

## **KHARIF-2018 SURVEY OF GROUNDNUT CROP**

### **Executive Summary**

Groundnut is a major oilseed crop of India and also an important agricultural export commodity. In India, though groundnut is cultivated in one or more seasons (kharif, rabi and summer) nearly 80% of the annual acreage and production comes from kharif crop (June-October). With an objective of assessment of groundnut production from kharif-2018 crop, an extensive survey was undertaken in five major groundnut growing states of India during the peak harvesting period. Eleven teams moved across the major groundnut growing regions and interviewed 3,070 groundnut farmers in 42 districts across the five states. For the information of the stakeholders in the export trade, a brief presentation of the estimates was made at the Annual Trade Meet of the IOPEPC on 28 October 2018 at Mahabalipuram, Chennai.

Kharif-2018 all India groundnut acreage was 38,90,000 hectares. Five states, Gujarat (14,67,600 ha; 37.7%), Andhra Pradesh (6,60,000 ha; 17%), Rajasthan (5,49,052 ha; 14.1%), Karnataka (3,82,940 ha; 9.8%) Maharashtra (1,95,594 ha 5.0%) jointly accounted for 83.7% of the national acreage. At the national level, there was a decrease in acreage by 6.3% with respect to kharif-2017. The maximum decrease was observed for Gujarat (10.0%) while it was negligible for Andhra Pradesh (1.0%). The observed increase in acreage in Karnataka was nominal (1.3%).

A majority of groundnut farmers (51 to 67%) owned farm land smaller than two hectares. At national level, the peak period of sowing was 8 June to 5 July. The largest extent of sowing was done during 8 June to 14 June in both Rajasthan (28%) and Maharashtra (42%); and during 28 June to 5 July in Gujarat (31.2%); Andhra Pradesh (25.2%) and Karnataka (22.9%). Most farmers procured seed from the local vendors while some used their home-grown seed. The vendors quite often sell groundnut seeds that are a mixture of a few varieties under the guise of any popular authentic variety or assign a new name to their seed stocks. As most farmers relied on local seed vendors they were not able to specify the true identity (variety) of the seed they had used. Application of pesticides, for managing diseases and insects, was commonly practiced among the farmers of Gujarat and Rajasthan (98-99%). The proportion of farmers using pesticide, however, was relatively low in Maharashtra (88%), Karnataka (82%) and Andhra Pradesh (77%).

Among the surveyed states, the highest yield of 2051 kg/ha was estimated for Rajasthan, followed by 1421 kg/ha for Gujarat, 1361 kg/ha for Maharashtra, 883 kg/ha for Andhra Pradesh and 750 kg/ha for Karnataka. The national average yield was estimated at 1336 kg/ha. The combined production of these five states was estimated at 43,47,298 MT which accounted for 83.6% of the estimated national production. With 20,84,780 MT, Gujarat contributed 40.1% of the national production followed by Rajasthan (11,26,206 MT; 21.6%), Andhra Pradesh (5,82,972; 11.2%), Karnataka (2,87,178 MT; 5.5%) and Maharashtra (2,66,162; 5.12%) while the joint contribution of the remaining states was estimated at 8,48,698 MT i.e. 16.4%. Thus the all-India kharif 2018 production was estimated at 51,95,990 MT.

In kharif 2018, the rainfall was rather irregular and deficient in major groundnut growing regions. Due to a combined effect of shrinkage in acreage by 6.3% and irregular and deficient rainfall, the kharif 2018 production (51.95 lakh MT) was estimated to be lower than that of kharif-2017 season (62.21 lakh MT).

## **INTRODUCTION**

Groundnut (*Arachis hypogaea* L.), is a leguminous crop plant which is widely cultivated in the tropics and subtropics between 40°N and 40°S latitudes. It is valued for its high-oil edible seeds and as such it is the fourth most important source of edible oil and third most important source of vegetable protein in the world. Groundnut is not only an important oilseed crop of India but also an important agricultural export commodity.

