#### **Pradeep Agrawal**

pradeep.agrawal@emkayshare.com
+91 22 6612 1340

# **Southwest Monsoon**

## Steady show

The advancement of the Southwest monsoon remained steady as the number of divisions with deficient/scanty rainfall remained at 4 and weighted average rainfall continued to remain at 5.5% over week ended August 22, 2008. The key takeaways of our analysis upto 22nd August are as under:

- The weighted average rainfall across the county remained steady at 5.5% above normal for week ended August 20, 2008
- In the rain dependent areas the weighted average rainfall continued to pick up well as it's now 2.7% above the normal
- The total rainfall till date is now 74.3% of the normal (see table IV) rainfall for the full season compared with 75.4% for the corresponding period last year.
- The sowing (see table V) has been delayed due to delayed advancement of the monsoon. The area under cultivation is down for most of the crops except for rice. For rice, the area under cultivation has gone up by 10% over last year. However, as the monsoon has become near normal since mid-August, a pick up in cultivation is expected from thereon.
- Number of divisions with deficient or scanty rainfall has remained steady at 4 for week ended August 20, 2008.
- The downside risks to the agriculture sector have reduced to minimal except for a threat of floods in certain areas.
- The precipitation graph for next one week is indicating a VERY GOOD rainfall over north and north eastern states while the activity is likely to remain DULL over rest of the country for week ended August 27, 2008.

TABLE - I: Advancement of southwest monsoon

% deviation to normal	02-Jul-08	09-Jul-08	16-Jul-08	23-Jul-08	30-Jul-08	06-Aug-08	13-Aug-08	20-Aug-08
Well Irrigated areas	152.9	119.9	83.8	69.7	49.7	38.3	31.5	35.5
Adequately Rain-fed areas	-12.3	-18.6	-20.6	-21.2	-18.5	-17.0	-12.9	-12.3
Rain Dependent Areas	26.2	8.7	3.0	-4.9	-2.5	-0.7	4.9	2.7
India	29.5	15.7	9.0	2.9	2.4	2.4	5.9	5.5

TABLE - II: Distribution of rainfall

No of divisions	02-Jul-08	09-Jul-08	16-Jul-08	23-Jul-08	30-Jul-08	06-Aug-08	13-Aug-08	20-Aug-08
Excess	18	13	14	9	7	9	8	9
Normal	10	10	8	12	20	20	24	23
Deficient/Scanty	8	13	14	15	9	7	4	4

Source: Indian Meteorological Department, Emkay Research

Emkay Research 22 August 2008 1

TABLE - III: Distribution of rainfall during southwest monsoon till August 20, 2008

