACABC for UG/PG students in agriculture and allied sector.</p>
6.	<p>Operationalization of Electronic Monitoring System (E.M.S.) : All States may arrange trainings of their District level staff for operationalization of EMS as there would be no release of Centre share without receipt of MPR, on 'EMS' w.e.f. 2012-13. NIC may also coordinate with their regional offices in the States to facilitate the training for operationalizing EMS.</p>	<p>The EMS Portal has been greatly improved taking into account States' suggestions. It has been now decided that no release proposal shall be processed in case of States which do not send their Monthly Reports.</p> <p>It was recommended that provisions may be made for uploading trainings/ demonstrations undertaken by ATMA as well as other agencies/programmes viz. ICAR, NFSM, MIDH, RKVY, KVK etc in the EMS</p>

2.2 ACTION IN PROGRESS ON ISSUES DISCUSSED DURING PRE RABI 2014 DAC-ICAR GROUP MEETING

Sl.	Issues	Action Taken
1.	Field Orientation to the Farm Tele Advisors (FTAs) working in the KCCs	Deputation of Farm Tele Advisors (FTAs) of KCCs to the field to act as block level Asstt. Technology Manger (ATM) for a fortnight before each crop season to orient them to field issues. This is under process in Uttar Pradesh. Punjab, Tamil Nadu and Assam. Other States also need to follow.
2.	Uploading the activities of ICAR on the DAC website	Content like succe3ss stories, news and highlights and good research done by ICAR, from ICAR

	(agricoop.nic.in)	<p>website shall be retrieved on the DAC website in the form of a RSS feed or XML. DKMA is already working on this</p> <p>An Interface has also been provided on the Farmers Portal for uploading the Booklets and other content from ICAR.</p>
4.	A user Manual of KCCs may be developed for information of the public and officers from States/ scientists from SAUs, ICAR and KVKs others interested.	Detailed information on KCC has been uploaded at the m-Kisan Portal (http://www.mkisan.gov.in/)
5.	ICAR may encourage extensive use of SMS Portal by ICAR Institutes and KVKs for sending advisories to farmers	There has been greater participation of ICAR Institutes/KVKs in sending messages to Farmers using the m-Kisan Portal. Existing set up of voice and text based messages available with mKisan Portal may be used by ICAR scientist from various institutes/KVKs as it has immense capacity and has database of nearly 80 lakh farmers enabling speedy delivery of messages to large number of farmers.
6.	Active involvement of ICAR Institutes and KVKs in implementing the programme on Skill Training of Rural Youth	<p>While implementation modalities for these components are being finalised, ICAR shall be actively involved in the process.</p> <p>Experts of ATMA, ICAR Institutes and KVKs will constitute the core group for finalising the course content and curriculum of the skill training modules for rural youth. These institutions shall also be associated in implementing the programme on Accreditation and Certification of Farmers.</p>
7.	ICAR to be associated in the programme on Accreditation and Certification of Farmers.	Experts of ATMA, ICAR Institutes and KVKs will constitute the core group for finalising the course content and curriculum of the skill training modules for rural youth. These institutions shall also be associated in implementing the programme on Accreditation and Certification of Farmers.

2.3. Action yet to be initiated:

- Development of a joint Reporting format for reviewing the progress of R-E Convergence to be developed by DAC and ICAR.

- Organization of a national level workshop jointly by DAC and ICAR inviting ZPDs, SNOs and selected PD ATMAs/ PC KVKs to identify the constraints and strategies for effective R-E convergence at field level.
- Development of a common website of the Agriculture Ministry.
- Launching of e-courses by DAC with active support of ICAR

3. Issues to be flagged in the forthcoming Pre-Kharif Interface

- i. District level Pre-Kharif campaigns to be jointly organized as a regular activity (as in case of National level pre-seasonal Campaigns) by ATMAs and KVKs engaging all means of Transfer of Technology.
- ii. All R&D institutions in Agriculture (ICAR/ SAUs) may prepare a list of technologies available with them and pass on the readily transferrable technologies to KVKs for validation assessment and its mass transfer through ATMA with respect to Kharif crops.
- iii. Selection and deployment of cutting edge level functionaries like farmers' friends, SMSs, BTMs & others may be completed early. SAUs/KVKs and SAMETIs may be actively involved in their orientation and capacity building.
- iv. BPDs and ATICS under ICAR/SAUs may focus on Kharif specific crop modules and technologies to ensure better productivity at farm level.
- v. Strengthening linkages between EEIs, KVKs & ICAR Institutions located in various States for capacity building of extension functionaries.

Annexure - I

CONSOLIDATED STATUS OF PROPOSALS SUBMITTED TO MIN. OF I & B BY SAUS/KVKS /NGOs FOR LICENCE TO SETUP COMMUNITY RADIO STATIONS (CRSs)								
S. No.	Cat.	Name of Organization	Address	State	Date of receipt of proposal in MIB	Status of proposal	Reasons for Rejection/Cancellation/Non-Commissioning of CRS	Important Advice to the Individual Applicant
1	SAU	College of Horticulture, Bihar	Noorsarai, Nalanda, Bihar Ph. 06112-242493	Bihar	18.10.10	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	Fresh application may be submitted to the Ministry of Information and Broadcasting (MIB) on prescribed proforma along with requisite documents / information and approval letter from ICAR. Application proforma can be downloaded from the MIB's website "www. mib.nic.in" for getting the CRS License.
2	SAU	CSKHP Krishi Vishwavidyalaya	CSKHP Krishi Vishwavidyalaya Palampur, Himachal Pradesh	Himachal Pradesh	10-10-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-