With annual all-season coverage of about 70 lakh hectares, globally India ranks first in groundnut acreage and with an output of approx. 80-85 lakh MT (in shell groundnuts), second in production. Although in various states of India groundnut is cultivated in one or more (kharif, rabi and summer) seasons, nearly 80% of acreage and production comes from kharif crop (June-October).

For estimating groundnut production from kharif-2018 crop season, a well-planned and extensive crop survey was undertaken in major groundnut growing states of India with a view to providing estimates as early as last week of October 2018.

## **IMPORTANCE AND OBJECTIVES OF THE CROP SURVEY**

The bulk arrival of kharif groundnut crop in the marketing yards begins usually in the third week of October and continues up to the second week of November. Being by and large a rain dependent crop, the production of kharif groundnut in various regions of India varies considerably from year to year.

The second advance estimate, the earliest realistic crop estimates are announced by Government of India in January/February, i.e. three-four months after the bulk harvest of the kharif crops. If the estimates for kharif-2018 groundnut crop are made available close on the heels of the harvesting season (first fortnight of November), it would be very helpful in making right decisions about procurement, processing and export.

Therefore, with a view to fulfilling the crucial need of the stakeholders, a survey was undertaken in five major groundnut growing states of India viz. Rajasthan, Gujarat, Maharashtra, Karnataka and Andhra Pradesh. A brief presentation of the estimates was made at the Annual Trade Meet of the IOPEPC on 28 October 2018 at Mahabalipuram, Chennai. The details of the methodology adopted for survey and the estimates are described in this report.

## **METHODOLOGY**

### **District wise and state wise groundnut acreage**

The data on weekly progress of state-wise coverage of kharif 2018 groundnut crop was obtained from the website of the Directorate of Economics and Statistics, Government of India. Information on district wise final acreage was obtained from the state departments of agriculture concerned either through correspondence or by downloading the information from the website of the respective state department.

### **Selection of states and districts**

The states were first arranged in decreasing order of their groundnut acreages and then only those states were identified as would jointly account for at least for 80% of the national acreage. Similarly, within a state, the districts were first arranged

in decreasing order of their acreages and then as many districts as would jointly account at least 75% of the acreage of the respective states were selected.

### **Determination of number of farmers to be interviewed**

In each state, efforts were made to interview as many farmers as would be equal to 0.1 per cent of the figures for the kharif 2018 groundnut acreage of that state (e.g. for a state having an acreage of 78,000 hectares, at least 78 farmers were to be interviewed).

### **Composition of the survey teams**

Each survey team comprised two well-trained agri-experts and one member for assistance. The teams were required to collect data through on site interview of farmers at their fields or villages. A pre-designed structured questionnaire (Annexure 1) was used for recording the data. Selection of the representative villages/farmers was done on a random basis.

### **GPS tagging of movement of survey teams**

All survey teams were equipped with GPS (Global Positioning System). Survey teams tagged the interview points. The GPS tagged points superimposed on the respective state/district maps get a clear picture of the route followed by the interview teams.

### **Rainfall data**

The month wise (June, July, August and September) data for rainfall along with its departure from the normal was downloaded from the website of IMD (Indian Meteorology Department). This data pertained to various defined meteorological sub-divisions of Indian states and UT.

### **Scheduling of survey**

The survey was undertaken during the peak harvesting period of kharif groundnut crop i.e. during the last week of September to the third week of October so as to have maximum number of farmers interviewed in their respective fields when the crop had been just harvested, being harvested or was about to be harvested.

### **Estimating average yields (kg/ha) and production (metric tonne) of the districts and the states:**

The figures for the average groundnut (in-shell) yield of each district were estimated as the mathematical average of the figures of the expected/realized yield reported by the farmers of the respective districts. The yield was expressed as 'kg/ha'. For each district, the production of groundnut was estimated by multiplying the estimated average yield of the district with the acreage (in hectares) of that district. The production was expressed as 'MT' (metric tonnes).

