

F. No. 3-1/ 2016-17-CFCC-E&S
GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURE, COOPERATION AND FARMERS WELFARE
(CROP FORECAST COORDINATION CENTRE)

Room No. 344-A, Krishi Bhawan, New Delhi

Dated: 30.11.2016

SUBJECT: MINUTES OF THE MEETING OF THE CROP WEATHER WATCH GROUP HELD ON 25.11.2016.

Summary observations of the Group on Agenda Items

- **Details of the mean maximum and minimum temperature during the week 17th November, 2016 to 23rd November, 2016 were as under:-**

Maximum Temperature

- ***Above normal by 2 to 4^oC over many parts of South Interior Karnataka, Tamil Nadu, Kerala, some parts of Himachal Pradesh, Arunachal Pradesh, Assam, Kutch, Coastal Karnataka, Rayalaseema, Lakshadweep and isolated pockets of Jammu & Kashmir, East Rajasthan, West Madhya Pradesh and Coastal Andhra Pradesh.***
- ***Normal to near normal over rest of the country.***

Minimum Temperature

- ***Above normal by 2 to 4^oC over some parts of Himachal Pradesh, Andaman & Nicobar Islands and isolated pockets of Jammu & Kashmir.***
- ***Normal to near normal over rest of the country except Jharkhand, Gangetic West Bengal, many parts of Tripura, Gujarat Region, East Madhya Pradesh, Chhattisgarh, Odisha, Madhya Maharashtra, Vidarbha, Telangana, South Interior Karnataka, some parts of East Uttar Pradesh, Sub Himalayan West Bengal, Bihar, Assam & Meghalaya, East Rajasthan, West Madhya Pradesh, Marathwada, Konkan, North Interior Karnataka, Coastal Karnataka, Coastal Andhra Pradesh and isolated pockets of West Rajasthan, Saurashtra, Rayalaseema and Tamil Nadu, where it was below normal by 2 to 4^oC and many parts of North Interior Karnataka, some parts of Vidarbha, Marathwada and isolated pockets of Madhya Pradesh, Odisha, Coastal Karnataka and South Interior Karnataka, where it was below normal by 4 to 6^oC.***
- ***In the post monsoon season, at All-India level, the rainfall during the week (17th – 23rd November, 2016) has been 93% lower than the Long Period Average (LPA). Rainfall in the four broad geographical divisions of the country during the above period has been lower than LPA by 100% in North-West India and East & North East India each, 99% in Central India and 88% in South Peninsula.***

- *The cumulative rainfall in the country during the post monsoon season i.e. 01st October to 23rd November, 2016 has been 42% lower than the Long Period Average (LPA). Rainfall in the four broad geographical divisions of the country during the above period has been lower than LPA by 69% in South Peninsula, 62% in North West India, 19% in East & North East India and 3% in Central India.*
- *Out of 36 met sub-divisions, 14 met sub-divisions constituting 42% of the total area of the country has received excess/normal rainfall, 22 met sub-divisions constituting 58% of the total area of the country has received deficient/scanty rainfall.*
- *Central Water Commission monitors 91 major reservoirs in the country which have total live capacity of 157.80 Billion Cubic Meter (BCM) at Full Reservoir Level (FRL). Out of these, 76 reservoirs with FRL capacity of 116.25 BCM have irrigation potential. Live storage in the 91 major reservoirs as on 24th November, 2016 has been 105.21 BCM as against 83.86 BCM on 24.11.2015 (last year) and 107.98 BCM of normal (average of the last 10 years) storage. Current year's storage is 125% of last year's storage and 97% of the average of last 10 year's storage.*
- *As per latest information available on sowing of crops, around 52% of the normal area under Rabi crops has been sown upto 25.11.2016. Total area sown under Rabi crops in the country as on 25.11.2016 has been reported to be 327.62 lakh hectares as compared to 313.17 lakh hectares in the corresponding period of last year. This year's area coverage so far is higher by 14.5 lakh ha. than the last year but lower by 26.4 lakh ha. than normal area coverage during the same period.*
- *Area coverage under Wheat is higher by 9.83 lakh ha. than the last year.*
- *Area coverage under Rabi Pulses is higher by 6.98 lakh ha. than the last year and by 5.86 lakh ha. than normal as on date. This is due to higher coverage in Gram, Pea and Lentil.*
- *Area coverage under total Rabi Oilseeds is higher by 7.94 lakh ha. than the last year and by 0.4 lakh ha. than normal as on date. This is due to higher coverage in Rapeseed & Mustard.*
- *Availability position of seeds and fertilizers has been found satisfactory.*