3	SAU	Birsa Agricultural University	Kanke, Ranchi - 834006, Jharkhand	Jharkhand	23-05-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
4	KVK	Krishi Vigyan Kendra, Bidar	Krishi Vigyan Kendra Janawada Farm, Bidar-585401, Karnataka	Karnataka	22-05-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
5	KVK	University of Agri. Sciences, Bangalore for KVK	University of Agricultural Sciences, Hebbal Campus, Bangalore-, Shimoga, 560 024, Karnataka	Karnataka	22-09-08	LOI Cancelled	MHA observed vide lettrdt 17.4.09 recd in IMC on 23.02.10 that vital installations of ISRO in Hassan is 14 Km away from Kandali. MHA did not grant permission.	-do-
6	KVK	Krishi Vigyan Kendra, Faridkot	Krishi Vigyan Kendra, Faridkot-151203 Punjab	Punjab	06-06-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
7	SAU	SardarVallabh Bhai Patel UAT	SardarVallabh Bhai Patel University of Agriculture & Technology, Meerut-250 110	Uttar Pradesh	21-04-09	LOI Cancelled	CRS located near Army HQ. MOD views may be sought as per MHA letter dt 18.09.09, 7.7.11 (Cleared for 50 Watt ERP). LOI has been cancelled due to security reasons.	-do-
8	KVK	Krishi vigyankendra	Chiniyalisaur, Uttarkashi-249196, Uttarakhand	Uttarakhand	10-10-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-

9	KVK	Krishi vigyan Kendra	Gwaldam, Chamoli, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
10	KVK	Krishi vigyan Kendra	Gaina-Ancholi, Pithoragarh, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
11	KVK	Krishi vigyan Kendra	Ranichauri, TehriGarhwal, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
12	KVK	Krishi vigyan Kendra	Jyolikot, Distt- Nainital- 263127, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
13	KVK	Krishi vigyan Kendra	Lohaghat, P.O.Galchoura , Distt- Champawat, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
14	KVK	Krishi vigyan Kendra, Almora	Chaubatia, Ranikhet, Distt-Almora, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
15	KVK	Krishi vigyan Kendra, Bharsar	Bharsar, Pauri, Uttarakhand	Uttarakhand	15-01-08	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
16	KVK	Krishi vigyan Kendra, Dhanauri	Dhanauri, Haridwar, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
17	KVK	Krishi vigyan Kendra, Harbatpur	Dhakrani, Harbatpur, Dehradun, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-

18	KVK	Krishi vigyankendra, Jakhdhar	Jakhdhar, Rudraprayag - 268145, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
19	KVK	Krishi vigyankendra, U.S.Nagar	Kashipur, Udham Singh Nagar, Uttarakhand	Uttarakhand	06-11-07	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
20	KVK	Krishi Vigyan Kendra, Sonamukhi	Prog Coordinator, KVK, Vill- Chuamonipur, PO: Sonamukhi, Dist: Bankura - 722 207	West Bengal	21-04-09	LOI Cancelled	LOI holder did not apply for frequency & SACFA clearances	-do-
21	KVK	Krishi Vigyan Kendra, Begusarai	Khodawandpur, Begusarai- 848 202, Bihar	Bihar	05-09-08	LOI Issued	GOPA not signed by applicant to enable WOL	KVK may ask to sign on Grant of Permission Agreement (GOPA) with Min. of I& B to enable CRS License.
22	KVK	Krishi Vigyan Kendra, Vaishali	Hariharpur vis Rajauli, Hajipur, Distt- Vaishali - 844 101, Bihar	Bihar	05-09-08	LOI Issued	GOPA not signed by applicant to enable WOL	-do-
23	KVK	Cendect Krishi Vigyan Kendra	Kamatchipuram - 625 520, DisttTheni	Tamil Nadu	22-05-09	LOI Issued	GOPA not signed by applicant to enable WOL	-do-
24	KVK	Saraswathi Krishi Vigyan	R.T.Malai Post, Kulithalai Taluk, Karur	Tamil Nadu	09-06-08	LOI Issued	GOPA not signed by applicant to enable WOL	-do-

		Kendra	Distt-621 313, Tamilnadu					
25	KVK	ChanderSekhar Azad UAT	Kanpur, Uttar Pradesh	Uttar Pradesh	03-12-07	LOI Issued	GOPA not signed by applicant to enable WOL	-do-
26	KVK	Krishi Vigyan Kendra, Baghpat	Prog Coordinator, KVK, Khekra, Delhi Road, Baghpat-	Uttar Pradesh	21-04-09	LOI Issued	GOPA not signed by applicant to enable WOL	-do-
27	SAU	Narendra Deva UAT	Kumarganj, Faizabad 244229 Uttar Pradesh	Uttar Pradesh	26-04-07	LOI Issued	GOPA not signed by applicant to enable WOL	-do-
28	KVK	Bihar Agriculture College	Sabour, Bhagalpur	Bihar	18.10.2010	LOI Issued	GOPA not signed by applicant to enable WOL	-do-
29	KVK	Krishi Vigyan Kendra, Namakkal	Veternary College and Research Instt Campus, Lathuvadi (PO), Namakkal-637002	Tamil Nadu	22-04-09	LOI/WOL Issued	WOL holder did not setup CRS	CRS License (WOL) already been issued by Ministry of I & B to Krishi Vegan Kendra, Nammakkhal(TN) . They can set up the CRS immediately.
30	KVK	Krishi Vigyan Kendra, Patna	Agwanpur, Barh, Patna-803 214, Bihar	Bihar	05-09-08	LOI/WOL Issued	WOL holder did not setup CRS	-do-
31	KVK	Krishi Vigyan Kendra,	Birauli, Samastipur-848 113, Bihar	Bihar	05-09-08	LOI/WOL Issued	WOL holder did not setup CRS	-do-