The anticipated production of non-surveyed districts was calculated by multiplying the figures of the collective acreages of non-surveyed districts with the weighted average yield of the surveyed districts in the states concerned. The total anticipated production of a state was calculated by summing up the figures for anticipated production in the surveyed and non-surveyed districts.

## Estimating average yield of non-surveyed states

The average yield of the non-surveyed states was assumed to be equal to that of the weighted average yield of the surveyed states. The production from each of the non-surveyed state was calculated by using the figures of the weighted average yield of the states and the acreage of state concerned.

The all India production was calculated by summing up the anticipated production of the surveyed states and the non-surveyed states.

## RESULTS

### Kharif-2018 groundnut crop acreage

According to the Directorate of Economics and Statistics, GOI, all India kharif 2018 the groundnut acreage was 38,90,000 hectares. The states which jointly accounted for 83.7% of the national acreage were Andhra Pradesh, Maharashtra, Rajasthan, Gujarat and Karnataka. The state wise breakup of acreages in these five states is given in table 1.

**Table 1. Kharif-2018 groundnut acreage (states arranged in decreasing order of acreage)**

	State	Acreage (ha)	Share (%)
1	Gujarat	1467600	37.7
2	Andhra Pradesh	660000	17.0
3	Rajasthan	549052	14.1
4	Karnataka	382940	9.8
5	Maharashtra	195594	5.0
6	Others	634814	16.3
7	All India	3890000	

A total of 42 districts across the five identified states were covered by survey. In all eleven teams were deployed to interview as many as 3,070 groundnut farmers. State wise number of districts covered and the farmers interviewed along with the dates of start and completion of survey are shown in table 2.

**Table 2: State wise particulars of kharif 2018 groundnut crop survey**

State	Acreage (ha)	Number			Period	
		Districts	Teams	Farmers	From	To
Rajasthan	549052	9	2	450	27 Sep	16 Oct
Gujarat	1467600	10	4	1250	27 Sep	16 Oct
Maharashtra	195594	7	1	210	28 Sep	15 Oct
Karnataka	382940	11	2	410	01 Oct	17 Oct
Andhra Pradesh	660000	5	2	750	30 Sep	17 Oct
<b>Total</b>	<b>3255186</b>	<b>42</b>	<b>11</b>	<b>3070</b>	<b>27 Sep</b>	<b>17 Oct</b>

The district boundary maps of the five states showing the surveyed districts (colour shaded) and also the satellite map showing GPS points visited by the survey teams are shown in figures 1a to 1e.