			From J	une 1 to		
Division		August 20, 200	8		August 22, 200	7
	Actual (MM)	Normal (MM)	Deviation (%)	Actual (MM)	Normal (MM)	Deviation (%)
Well Irrigated areas	676	499	35.5	402	515	-22.0
East Uttar Pradesh	864	621	39.1	534	640	-16.6
West Uttar Pradesh	678	538	26.0	383	552	-30.6
Haryana, Chandigarh and Delhi	426	324	31.5	248	346	-28.3
Punjab	522	356	46.6	307	367	-16.3
Adequately Rain-fed areas	1,323	1,509	-12.3	1,556	1,539	1.1
Konkan and Goa region	2,392	2,265	5.6	2,453	2,304	6.5
coastal Karnataka	2,275	2,670	-14.8	2,729	2,716	0.5
Kerala	1,255	1,762	-28.8	2,096	1,791	17.0
sub-Himalayan West Bengal and Sikkim	1,574	1,402	12.3	1,455	1,430	1.7
Assam & Meghalaya	1,129	1,410	-19.9	1,168	1,443	-19.1
Nagaland, Manipur, Mizoram and Tripura	654	911	-28.2	858	930	-7.7
Arunachal Pradesh	1,200	1,335	-10.1	1,082	1,365	-20.7
Uttaranchal	952	892	6.7	1,186	918	29.2
Andaman & Nicobar Islands	1,297	1,178	10.1	1,073	1,203	-10.8
Lakshadweep	703	751	-6.4	1,025	764	34.2
Rain Dependent Areas	546	531	2.7	612	546	12.1
Gangetic West Bengal	950	760	25.0	1,312	780	68.2
Orissa	955	805	18.6	995	826	20.5
Jharkhand	850	751	13.2	863	771	11.9
Bihar	896	705	27.1	940	728	29.1
Himachal Pradesh	546	569	-4.0	416	584	-28.8
Jammu & Kashmir	447	372	20.2	437	382	14.4
west Rajasthan	255	191	33.5	161	197	-18.3
east Rajasthan	466	445	4.7	406	461	-11.9
West Madhya Pradesh	544	630	-13.7	668	647	3.2
East Madhya Pradesh	796	784	1.5	539	805	-33.0
Gujarat region	683	688	-0.7	920	701	31.2
Saurashtra and Kutch	325	376	-13.6	682	381	79.0
madhya Maharashtra	423	500	-15.4	637	509	25.1
Marathwada	271	458	-40.8	307	475	-35.4
Vidarbha	589	702	-16.1	787	722	9.0
Chattisgarh	801	856	-6.4	760	883	-13.9
coastal Andhra Pradesh	441	355	24.2	455	367	24.0
Telangana region	613	525	16.8	421	541	-22.2
Rayalaseema	189	210	-10.0	383	218	75.7
north interior Karnataka	231	299	-22.7	408	307	32.9
south interior Karnataka	507	476	6.5	661	486	36.0
Tamil Nadu and Pondicherry	189	163	16.0	194	170	14.1
India	629	596	5.5	638	612	4.3

Excess/Normal/Deficient/Scanty	No of divisions	No of divisions
Excess	8	14
Normal	24	16
Deficient/Scanty	4	6

Source: Indian Meteorological Department, Emkay Research

Emkay Research 22 August 2008 2

TABLE - IV: Rainfall till date as % of full season

	From June 1 to								
Division		August 20, 2008			August 22, 2007				
	Aug 20 2008	Full season	% of FS	Aug 22, 2007	Full season	% of FS			
Well Irrigated areas	676	723.3	93.4	402	723.3	55.6			
East Uttar Pradesh	864	914.0	94.5	534	914.0	58.4			
West Uttar Pradesh	678	773.0	87.7	383	773.0	49.5			
Haryana, Chandigarh and Delhi	426	470.0	90.6	248	470.0	52.8			
Punjab	522	502.0	104.0	307	502.0	61.2			
Adequately Rain-fed areas	1,323	1,959.3	67.5	1,556	1,959.3	79.4			
Konkan and Goa region	2,392	2,802.0	85.4	2,453	2,802.0	87.5			
coastal Karnataka	2,275	3,174.0	71.7	2,729	3,174.0	86.0			
Kerala	1,255	2,143.0	58.6	2,096	2,143.0	97.8			
sub-Himalayan West Bengal and Sikkim	1,574	1,955.0	80.5	1,455	1,955.0	74.4			
Assam & Meghalaya	1,129	1,885.0	59.9	1,168	1,885.0	62.0			
Nagaland, Manipur, Mizoram and Tripura	654	1,241.0	52.7	858	1,241.0	69.1			
Arunachal Pradesh	1,200	1,835.0	65.4	1,082	1,835.0	59.0			
Uttaranchal	952	1,223.0	77.8	1,186	1,223.0	97.0			
Andaman & Nicobar Islands	1,297	1,755.0	73.9	1,073	1,755.0	61.1			
Lakshadweep	703	985.0	71.4	1,025	985.0	104.1			
Rain Dependent Areas	546	768.5	71.0	612	768.5	79.7			
Gangetic West Bengal	950	1,136.0	83.6	1,312	1,136.0	115.5			
Orissa	955	1,165.0	82.0	995	1,165.0	85.4			
Jharkhand	850	1,093.0	77.8	863	1,093.0	79.0			
Bihar	896	1,039.0	86.2	940	1,039.0	90.5			
Himachal Pradesh	546	774.0	70.5	416	774.0	53.7			
Jammu & Kashmir	447	514.0	87.0	437	514.0	85.0			
west Rajasthan	255	263.0	97.0	161	263.0	61.2			
east Rajasthan	466	624.0	74.7	406	624.0	65.1			
West Madhya Pradesh	544	904.0	60.2	668	904.0	73.9			
East Madhya Pradesh	796	1,097.0	72.6	539	1,097.0	49.1			
Gujarat region	683	934.0	73.1	920	934.0	98.5			
Saurashtra and Kutch	325	486.0	66.9	682	486.0	140.3			
madhya Maharashtra	423	700.0	60.4	637	700.0	91.0			
Marathwada	271	704.0	38.5	307	704.0	43.6			
Vidarbha	589	976.0	60.3	787	976.0	80.6			
Chattisgarh	801	1,206.0	66.4	760	1,206.0	63.0			
coastal Andhra Pradesh	441	575.0	76.7	455	575.0	79.1			
Telangana region	613	767.0	79.9	421	767.0	54.9			
Rayalaseema	189	381.0	49.6	383	381.0	100.5			
north interior Karnataka	231	491.0	47.0	408	491.0	83.1			
south interior Karnataka	507	659.0	76.9	661	659.0	100.3			
Tamil Nadu and Pondicherry	189	316.0	59.8	194	316.0	61.4			
India .	629	846.2	74.3	638	846.2	75.4			