1. **Post Monsoon Season (October – December) during the week ending on 23rd November, 2016**

➤ **Sub-division-wise weekly rainfall & minimum temperature is shown in Table-1.1**

- **Rainfall during the week (17th November, 2016 to 23rd November, 2016)** Rainfall was scanty in 10 and no rain in 26 out of 36 meteorological sub-divisions. (Sub-division wise weekly rainfall distribution is given in **Annex I**).
- **Cumulative rainfall (01st October, 2016 to 23rd November, 2016)** Rainfall was excess/normal in 14 and deficient/scanty in 22 out of 36 meteorological sub-divisions. (The sub-division-wise seasonal rainfall distribution is given in **Annex II**).

Table - 1.2: Weekly and Cumulative Rainfall in four regions of the country¹

Region	Week Ending (23.11.2016)				Cumulative (01.10.16 to 23.11.16)			
	(in mm)		Devi- ation (%)	Cat.	(in mm)		Devi- ation (%)	Cate- gory
	Actual	Normal			Actual	Normal		
North-West India	0.0	2.7	-100	NR	14.9	38.8	-62	S
Central India	0.0	3.2	-99	S	68.3	70.4	-3	N
South Peninsular India	2.0	17.5	-88	S	71.7	229.2	-69	S
East & North-East India	0.0	3.5	-100	NR	122.9	152.5	-19	N
Country as a whole	0.4	5.9	-93	S	61.3	105.3	-42	D

E: Excess, N: Normal, D: Deficient, S: Scanty, NR: No Rain.

Source: India Meteorological Department, New Delhi

Table - 1.3: Category wise comparative distribution of Sub-division (cumulative rainfall) and All-India Percentage Rainfall Departure for the last five years since: 1st October to

No. of Sub-Divisions with rainfall	<i>For the period from 1st October to</i>					
	23 NOV 2011	21 NOV 2012	20 NOV 2013	26 NOV 2014	25 NOV 2015	23 NOV 2016
Excess	00	03	18	02	06	04
Normal	04	13	08	09	04	10
Total	04	16	26	11	10	14
Deficient	08	07	10	10	08	08
Scanty	22	13	00	15	18	14
No rain	02	00	00	00	00	00
Total	32	20	10	25	26	22
Data Inadequate	00	00	00	00	00	00
TOTAL	36	36	36	36	36	36
All-India % Rainfall Deviation	(-) 53%	(-) 17%	36%	(-) 32%	(-) 25%	(-) 42%

Source: IMD

1. North-west India - Uttar Pradesh, Rajasthan, Haryana, Chandigarh and Delhi, Punjab, Uttaranchal, Himachal Pradesh, and Jammu and Kashmir.
Central India - Madhya Pradesh, Chhattisgarh, Maharashtra and Gujarat

South Peninsula - Andhra Pradesh, Karnataka, Tamil Nadu & Pondicherry, Kerala and Lakshadweep.

North-east India - Bihar, Jharkhand, Orissa, West Bengal, Sikkim, Assam, Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram, Tripura, and Andaman and Nicobar Islands.