		Samastipur						
32	SAU	Junagadh Agricultural University	Junagadh	Gujarat	11-11-11	LOI/WOL Issued & Commissioned	Commissioned	Already commissioned and in operation. They can apply to ATMA Governing Board (ATMA office of concerned District for funding under ATMA scheme.
33	KVK	Krishi Vigyan Kendra, Junagarh	Ambuja Cement Foundation, Junagarh	Gujarat	19-04-10	LOI/WOL Issued & Commissioned	Commissioned	-do-
34	SAU	CCS Haryana Agricultural University	Hissar-125004, Haryana	Haryana	21-01-08	LOI/WOL Issued & Commissioned	Commissioned	-do-
35	SAU	University of Agri. Sciences, Krishaknagar, Dharwar	University of Agricultural Sciences, Krishaknagar, Dharwar-580005	Karnataka		LOI/WOL Issued & Commissioned	Commissioned	-do-
36	KVK	Shram Sadhana Trust Amravati	Sadhana Krishi Viyana Kendra, Durgapur (Badnera), Dist. Amravati-444701, Maharashtra	Maharashtra	22-09-08	LOI/WOL Issued & Commissioned	Commissioned	-do-

37	SAU	Tamilnadu Agricultural University	Lawley Road, Coimbatore-641003, Tamilnadu	Tamil Nadu	01-06-07	LOI/WOL Issued & Commissioned	Commissioned	-do-
38	SAU	Allahabad Agricultural Institute	Allahabad Agricultural Institute Deemed University, Allahabad 211007 Uttar Pradesh	Uttar Pradesh	22-05-07	LOI/WOL Issued & Commissioned	Commissioned	-do-
39	SAU	GB Pant UAT	Pant Nagar, Udham Singh Nagar, Uttarakhand	Uttarakhand	09-05-07	LOI/WOL Issued & Commissioned	Commissioned	-do-
40	SAU	Indira Gandhi Krishi Vishwavidyalaya	Krishak Nagar, Raipur Pin 492006, Chhattisgarh	Chhattisgarh	17-05-07	LOI/WOL Issued & Commissioned	Commissioned	-do-
41	NGO	Sourabha, At LalaSahi, Jagatsinghpur-754103	LalaSahi, Jagatsinghpur-754103	Odisha		LOI/WOL Issued & Commissioned	Commissioned (under ATMA)	Already operational under ATMA scheme.
42	NGO	Institute of Rural Research & Development	IRRD, Ghaghas Village, Nagina Block, Mewat District.	Haryana		LOI/WOL Issued & Commissioned	Commissioned (under ATMA)	-do-

43	NGO	DivyaJyothi Vidya Kendra, Nelamangala Town	Vishwa Building, Chikkana Layout, Nelamangala Town, Bengaluru-562123	Karnataka		LOI/WOL Issued & Commissioned	Commissioned (under ATMA)	-do-
44	NGO	Waynad Social Service Society, Dwaraka, Nallurnad	Dwaraka, Nallurnad-670645, Manthawady, Wynad Dist.	Kerala		LOI/WOL Issued & Commissioned	Commissioned (under ATMA)	-do-
45	KVK	Krishi Vigyan Kendra (PIRENS), Ahmednagar	Krishi Vigyan Kendra (PIRENS) A/P Babhaleshwar, Taluka-Rahata, District Ahmednagar, Maharashtra Pin Code -413737	Maharashtra	06-07-07	LOI/WOL Issued & Commissioned	Commissioned (under ATMA)	-do-
46	KVK	Krishi Vigyan Kendra, Baramati	Programme Co-ordinator, Krishi Vigyan Kendra, Malegaon Colony, Sharda Nagar, Baramati-413115, Distt-	Maharashtra	11-09-08	LOI/WOL Issued & Commissioned	Commissioned (under ATMA)	-do-

			Pune, Maharashtra					
47	KVK	Suvide Foundation's Krishi Vigyan Kendra	Karda, Tq. Risod Distt. Washim 444506, Maharashtra	Maharashtra	14-03-07	LOI/WOL Issued & Commissioned	Operational (under ATMA)	-do-
48	KVK	Krishi vigyan kendra, Saharanpur	Khajuribagh, New Gopal Nagar, Saharanpur - 247001, Uttar Pradesh	Uttar Pradesh	30-10-07	LOI/WOL Issued & Commissioned	Commissioned (under ATMA)	-do-
49	KVK	Krishi Vigyan Kendra Ujha	Ujha, Distt., Panipat	Haryana	30/10/1 2	Rejected	Asked to furnish processing fee on 16.11.12. Sent for clearance on 6.6.13. clearance denied by ICAR	Fresh application may be submitted to the Ministry of Information and Broadcasting (MIB) on prescribed proforma along with requisite documents / information and approval letter from ICAR. Application proforma can be downloaded from the MIB's website "www.mib.nic.in" for getting the CRS License.