Source: Indian Meteorological Department, Emkay Research

# Full season is normal rainfall from June 1 to September 30

TABLE - V: Area under cultivation (million hectares)

Crop	Monsoon 2008-09	Monsoon 2007-08	% yoy change	Normal for full season	Current as % of normal
Rice	28.21	25.64	10.0	39.12	72.1
Coarse cereals	17.11	19.41	-11.8	22.65	75.5
Bajra	6.74	7.61	-11.4	9.18	73.4
Maize	6.31	6.98	-9.6	6.37	99.1
Jowar	2.64	3.11	-15.1	4.21	62.7
Pulses	8.98	10.57	-15.0	10.87	82.6
Arhar	2.95	3.38	-12.7	3.46	85.3
Urad	1.86	2.32	-19.8	2.53	73.5
Moong	2.19	2.93	-25.3	2.62	83.7
Oilseeds	16.39	16.45	-0.4	15.90	103.1
Groundnut	4.81	5.00	-3.8	5.36	89.8
Soybean	9.28	8.60	7.9	7.25	127.9
Cash crops					
Cotton	8.59	9.07	-5.3	8.37	102.6
Sugarcane	4.41	5.30	-16.8	4.15	106.3
Jute	0.74	0.83	-10.8	0.82	89.8

Source: Ministry of agriculture, newspaper articles, Emkay Research

Normal is average of full season between 2001-06

TABLE -VI: State wise crop pattern

Area - Million Hectares (FY06)	Rice	Wheat	Coarse Cereals	Jowar	Bajra	Maize	Major Pulses	Gram	Tur (Arhar)	Lentil (Masur)
Andhra Pradesh	4.0		1.4	0.4	0.1	0.8	1.8	0.4	0.5	
Assam	2.4	0.1								0.0
Bihar	3.3	2.0	0.7			0.7	0.6	0.1	0.0	0.2
Chhattisgarh	3.8		0.4				1.0	0.2		
Gujarat	0.7	0.9	1.6	0.1	0.9	0.5	8.0	0.2	0.3	
Haryana	1.1	2.3	0.7	0.1	0.6		0.2	0.1		
Himachal Pradesh		0.4	0.3			0.3				
Jammu & Kashmir		0.3	0.4		0.0	0.3				
Jharkhand		0.1	0.2			0.2	0.3		0.1	
Karnataka	1.5	0.3	3.9	1.5	0.4	0.9	2.0	0.4	0.6	
Kerala	0.3									
Madhya Pradesh	1.7	3.7	2.0	0.6	0.2	0.9	4.3	2.6	0.3	0.5
Maharashtra	1.5	0.9	6.9	4.7	1.4	0.5	3.4	1.0	1.1	
Meghalaya										
Orissa	4.5		0.2	0.0			8.0	0.0	0.1	
Punjab	2.6	3.5	0.2			0.2				
Rajasthan		2.1	6.8	0.6	5.0	1.0	3.4	1.1		0.0
Tamil Nadu	2.1		0.7	0.3	0.1	0.2	0.5		0.0	
Uttaranchal		0.4	0.3							
Uttar Pradesh	5.6	9.2	2.2	0.2	0.9	0.8	2.8	0.7	0.4	0.6
West Bengal	5.8	0.4	0.1			0.1	0.2	0.0		0.1
Others	1.7	0.1	0.3	0.0	0.0	0.4	0.4	0.0	0.2	0.1
Total Area under each crop	42.3	26.5	29.1	8.7	9.6	7.6	22.4	6.9	3.6	1.5