Sub-division-wise 5 days rainfall forecast from 21st Nov., 2016 to 25th Nov., 2016 is shown in **Table 1.4**

Table: 1.1

METEOROLOGICAL SUB-DIVISIONWISE DAILY DISTRIBUTION OF RAINFALL & MINIMUM TEMPERATURE-2016															
S.No.	SUB-DIVISIONS	RAINFALL							MINIMUM TEMPERATURE						
		17 NOV	18 NOV	19 NOV	20 NOV	21 NOV	22 NOV	23 NOV	17 NOV	18 NOV	19 NOV	20 NOV	21 NOV	22 NOV	23 NOV
1	ANDAMAN & NICOBAR ISLANDS	SCT	SCT	DRY	DRY	DRY	ISOL	ISOL	N	N	N	N	N	N	N
2	ARUNACHAL PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	AN	N	N	N	N	N	N
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	AN	N	N	N	N	BN	BN
4	NAGA,MANI,MIZO,TRIPURA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	N	N
5	SUB-HIMA,WEST BEN. & SIKKIM	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	N	N
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	ABN	N	N	ABN
7	ODISHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	ABN	ABN	N	ABN	ABN
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	BN	BN	BN	N	ABN	BN
9	BIHAR	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	N	N
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	BN	N	N	BN
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	N	N
12	UTTARAKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	N	N
13	HARYANA CHAND. & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	BN	BN	N	N
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	N	N
15	HIMACHAL PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	AN	N
16	JAMMU & KASHMIR	DRY	DRY	DRY	DRY	DRY	DRY	DRY	BN	N	N	N	N	N	N
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	BN	BN	N	N	N	N
18	EAST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	BN	BN	N	N	N	N
19	WEST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	BN	N	N	N	N	N	N
20	EAST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	BN	ABN	N	N	N	BN	N
21	GUJARAT REGION D.D. & N.H.	DRY	DRY	DRY	DRY	DRY	DRY	DRY	BN	N	N	N	BN	N	N
22	SAURASTRA KUTCH & DRU	DRY	DRY	DRY	DRY	DRY	DRY	DRY	ABN	N	N	N	BN	N	BN
23	KONKAN & GOA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	BN	N	N	N
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	BN	ABN	N	N
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	BN	N	N	N
26	VIDARBHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	BN	N	N	N	ABN	N	BN
27	CHHATTISGARH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	N	N	ABN	ABN	N	BN
28	COASTAL ANDHRA PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY	AN	N	N	N	N	N	N
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	AN	N	ABN	N	ABN	ABN	BN
30	RAYALASEEMA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY	AAN	N	N	N	N	N	ABN
31	TAMILNADU & PUDUCHERRY	ISOL	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	N	N	N	N	N	N	N
32	COASTAL KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY	N	AAN	N	N	N	N	N
33	NORTH INTERIOR KARNATAKA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY	AN	N	N	BN	N	N	N
34	SOUTH INTERIOR KARNATAKA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY	N	N	N	N	N	N	N
35	KERALA	ISOL	ISOL	ISOL	ISOL	DRY	ISOL	ISOL	N	AAN	N	N	N	N	N
36	LAKSHADWEEP	DRY	DRY	DRY	DRY	ISOL	SCT	ISOL	N	N	N	N	N	N	N

LEGENDS FOR RAINFALL:														
WDS	WIDE SPREAD / MOST PLACES (75-100%)			FWS	FAIRLY WIDE SPREAD, /MANY PLACES (51-75%)			SCT	SCATTERED/ FEW PLACES (26-50%)			ISOL	ISOLATED (UP TO 25 %)	
DRY	NO STATION REPORTED RAINFALL			RAINFALL ACTIVITY				*	ACTIVE (3/5 1 st - 4 times the normal)			**	VIGOROUS (3/5 More than 4 times the normal)	
LEGENDS FOR TEMPERATURE:														
N	NORMAL (N,±1,±1) °C			BN	BELOW NORMAL (N-2) °C			ABN	APRECIABLY BELOW NORMAL (N-3, -4) °C			MBN	MARKEDLY BELOW NORMAL (N-5 AND BELOW) °C	
AN	ABOVE NORMAL (N+2) °C			AAN	APRECIABLY ABOVE NORMAL (N+3,+4) °C			MAN	MARKEDLY ABOVE NORMAL (N+5 AND ABOVE) °C					
*	Cold wave conditions (Departure from Normal is) -4°C to -5°C and -5°C to -6°C)						**	Severe Cold wave conditions (Departure from Normal is) -6°C or less and -7°C or less)						