50	KVK	Krishi Vigyan Kendra, (Under Y C Open Univ)	Govardhan, Nashik	Maharashtra	16/01/12	Rejected	Asked to furnish, exact GC, details of auth sig., Recog cert., area map, profile of community etc. on 2/2/12, No reply recd. Matter closed on 08.11.13	-do-
51	KVK	Krishi Vigyan Kendra Amadalavala	Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad, andhrapradesh	Andhra Pradesh	13-09-07	Rejected	Records not available in MIB	-do-
52	KVK	Krishi vityankendra, Rudrur	Rudrur, Nizamabad, Andhra Pradesh	Andhra Pradesh	27-08-07	Rejected	Clearances denied by ICAR	-do-
53	KVK	Krishi Vigyan Kendra, Karimganj (AAU, Jorhat)	Karimganj	Assam	15-02-10	Rejected	Asked to furnish area map, reg cert., revalidated DD, Location of tr. & AMSL on 7.7.10. No reply received despite reminders. matter was closed.	-do-
54	KVK	Krishi Vigyan Kendra, Jamui	PO-Khadigram, Jamui-811313, Bihar	Bihar	12-03-08	Rejected	Infested with CPI (M) armed cadres vide letter dt 28.08.09	-do-
55	KVK	Krishi Vigyan Kendra, Nawada	Sarvodaya Ashram, Sokhodeora, Nawada-805106, Bihar	Bihar	09-05-08	Rejected	Asked to furnish documents in support of Govt Status on 16/6/08. No response.	-do-
56	KVK	Regional Research Station	Shankarpur, Munger	Bihar	18.10.2010	Rejected	Asked to furnish legible area map, details of auth sig, GC, AMSL, betc. No response.	-do-

57	KVK	Krishi Vigyan Kendra Pandu Pindara	Pandu Pindara, Distt. Jind	Haryana	30/10/12	Rejected	Asked to furnish processing fee on 16.11.12. DD recd. Sent for clearance on 6.6.13. Screening committee not satisfied with agency view point on CRS sustainability.	-do-
58	KVK	Krishi Vigyan Kendra Rohtak	Rohtak	Haryana	30/10/12	Rejected	Asked to furnish processing fee and details of auth. Sign. & GB members on 16.11.12. No response.	-do-
59	SAU	Sher-e-kashmir University of Agri. Sciences & Tech	Directorate of Extension Education, SK University of Agricultural Sciences & Technology of Kashmir, Shalimar campus, Srinagar-191 121	J & K	20-11-09	Rejected	Asked to furnish GC, AMSL, profile of community etc on 7.6.10. No response.	-do-
60	KVK	KVK Mattikopp	Mattikoppa, Belgaum	Karnataka	07-12-12	Rejected	Another application from Insitute is under process in the Min. hence not eligible as per policy guidelines. proposal rejected.	-do-
61	KVK	University of Agricultural Sciences, Bangalore for KVK, Hassan	University of Agricultural Sciences, Hebbal Campus, Bangalore-560 024, Karnataka	Karnataka	22-09-08	Rejected	Asked to furnish seven copies of appl on 5/11/2008. Asked to furnish GC & SR etc on 31/12/08. No reply received.	-do-

62	KVK	Dr.Hedgewar SevaSamiti's Krishi Vigyan Kendra, Nandurbar	Krishi Vigyan Kendra, At a PO.Kolde, Tal, Distt-Nandurbar-415 412, Maharashtra	Maharashtr a	22-09-08	Rejected	As per MHAs' report, organization is closely linked to RSS. Denied security clearance vide MHAs' letter dt.27.8.10.	-do-
63	KVK	DY Patil Education Socitie's Krishi Vigyan Kendra	Talsande, Distt. Kolhapur	Maharashtr a	21/2/12	Rejected	Frequency spot not available.	-do-
64	KVK	Krishi Vigyan Kendra, Kalawade	Kalawade Tal: Karad, Distt: Satara	Maharashtr a	13-01-10	Rejected	Asked on 24.6.2010 to furnish actual area map, registration certificate and revalidated DD. No reply received despite several reminders.	-do-
65	KVK	Mahatma Gandhi Vidyamandir Krishi Vidyalya	Malegaon Camp, Distt-Nashik - 423 105, Maharashtra	Maharashtr a	07-07-08	Rejected	Asked to furnish area map, details of authorized signatory & local survey report etc on 05/08/08. No response.	-do-
66	KVK	Manjara Krishi Vigyan Kendra, Latur	C/o Guest House, ManjaraSagar Factory, VilasnagarChincholiraowadi, Latur, Maharashtra	Maharashtr a	30-07-07	Rejected	Records not available in MIB	-do-

67	KVK	Krishi Vigyan Kendra, Hingoli	Hingoli	Maharashtra	04-10-13	Rejected	Asked to furnish Complete address, GB. Members, GC, commu. Location in 10 km, How to help the targeted community and involve the local community on 10/10/13, reply received on 09/12/13, asked to furnish exact GC., on 18/12/13 again on 02.04.14, reply received on 21.04.14, Sent for clearance on 15.05.14. Organization did not satisfied screening Committee.	-do-
68	KVK	PAU Krishi Vigyan Kendra, Kheri, Sangrur	Deputy Director, Krishi Vigyan Kendra, Kheri, Sangrur-148 001, Panjab	Punjab	11-09-08	Rejected	Asked to revalidate the DD & furnish seven copies of appl on 5/11/2008. No reply.	-do-
69	KVK	Krishi Vigyan Kendra, Akorashi	Krishi Vigyan Kendra, Akorashi, Hindoun City, Karauli-322 230, Rajasthan	Rajasthan	11-11-08	Rejected	Asked to furnish appl in new format on 22/01/08. Information not provided and did not turn up in SC Meetings	-do-
70	KVK	Krishi Vigyan Kendra, Bhilwara	Programme Co-ordinator, Krishi Vigyan Kendra, Gandhi Nagar, Bhilwara-311 001, Rajasthan	Rajasthan	11-09-08	Rejected	Clearances denied by ICAR due to policy reasons.	-do-