Area - Million Hectares	Nine		Rapeseed &				Jute &	Cumor	Total cultivable
(FY06)	Oilseeds	Groundnut	Mustard	Soyabean	Sunflower	Cotton	Mesta	Sugar - cane	area
Andhra Pradesh	2.9	1.9		0.1	0.4	1.0	0.1	0.2	11.4
Assam	0.2		0.2				0.1	0.0	2.8
Bihar	0.1		0.1		0.0		0.2	0.1	6.9
Chhattisgarh									5.1
Gujarat	3.0	2.0	0.3			1.9		0.2	9.1
Haryana	0.7		0.7		0.0	0.6		0.1	5.7
Himachal Pradesh									0.7
Jammu & Kashmir									0.6
Jharkhand									0.6
Karnataka	2.9	1.0		0.1	1.4	0.4		0.2	11.1
Kerala									0.3
Madhya Pradesh	5.7	0.2	0.8	4.3		0.6		0.1	18.0
Maharashtra	3.7	0.4		2.4	0.4	2.9	0.0	0.5	19.8
Meghalaya							0.1		0.1
Orissa	0.3	0.1					0.0	0.0	5.8
Punjab	0.1		0.1			0.6		0.1	7.0
Rajasthan	5.3	0.3	3.7	0.7		0.5			18.1
Tamil Nadu	0.7	0.6			0.0	0.1		0.3	4.5
Uttaranchal								0.1	0.8
Uttar Pradesh	1.1	0.1	0.8		0.0			2.2	22.9
West Bengal	0.6		0.4				0.6	0.0	7.7
Others	0.5	0.1	0.2	0.1	0.0	0.1	-0.1	0.0	3.0
Total Area under each crop	27.9	6.7	7.3	7.7	2.3	8.7	0.9	4.2	223.8

Source: Ministry of agriculture, Emkay Research

22 August 2008

5

### Probability of good crop



Probability of normal crop



Probability of bad crop



### TABLE -VII: Crop wise update

Rice	Area under cultivation (mn hectares)	Rainfall	Dependency
Andhra Pradesh	4.0	Normal	Rain dependent
Assam	2.4	Deficient	Adequately rain fed
Bihar	3.3	Excess	Rain dependent
Chhattisgarh	3.8	Normal	Rain dependent
Orissa	4.5	Excess	Rain dependent
Punjab	2.6	Excess	Well Irrigated areas
Uttar Pradesh	5.6	Excess	Well Irrigated areas
West Bengal	5.8	Excess	Rain dependent
Others	10.4		
Total	42.3		

Wheat	Area under cultivation (mn hectares)	Rainfall	Dependency
Bihar	2.0	Excess	Rain dependent
Haryana	2.3	Excess	Well Irrigated areas
Madhya Pradesh	3.7	Excess	Rain dependent
Punjab	3.5	Excess	Well Irrigated areas
Rajasthan	2.1	Excess	Rain dependent
Uttar Pradesh	9.2	Excess	Well Irrigated areas
Others	3.7		
Total	26.5		