Table: 1.4

Met-Sub-Division	28-Nov Today	29Nov Tue	30Nov Wed	01Dec Thu	02Dec Fri
1. Andaman & Nicobar Islands	ISOL	FWS	FWS	FWS	FWS
2. Arunachal Pradesh	DRY	ISOL	ISOL	ISOL	ISOL
3. Assam & Meghalaya	DRY	ISOL	ISOL	ISOL	ISOL
4. N. M. M. & T.	DRY	DRY	ISOL	ISOL	ISOL
5. S.H. West Bengal & Sikkim	DRY	DRY	DRY	DRY	DRY
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7. Odisha	DRY	DRY	DRY	DRY	DRY
8. Jharkhand	DRY	DRY	DRY	DRY	DRY
9. Bihar	DRY	DRY	DRY	DRY	DRY
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
11. West Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
12. Uttarakhand	DRY	DRY	DRY	DRY	DRY
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	DRY
14. Punjab	DRY	DRY	DRY	DRY	DRY
15. Himachal Pradesh	DRY	DRY	DRY	DRY	DRY
16. Jammu & Kashmir	DRY	ISOL	ISOL	ISOL	DRY
17. West Rajasthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathawada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	DRY
28. Coastal Andhra Pradesh	DRY	DRY	DRY	ISOL	ISOL
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	ISOL
31. Tamilnadu & Puducherry	DRY	DRY	ISOL	SCT	SCT
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	ISOL
35. Kerala	DRY	DRY	DRY	ISOL	ISOL
36. Lakshadweep	DRY	DRY	DRY	DRY	DRY

% Station Reporting Rainfall			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)
No Rain	Dry		

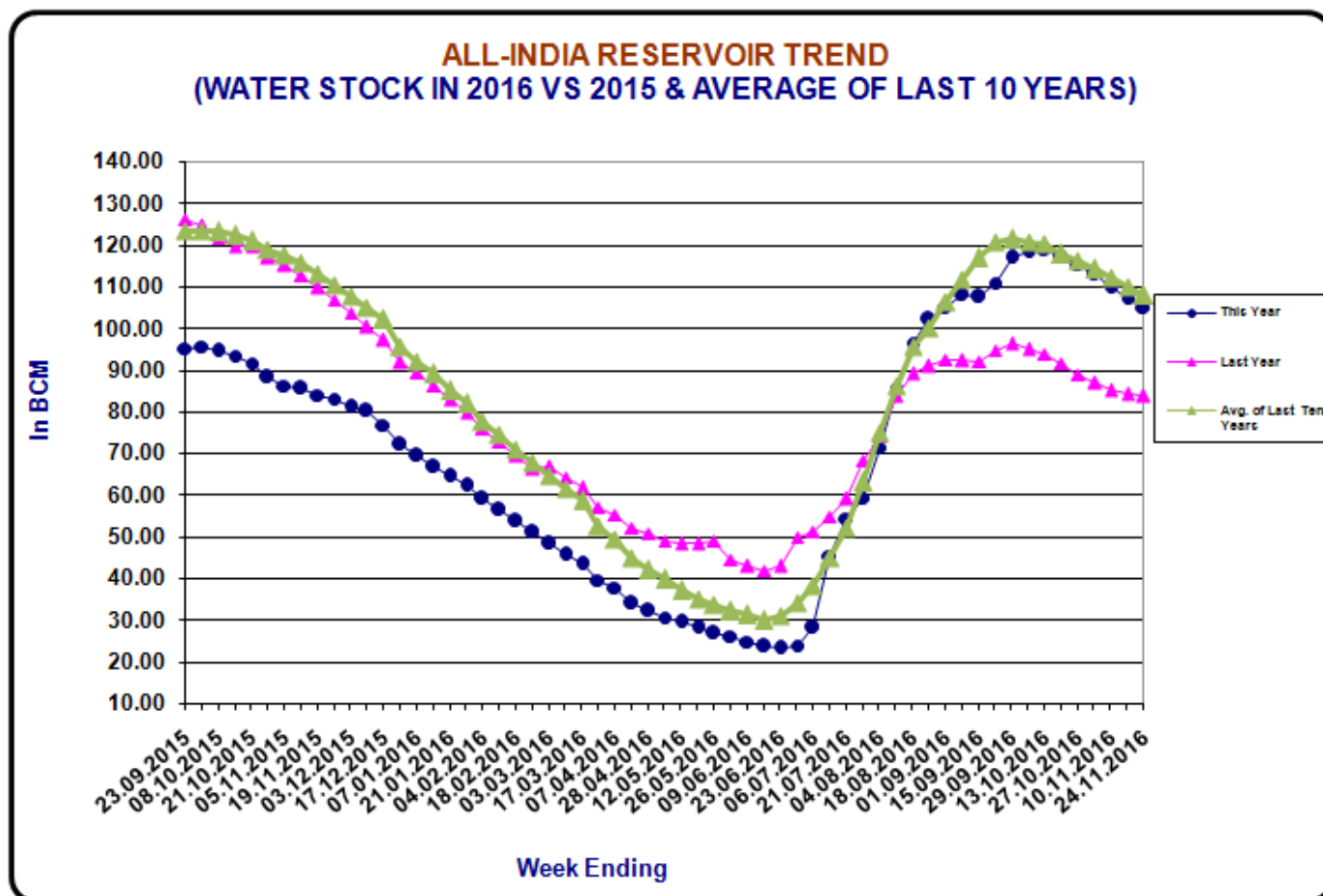
2. Reservoir Status (For the week ending on 24.11.2016)