71	KVK	Agriculture College and Research Institute, Killikulam	Agriculture College and Research Institute, Killikulam	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 and 8.5.12. No reply received.	-do-
72	KVK	Agriculture Research Station, Bhavanisagar	Agriculture Research Station, Bhavanisagar	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 & 8.5.12. Reply recd. As per guidelines not eligible to set up CRS	-do-
73	KVK	Commercial Institute of Horticulture, Ooty (under TNAU)	Commercial Institute of Horticulture, Ooty	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 & 8.5.12. Reply recd. As per guidelines not eligible to set up CRS	-do-
74	KVK	Cotton Research Station, Perambalur	Cotton Research Station, Perambalur	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 & 8.5.12. Reply recd. As per guidelines not eligible to set up CRS	-do-
75	KVK	Dryland Research Station, Chettinad	Dryland Research Station, Chettinad	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 & 8.5.12. Reply recd. As per guidelines not eligible to set up CRS	-do-
76	KVK	Krishi Vigyan Kendra Dharamapuri (under TNAU)	Programme Coordinator, KVK, Dharamapuri	Tamil Nadu	16.8.11	Rejected	Asked to furnish processing fee, GC, location of Tr., recognition certificate and details of GB in prescribed format on 26.8.11. Reply recd and sent for clearance on 20/12/11. SC not satisfied	-do-

							with justifications.	
77	KVK	Krishi Vigyan Kendra Kanyakumari (under TNAU)	Programme Coordinator, KVK, Kanyakumari	Tamil Nadu	16.8.11	Rejected	Asked to furnish processing fee, GC, location of Tr., recognition certificate and details of GB in prescribed format on 26.8.11. Reply recd and sent for clearance on 20/12/11	-do-
78	KVK	Krishi Vigyan Kendra Madurai (under TNAU)	Programme Coordinator, KVK, Madurai	Tamil Nadu	16.8.11	Rejected	Asked to furnish processing fee, GC, location of Tr., recognition certificate and details of GB in prescribed format on 26.8.11. Reply recd and sent for clearance on 5/12/11. SC not recommended for license.	-do-
79	KVK	Krishi Vigyan Kendra Ramanathapuram (under TNAU)	Programme Coordinator, KVK, Ramanathapuram	Tamil Nadu	16.8.11	Rejected	Asked to furnish processing fee, GC, location of Tr., recognition certificate and details of GB in prescribed format on 26.8.11. Reply recd and sent for clearance on 5/12/11.	-do-
80	KVK	Krishi Vigyan Kendra Salem (under TNAU)	Programme Coordinator, KVK, Salem	Tamil Nadu	16.8.11	Rejected	Asked to furnish processing fee, GC, location of Tr., recognition certificate and details of GB in prescribed format on 26.8.11. Reply recd and sent for clearance on 20/12/11. SC not satisfied with justifications.	-do-
81	KVK	Krishi Vigyan Kendra Tiruvallur (under TNAU)	Programme Coordinator, KVK, Tiruvallur	Tamil Nadu	16.8.11	Rejected	Asked to furnish GC, location of Tr., recognition certificate and details of GB in prescribed format on 26.8.11. Reply recd and sent for clearance on 20/12/11. SC not approved.	-do-

82	KVK	Krishi Vigyan Kendra Trichy (under TNAU)	Programme Coordinator, KVK, Trichy	Tamil Nadu	16.8.11	Rejected	Freq. Spot not available.	-do-
83	KVK	Krishi Vigyan Kendra Vellore (under TNAU)	Programme Coordinator, KVK, Vellore	Tamil Nadu	16.8.11	Rejected	Asked to furnish processing fee, GC, location of Tr., recognition certificate and details of GB in prescribed format on 26.8.11. Reply recd and sent for clearance on 20/12/11. Proposal not recommended by SC	-do-
84	KVK	Maize Research Station, Vagarai	Maize Research Station, Vagarai	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 DD received on 2.1.12 As per guidelines not eligible to set up CRS	-do-
85	KVK	Plant Clinic Center, Ariyalur (Under TNAU)	Director of extension education, TNAU, Coimbatore	Tamil Nadu	20.9.11	Rejected	Asked to furnsih location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 and 8.5.12. No reply received.	-do-
86	KVK	Plant Clinic Center, Kancheepuram (Under TNAU)	Director of extension education, TNAU, Coimbatore	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 and 8.5.12. No reply received.	-do-
87	KVK	Plant Clinic Center, Tirunelveli (Under TNAU)	Director of extension education, TNAU, Coimbatore	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 and 8.5.12. No reply received.	-do-