Coarse Cereals	Area under cultivation (mn hectares)	Rainfall	Dependency
Andhra Pradesh	1.4	Normal	Rain dependent
Karnataka	3.9	Normal	Rain dependent
Maharashtra	6.9	Normal	Rain dependent
Rajasthan	6.8	Excess	Rain dependent
Uttar Pradesh	2.2	Excess	Well Irrigated areas
Others	8.0		
Total	29.1		

Jowar	Area under cultivation (mn hectares)	Rainfall	Dependency
Andhra Pradesh	0.4	Normal	Rain dependent
Karnataka	1.5	Normal	Rain dependent
Madhya Pradesh	0.6	Excess	Rain dependent
Maharashtra	4.7	Normal	Rain dependent
Rajasthan	0.6	Excess	Rain dependent
Others	0.8		
Total	8.7		

Bajra	Area under cultivation (mn hectares)	Rainfall	Dependency
Gujarat	0.9	Normal	Rain dependent
Haryana	0.6	Excess	Well Irrigated areas
Maharashtra	1.4	Normal	Rain dependent
Rajasthan	5.0	Excess	Rain dependent
Uttar Pradesh	0.9	Excess	Well Irrigated areas
Others	0.8		
Total	9.6		

**Emkay** Research 22 August 2008 6

	Monsoon			Update
	Maize	Area under cultivation (mn hectares)	Rainfall	Dependency
Probability of good crop	Andhra Pradesh	0.8	Normal	Rain dependent
geometric geometric	Bihar	0.7	Excess	Rain dependent
	Gujarat	0.5	Normal	Rain dependent
Probability of normal crop	Karnataka	0.9	Normal	Rain dependent
	Madhya Pradesh	0.9	Normal	Rain dependent
Drobability of had aren	Maharashtra	0.5	Normal	Rain dependent
Probability of bad crop	Uttar Pradesh	0.8	Excess	Well Irrigated areas
	Others	2.6		
	Total	7.6		
	Pulses total	Area under cultivation	Rainfall	Dependency
		(mn hectares)		
	Andhra Pradesh Karnataka	1.8 2.0	Normal Normal	Rain dependent
				Rain dependent
	Madhya Pradesh	4.3	Excess	Rain dependent
	Maharashtra Rajasthan	3.4 3.4	Normal Excess	Rain dependent
	Uttar Pradesh	2.8	Excess	Rain dependent Well Irrigated areas
	Others	4.7	LXCess	vveii irrigated areas
	Total	22.4		
	Total	22.7		
	Gram	Area under cultivation (mn hectares)	Rainfall	Dependency
	Andhra Pradesh	0.4	Normal	Rain dependent
	Karnataka	0.4	Normal	Rain dependent
	Madhya Pradesh	2.6	Excess	Rain dependent
	Maharashtra	1.0	Normal	Rain dependent
	Rajasthan	1.1	Excess	Rain dependent
	Uttar Pradesh	0.7	Excess	Well Irrigated areas
	Others	0.7		
	Total	6.9		
	Tur (Arhar)	Area under cultivation (mn hectares)	Rainfall	Dependency
	Andhra Pradesh	0.5	Normal	Rain dependent
	Gujarat	0.3	Normal	Rain dependent
	Karnataka	0.6	Normal	Rain dependent
	Madhya Pradesh	0.3	Excess	Rain dependent
	Uttar Pradesh	0.4	Excess	Well Irrigated areas
	Others	1.5		
	Total	3.6		
		Anna con de 10° 10°		
	Lentil (Masur)	Area under cultivation (mn hectares)	Rainfall	Dependency
	Bihar	0.2	Excess	Rain dependent
	Madhya Pradesh	0.5	Excess	Rain dependent
	Uttar Pradesh	0.6	Excess	Well Irrigated areas
	Others	0.2		

Emkay Research 22 August 2008 7

Total

1.5

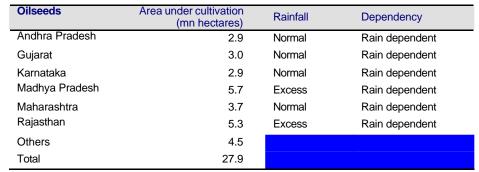
Probability of good crop



Probability of normal crop



Probability of bad crop



Groundnut	Area under cultivation (mn hectares)	Rainfall	Dependency
Andhra Pradesh	1.9	Normal	Rain dependent
Gujarat	2.0	Normal	Rain dependent
Karnataka	1.0	Normal	Rain dependent
Maharashtra	0.4	Normal	Rain dependent
Tamil Nadu	0.6	Normal	Rain dependent
Others	0.8		
Total	6.7		