- **The Central Water Commission** monitors the live storage of **91** important/major reservoirs, having capacity at Full Reservoir Level (FRL) of **157.80** billion cubic meters (BCM), which is about 62% of total reservoir capacity in the country.
- Water stock in 91 major reservoirs **decreased** to 105.21 BCM from the previous week's level of 107.45 BCM. Current storage is higher than the last year's position of 83.86 BCM and lower than the average of last 10 year's storage of 107.98 BCM.

Table – 2.1 : For 91 major reservoirs of the country

Period	Storage as % of FRL	Storage as % of last year	Storage as % of 10 year's average level
Current Week	67	125	97
Last Week	68	127	98
The percentage to live capacity at FRL was 53% on 24/11/2015, 68% on 24/11/2014, 80% on 24/11/2013 and 67% on 24/11/2012.			
<i>Source: CWC</i>			

There were 57 reservoirs having storage more than 80% of normal storage, 17 reservoirs having storage between 50% to 80%, 05 reservoir having storage between 30% to 50%, 12 reservoir having storage upto 30% of Normal Storage and 1 reservoir having no live storage.



Source: Central Water Commission

* The State wise details (reservoir position) are given in the **Annex III**.

3. Fertilizer Position:

Table – 3.1: Requirement, Availability, Sales and Stock position of Major Fertilizers Urea, DAP, MOP, Complex and SSP during Rabi 2016-17 (As on 24.11.2016)

(in '000 Tonnes)

Availability / Sale / Closing Stock	Urea	DAP	MOP	Complex	SSP
Opening Stock as on 01.10.2016	1698	1308	231	1061	212
Requirement for Rabi, 2016-17	15067	5110	1835	5320	3357
Requirement upto November, 2016	3276	1245	408	1116	733
Availability upto 24.11.2016	5695	3027	786	2312	851
Sales upto 24.11.2016	2651	1553	445	951	513
Closing Stock upto 24.11.2016	3043	1474	338	1360	339