88	KVK	Plant Clinic Center, Tiruppur (Under TNAU)	Director of extension education, TNAU, Coimbatore	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 and 8.5.12. No reply received.	-do-
89	KVK	Plant Clinic Center, Tiruvannamalai (Under TNAU)	Director of extension education, TNAU, Coimbatore	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 and 8.5.12. No reply received.	-do-
90	KVK	Regional Research Station, Paiyur	Regional Research Station, Paiyur	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 & 8.5.12. Reply recd. As per guidelines not eligible to set up CRS	-do-
91	KVK	Soil & Water management Research Institute, Thanjavur	Soil & Water management Research Institute, Thanjavur	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 & 8.5.12. Reply recd. As per guidelines not eligible to set up CRS	-do-
92	KVK	Urban Horticulture Development Centre, Chennai	Urban Horticulture Development Centre, Chennai	Tamil Nadu	20.9.11	Rejected	Asked to furnish location, GC, processing fee, recog. Cert. and details of GB on 4/11/11 & 8.5.12. Reply recd. As per guidelines not eligible to set up CRS	-do-
93	KVK	Krishi Vigyan Kendra, Basti	Krishi Vigyan Kendra, Banjaria Post-Katya, District-Basti Pin-272302, Uttar Pradesh	Uttar Pradesh	08-06-07	Rejected	Processing fee not received Letter sent on 10/7/07. fee not deposited despite several reminders.	-do-

94	KVK	Krishi Vigyan Kendra, Chherat (Aligarh)	CDF Campus, AnoopShahar Road, Post-Chherat, District-Aligarh	Uttar Pradesh	27-02-08	Rejected	asked to furnish recognition certificate & six more copies of the application on 28/4/08. no response.	-do-
95	KVK	Krishi Vigyan Kendra, Hydergarh	Hydergarh, Barabanki, Uttar Pradesh	Uttar Pradesh	21-04-08	Rejected	Ask to provide some documents	-do-
96	KVK	Krishi vigyankendra, Bageshwar	Sindhuri, Bashola, Bageshwar, Uttarakhand	Uttarakhand	06-11-07	Rejected	Ask to provide some documents	-do-
97	KVK	Krishi Vigyan Kendra, Darjeeling	Uttar Banga Krishi Viswavidhyalya, P.O. Kalimpong, Distt Darjeeling	West Bengal	04-01-10	Rejected	Clearance denied by MOD. Location adjacent to UHF detachment of army at Kalimpong. Frequencies may cause interference to army radio links. Mod was asked to review on 5/9/12. MOD reiterated its stand on 31/1/13	Not eligible for CRS License due to security reasons.
98	KVK	Krishi Vigyan Kendra, Pal	Jalgaon	Maharashtra	04.02.14	U/C ICAR	The president of SVM (NGO) is sitting MLA from Raver constituency of Distt. Jalgaon. Hence, the possibility of misuse of the CRS for political gains cannot be ruled out. Matter referred to the agency and ICAR for further clarification.	As desired and communicated by Min. of I&B, ICAR/KVK should provide all requisite information/documents to the Min. of I&B for early decision on the proposal.

99	KVK	Krishi Vigyan Kendra, Jamui	PO-Khadigram, Jamui-811313, Bihar	Bihar	14/3/12	U/C in ICAR	Proposal was sent for ICAR clearances	-do-
100	KVK	Vanvasi Krishi Vigyan Kendra	Adhaura, Kaimur	Bihar	16/04/12	U/C in MIB - IMC (L)	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	KVK should be asked to write a letter to Min. of I&B regarding early decision on the proposal.
101	KVK	Krishi Vigyan Kendra, Jhajjar	Jhajjar	Haryana	23.4.13	U/C in MIB - IMC (L)	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
102	KVK	Krishi Vigyan Kendra, Baghra	Baghra, Muzaffarnagar	Uttar Pradesh	17/04/12	U/C in MIB - IMC (L)	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
103	KVK	Krishi Vigyan Kendra Kurukshetra	Kurushetra	Haryana	30/10/12	U/C in MIB - IMC (L)	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
104	KVK	Krishi Vigyan Kendra Sirsa	Sirsa	Haryana	28/12/12	U/C in MIB-O	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
105	KVK	Dr.Hedgewar SevaSamiti's KVK Nandurbar	Kolde, Nandurbar	Maharashtra	31/07/13	U/C in MIB-O	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
106	KVK	Krishi Vigyan Kendra (SURE)	Barmer	Rajasthan	22.02.14	U/C in MIB-O	Asked to furnish Complete address, GB members, RC, area map, past achievements, exact geo-coordinates, AMSL in meters and 12 A of Income tax on 02.05.2014, reply received on	As desired and communicated by Min. of I&B, KVK may ask to provide all requisite

							19.05.14, (asked to furnish complete details of governing body members on 06.06.14)	information/doc uments to Min. of I&B for early decision on the proposal.
107	KVK	Creed Krishi Vigyan Kendra	Cholamadeve, Distt. Ariyalur	Tamil Nadu	06-12-13	U/C in MIB- O	Asked to furnish the GB, Members, Complete address, RC of Creed and balance sheet on 16/12/13, again reminded on 16.04.14	-do-
108	KVK	Krishi Vigyan Kendra Nagapattina m (under TNAU)	Programme Coordinator, KVK, Nagapattinam	Tamil Nadu	16.8.11	U/C in MIB- SC	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	KVK should be asked to write a letter to Min. of I&B regarding early decision on the proposal.
109	KVK	Krishi Vigyan Kendra Pudukottai (under TNAU)	Programme Coordinator, KVK, Pudukottai	Tamil Nadu	16.8.11	U/C in MIB- SC	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
110	KVK	Krishi Vigyan Kendra Tiruvarur (under TNAU)	Programme Coordinator, KVK, Tiruvarur	Tamil Nadu	16.8.11	U/C in MIB- SC	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
111	KVK	Krishi Vigyan Kendra Villupuram (under TNAU)	Programme Coordinator, KVK, Villupuram	Tamil Nadu	16.8.11	U/C in MIB- SC	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-