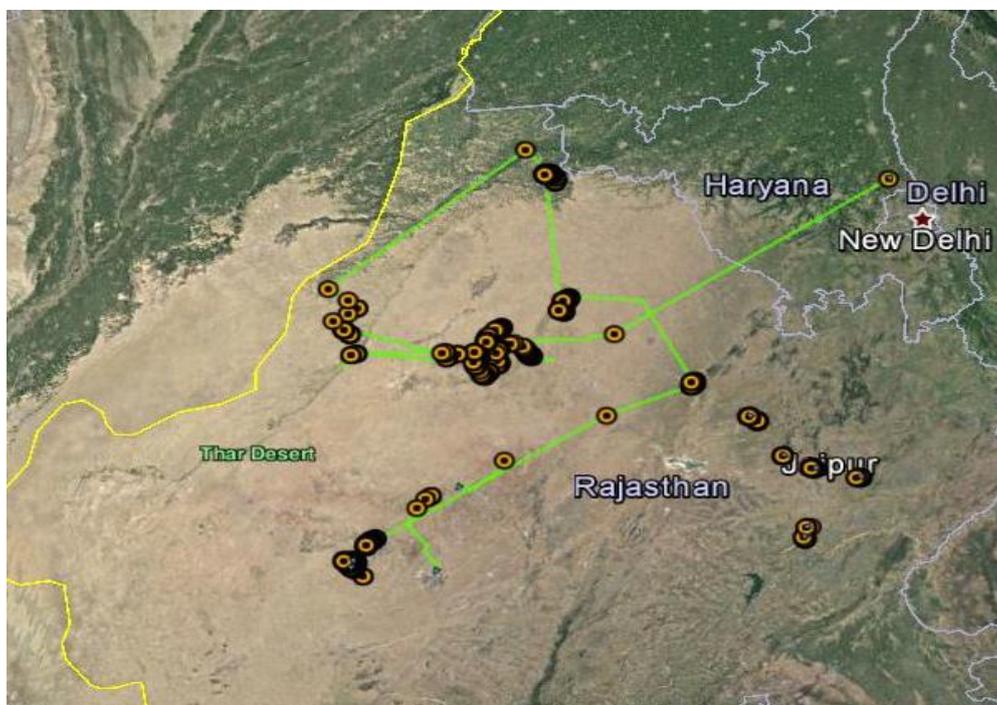
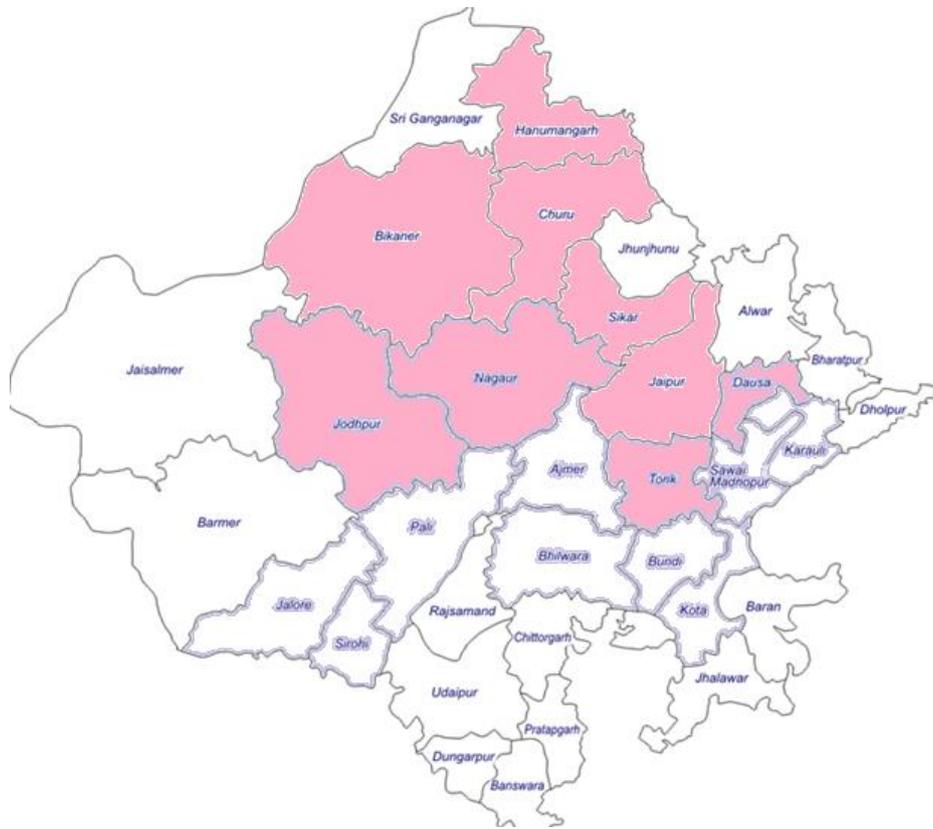