Rapeseed & Mustard	Area under cultivation (mn hectares)	Rainfall	Dependency
Madhya Pradesh	0.8	Excess	Rain dependent
Rajasthan	3.7	Excess	Rain dependent
Uttar Pradesh	0.8	Excess	Well Irrigated areas
Others	2.0		
Total	7.3		

Soyabean	Area under cultivation (mn hectares)	Rainfall	Dependency
Madhya Pradesh	4.3	Excess	Rain dependent
Maharashtra	2.4	Normal	Rain dependent
Rajasthan	0.7	Excess	Rain dependent
Others	0.4		
Total	7.7		

Sunflower	Area under cultivation (mn hectares)	Rainfall	Dependency
Karnataka	1.4	Normal	Rain dependent
Maharashtra	0.4	Normal	Rain dependent
Others	0.6		
Total	2.3		

Cotton	Area under cultivation (mn hectares)	Rainfall	Dependency
Andhra Pradesh	1.0	Normal	Rain dependent
Gujarat	1.9	Normal	Rain dependent
Haryana	0.6	Excess	Well Irrigated areas
Madhya Pradesh	0.6	Excess	Rain dependent
Maharashtra	2.9	Normal	Rain dependent
Punjab	0.6	Excess	Well Irrigated areas
Rajasthan	0.5	Excess	Rain dependent
Others	0.6		
Total	8.7		

Emkay Research 22 August 2008 8

Probability of good crop

Probability of normal crop

Probability of bad crop



Jute & Mesta	Area under cultivation (mn hectares)	Rainfall	Dependency
Andhra Pradesh	0.1	Normal	Rain dependent
Assam	0.1	Deficient	Adequately rain fed
Bihar	0.2	Excess	Rain dependent
Meghalaya	0.1	Deficient	Adequately rain fed
West Bengal	0.6	Excess	Rain dependent
Others	0.0		
Total	0.9		

Sugarcane	Area under cultivation (mn hectares)	Rainfall	Dependency
Maharashtra	0.5	Normal	Rain dependent
Tamil Nadu	0.3	Normal	Rain dependent
Uttar Pradesh	2.2	Excess	Well Irrigated areas
Others	1.2		
Total	4.2		

DISCLAIMER: This document is not for public distribution and has been furnished to you solely for your information and may not be reproduced or redistributed to any other person. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries, including the United States. Persons into whose possession this document may come are required to inform themsel ves of, and to observe, such restrictions. This material is for the personal information of the authorized recipient, and we are not soliciting any action based upon it. This report is not to be construed as an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. No person associated with Emkay Global Financial Services Ltd. is obligated to call or initiate contact with you for the purposes of elaborating or following up on the information contained in this document. The material is based upon information that we consider reliable, but we do not represent that it is accurate or complete, and it should not be relied upon. Neither Emkay Global Financial Services Ltd., nor any person connected with it, accepts any liability arising from the use of this document. The recipient of this material should rely on their own investigations and take their own professional advice. Opinions expressed are our current opinions as of the date appearing on this material only. While we endeavor to update on a reasonable basis the information discussed in this material, there may be regulatory, compliance, or other reasons that prevent us from doing so. Prospective investors and others are cautioned that any forward-looking statements are not predictions and may be subject to change without notice. We and our affiliates, officers, directors, and employees world wide, including persons involved in the preparation or issuance of this material may; (a) from time to time, have long or short positions in, and buy or sell the securities thereof,

#### Emkay Global Financial Services Ltd.

Paragon Center, H -13 -16, 1st Floor, Pandurang Budhkar Marg, Worli, Mumbai – 400 013. Tel no. 6612 1212. Fax: 6624 2410



22 August 2008

9