112	KVK	Krishi Vigyan Kendra Virudhunagar (under TNAU)	Programme Coordinator, KVK, Virudhunagar	Tamil Nadu	16.8.11	U/C in MIB-SC	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
113	KVK	Krishi Vigyan Kendra Cuddalore (under TNAU)	Programme Coordinator, KVK, Cuddalore	Tamil Nadu	16.8.11	U/C in MIB-SC	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-
114	KVK	Krishi Vigyan Kendra Katihar	Katihar	Bihar	17.5.13	U/C in MIB-W	Proposal cleared by ICAR on 22.8.2014. proposal is under Process	-do-

Status of Action Taken by States relating to KCCs

S. No.	State	Appoi ntmen t of State KCC Nodal Office r	Providi ng short text messa ges	Training to FTAs (Monthl y Video Confere ncing)	Deputing L-II Experts (Duty Roster) (last date for updation)	Identificati on of officers at various levels for implementa tion of Revised Escalation Matrix	Field expos ure to FTAs.
1	Andaman & Nicobar	Yes	No	No	No	No	No
2	Andhra Pradesh	Yes	No	No	ICAR Institutes & State Governme nt	No	No
3	Arunachal Pradesh	Yes	No	No	ICAR	No	No
4	Assam	Yes	No	No	SAU, State Governme nt	No	Action Initiate d
5	Bihar	Yes (Updat ed inform ation awaite d)	No	No	BAU Sabour, ICAR, KVK (Not Updated)	No	No
6	Chhattisgar h	Yes	No	No	Yes (Updated)	No	No
7	Dadra & Nagar Haveli	Yes	No	No	State Governme nt	No	No
8	Delhi	No	No	No	IARI	No	No
9	Goa	Yes	No	No	No	No	No
10	Gujarat	Yes	No	No	State Departmen t	No	No
11	Haryana	Yes	No	No	SAU	No	No
12	Himachal Pradesh	Yes	No	No	SAU	No	No

13	Jammu & Kashmir	Yes	No	No	SAU	No	No
14	Jharkhand	Yes	No	No	SAU,ICAR	No	No
15	Karnataka	Yes	Yes	Yes	ICAR,SAU	No	No
16	Kerala	Yes	No	No	ICAR	No	No
17	Lakshadweep	No	No	No	No	No	No
18	Madhya Pradesh	Yes	No	Yes	SAU	No	No
19	Maharashtra	Yes	No	No	SAU	No	No
20	Manipur	Yes	No	No	No	No	No
21	Meghalaya	Yes	No	No	No	No	No
22	Mizoram	Yes	No	No	Yes (Updated)	No	No
23	Nagaland	Yes	No	No	ICAR	No	No
24	Orissa	Yes	No	No	ICAR	No	No
25	Punjab	Yes	Yes	Yes	Yes (Updated)	Action initiated	Action initiated
26	Rajasthan	Yes	No	No	ICAR	No	No
27	Sikkim	No	No	No	State Government	No	No
28	Tamil Nadu & Pondicherry	Yes	No	Yes	SAU	Action initiated.	No
29	Tripura	Yes	No	No	No	No	No
30	U'Khand	Yes	No	No	SAU	No	No
31	Uttar Pradesh	Yes	No	No	ICAR	Action initiated	Training under progress
32	West Bengal	Yes	No	No	State Government	No	No

11. DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING & FISHERIES

Technological Issues related to Fisheries concerning the States with ICAR & DADF

Inland:

- Development of breeding and culture technology of Indian Magur *Clarius batrachus*. The demand of this species is very high. However commercially viable technology is not yet developed as a result aquaculture of this species is not picking up. Besides, the natural stock is also getting depleted.
- Development of breeding technology of *Pangasius sutchi*. Presently adequate seed is not available in various States to take up culture of this species. The seed is presently obtained from West Bengal. The breeding technology of this species has to be standardized to produce seed in various States.
- Development of culture and breeding technology of Indian white shrimp *Penaeus indusus*.
- Development of technology of production of probiotics, so as to reduce water quality deterioration and water exchange requirements.
- There is always a growing demand for quality fish seeds, uncertainty in the quantity and quality of riverine fish seed collection needs to be fulfilled.
- Production of quality feed at a cheap and reasonable cost is a key to successful fish farming operation and linear programming technique is one of the most important techniques to allocate the available feedstuffs in a least cost ration formulation.
- More increase in average productivity of pond fish is also required through improved technological means.

Marine:

- Standard protocol for breeding and seed production of important commercial marine fisheries must be standardized.
- Searching for suitable stature/winning should be taking care important marine ornamental fishes.
- Used of Specific Pathogen Free (SPF), Specific Pathogen Resistance (SPR) and Broodstock of commercial shrimps.
- Proper diagnostic kits and set up of disease diagnostic laboratory.
- Proper implementation of aquatic quarantine during imports of aquatic animal.
- Awareness among coastal fishermen on Mess size regulation, proper monitoring of fishing ban period.
- An alternative livelihood and opportunities can be developed for Small scale fishers who have losing their livelihoods.