Source: Fertilizer Division (DAC) / Deptt. of Fertilizer

4. Pest & Diseases:

- Incidence of Sucking pest & Leaf curl disease on Chilli crop has been reported in **trace to moderate** intensity in Waygaon & Murmadi villages of Mohda Tahsil of Nagpur; Bhiwapur Taluka of Bhandara districts of Maharashtra State. The crop is in flowering to fruiting stage.
- Incidence of Pod borer on Pigeon pea crop has been reported in **low to moderate** intensity in Bhandara district of Maharashtra State. The crop is in flowering to Pod formation stage.
- Incidence of Bacterial leaf blight and False smut on Rice crop has been reported in **low to moderate** intensity in Nagpur and Bhandara districts of Maharashtra State. The crop is in harvesting stage.
- Incidence of Leaf folder, Brown plant hopper, Brown spot and Bacterial leaf blight on Rice crop has been reported in **low to moderate** intensity in Atabira block of Bargarh district of Odisha State covering 40 hectare area. The crop stage is in Panicle initiation to maturity stage.
- No shortage of Chemical / Bio-pesticides was reported from any State / UT.

5. All India Crop Situation

Table-5.1

All India Crop Situation - Rabi (2016-17) as on 25.11.2016									(Area in lakh hectares)
Crop Name	Normal Area	Average Area as on date	Area sown			Absolute Change over (+/-)		% Change over	
			This Year	% of Normal	Last Year	Average as on date	Last Year	Average as on date	Last Year
Wheat	301.74	149.08	127.15	42.1	117.32	-21.9	9.8	-14.7	8.4
Rice	43.07	9.23	6.82	15.8	9.10	-2.4	-2.3	-26.1	-25.1
Jowar	38.26	32.25	24.69	64.5	32.48	-7.6	-7.8	-23.4	-24.0
Maize	15.02	5.18	5.01	33.4	5.63	-0.2	-0.6	-3.3	-11.0
Barley	6.85	4.66	4.39	64.1	3.77	-0.3	0.6	-5.8	16.4
Total Coarse Cereals	60.13	42.62	34.35	57.1	42.37	-8.3	-8.0	-19.4	-18.9
Total Cereals	404.94	200.93	168.32	41.6	168.79	-32.6	-0.5	-16.2	-0.3
Gram	88.37	62.32	66.33	75.1	64.57	4.0	1.8	6.4	2.7
Lentil	14.79	9.75	10.40	70.4	7.24	0.7	3.2	6.7	43.6
Peas	8.37	6.29	7.92	94.7	4.48	1.6	3.4	25.9	77.0
Kulthi(Horse Gram)	2.22	3.28	2.27	102.6	3.09	-1.0	-0.8	-30.7	-26.5
Urad	7.54	2.08	2.57	34.1	2.83	0.5	-0.3	23.3	-9.3
Moong	8.65	0.69	0.94	10.9	1.08	0.3	-0.1	37.1	-12.7
Lathyrus	4.95	2.49	2.58	52.1	2.32	0.1	0.3	3.9	11.4
Others	3.32	2.34	2.07	62.4	2.50	-0.3	-0.4	-11.6	-17.4
Total Pulses	138.19	89.24	95.09	68.8	88.12	5.9	7.0	6.6	7.9
Total Foodgrains	543.13	290.17	263.41	48.5	256.91	-26.8	6.5	-9.2	2.5
Rapeseed & Mustard	63.20	55.54	58.11	91.9	49.32	2.6	8.8	4.6	17.8
Groundnut	8.46	2.01	2.47	29.2	1.80	0.5	0.7	22.6	37.0
Safflower	2.06	1.13	0.53	25.8	0.86	-0.6	-0.3	-53.1	-38.1
Sunflower	4.90	2.50	0.97	19.8	2.16	-1.5	-1.2	-61.1	-55.0
Sesamum	3.01	0.30	0.15	4.9	0.16	-0.2	0.0	-50.8	-8.2
Linseed	3.11	2.01	1.66	53.4	1.53	-0.3	0.1	-17.1	8.5
Others		0.33	0.31	#DIV/0!	0.43	0.0	-0.1	-4.0	-27.9
Total Oilseeds (Nine)	84.74	63.81	64.21	75.8	56.26	0.4	7.9	0.6	14.1
All- Crops	627.87	353.98	327.62	52.2	313.17	-26.4	14.4	-7.4	4.6

Source: Crops & TMOP Divisions, DAC&FW