Post Harvest:

- Proper organization of harvest, post-harvest handling (near harbour and fish landing centres) and marketing of fish in India is needed. Post harvest losses also

needs to be taken in account and value addition to fish should be taken in account for increased fish consumption.

Fisheries Extension and Others:

- Ornamental fish breeding, culture and mass scale production is need of the hour, as most of the ornamental fishes are collected from wild and sold in the market, there is a need to shift from capture based to culture based fisheries under this vibrant field.
- Most of fishermen / fish farmers remain jobless during the monsoon ban period, which effect their social life and livelihood, lab to land based technology in fish culture like disease treatment kits, sea weed production, net mending, breeding, mortality reduction techniques can be introduced in such area. This makes them confident in the sector with an alternative during circumstances like fish ban.
- Mass media has to be given importance to upgrade fisheries sector, mass media can play an important role in providing advisory services to fishermen in terms of portable kits, tests for water quality, feed quality, over exploitation etc. It can also help in developing awareness with regard to nutritional importance of fish.
- Mass media can also serve as information hub for fisheries development in terms of marketing by providing a particular brand name for fish produced etc. Many of the States complaint regarding less demand of particular type of fish cultured, this is mainly because of poor transportation facilities available in the States which can be taken care of.
- Mobile has been booming as an information agent for Indian fishermen in terms of weather information, potential fishing zone etc. Mobile can also serve as an important media for dissemination information like market prices, endangered species to make fishermen know the actual facts and get fair price. Developing vessel monitoring systems in each coastal state is important for regulating illegal fishing.
- Most of the farmers especially shrimp farmers are mostly export oriented, but many of the times due to high standards set by importing nation most of our consignments gets rejected. Technology can play a very important role here, i.e there is a need of technology based approach to identify the standards set develop technology to regulate and maintain such standards where the processing companies in India can fulfill the stringent standards set by importing nations, thus earning foreign exchange.
- Feed accounts for near to 60% of the total production cost, there is need to come out with different forms of low cost feeds, including live feeds in the sector. Again fish meal cannot be the only means of serving feed, there is a need for mass production of feed alternative to fish feeds like soybean meal.

Technological Issues related to Poultry concerning the States with ICAR & DADF

- Continuing research on poultry disease situation and suggestion of specific strains, immunotypes of agents for vaccine to be used; Finalize antibacterials and antibiotics to be / not to be used in lines with One World, One Health Concept; Research & enlist medicated feed supplements/ additives/ premixes which may be allowed to be used. A roadmap for Pharmacovigilance; Ethnoveterinary products and practices is also required to be documented.
- Developing scientific basis for welfare norms for both layers and broilers with feasibility in Indian scenario and also keeping in view the nutritional requirement of the country's citizenry.
- Research on mitigation of climate change and environmental adaptation of poultry stocks- specific interventions to be suggested so that they may be incorporated in the National Livestock Mission (NLM).
- Concurrent evaluation on performance, at ground level, of specific Low-Input Technology birds in different States/ areas on agro-climatic zone basis, so that the information can be utilized for further assessment and improvement.
- Research in sustainable biosecurity & production models for different systems of poultry farming prevalent in the country.
- Research in alternate poultry species and indigenous breeds to suggest further course for propagation for both, especially in light of disease susceptibility and marketing opportunities.
- Research in current economics of production region-wise all over the country and development of a future prediction model on pricing- taking into account all variable factors like demand income elasticities, urbanization, transit and logistics issues, seasonal variations, festivals, religious taboos, cost of feed ingredients like maize and soya, electricity tariff, labour, fuel, lease/ rent cost etc.
- Possibilities of producing synthetic 'eggs' and 'meat', its safety and other concerns.

Technological Issues related to Livestock Health concerning the States with ICAR & DADF

One of the biggest impediments in the growth of livestock sector is large scale prevalence of animal disease like Foot & Mouth Disease under various programs of Livestock Health and Disease Control. The efforts are being made by the Department for prevention and control of animal disease of economic importance like Foot & Mouth Diseases (FMD) Peste des Petits Ruminants (PPR), Brucellosis, Anthrax, Haemorrhagic Septicemia (HS), Block Quarter (BQ), Classical Swine Fever and Ranikhet Disease and Avian Influenza.

Some emerging and re-emerging diseases are also showing their presence in recent times, out of which few are of zoonotic importance. There is a need to understand the detailed epidemiology of these emerging and re-emerging diseases for implementing effective control measures including studying the risk assessment for these diseases and also risk involved due to import of livestock and livestock products from other countries.

Further, it is also important that for successful control of any animal disease, the disease are to be diagnosed as quickly as possible and at field level. For this purpose, there should be an availability of diagnostic tests for differentiation of infected and vaccinated animals such as in case of Brucellosis, as the Department is implementing national control programme on Brucellosis.

In view of the above, following issues need to be taken up with ICAR:

- to conduct detailed epidemiological study for various animal diseases including risk assessment for the same (e.g. AI, Glanders, PRRS etc.).
- to develop rapid diagnostic tests for field use for various animal diseases (e.g. Avian Influenza – antigen as well as antibody detection, PRRS).
- to develop diagnostic tests for differentiation of infected and vaccinated animals such as in case of Brucellosis, IBR, PPR etc.
- to develop robust vaccine which will have extended duration of immunity and thermo-stability.
- to develop/make available tissue culture vaccine technology for production of tissue culture vaccine against Classical Swine Fever. There is also a need for development of new vaccines for control of ticks and tick borne disease.