Figure 1a: Surveyed districts (colour shaded) and GPS points in Rajasthan

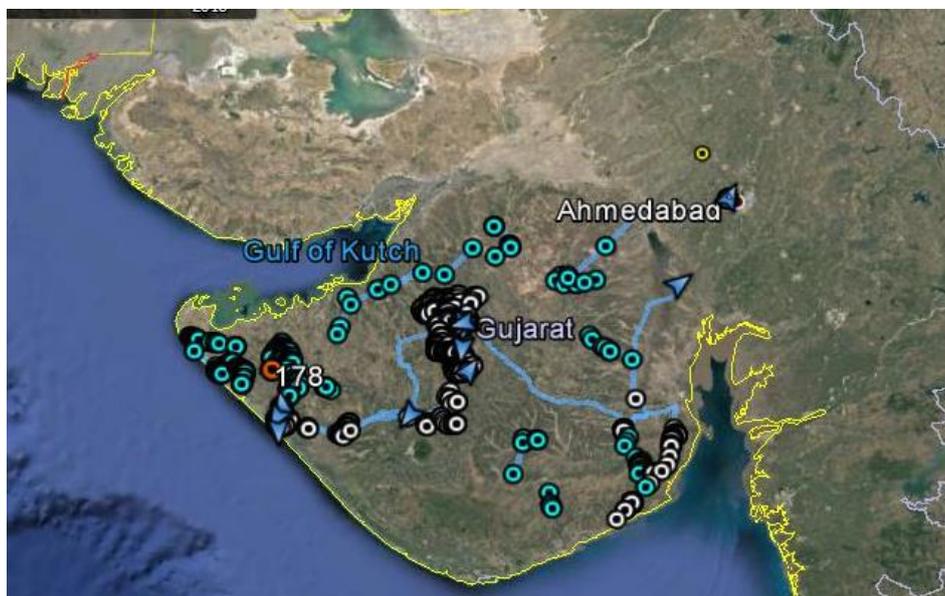
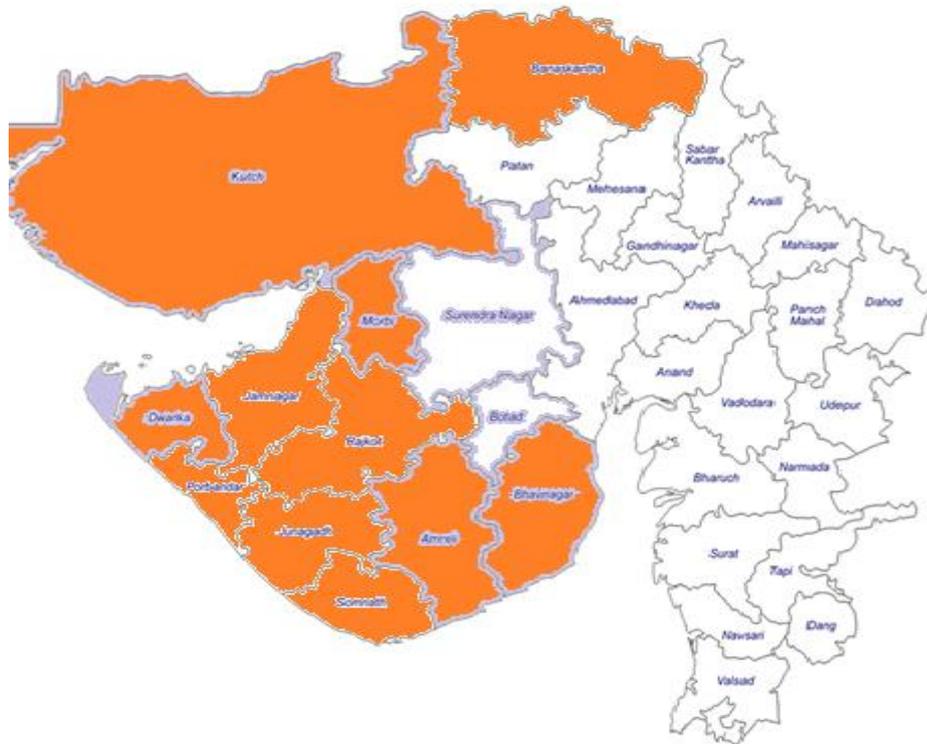
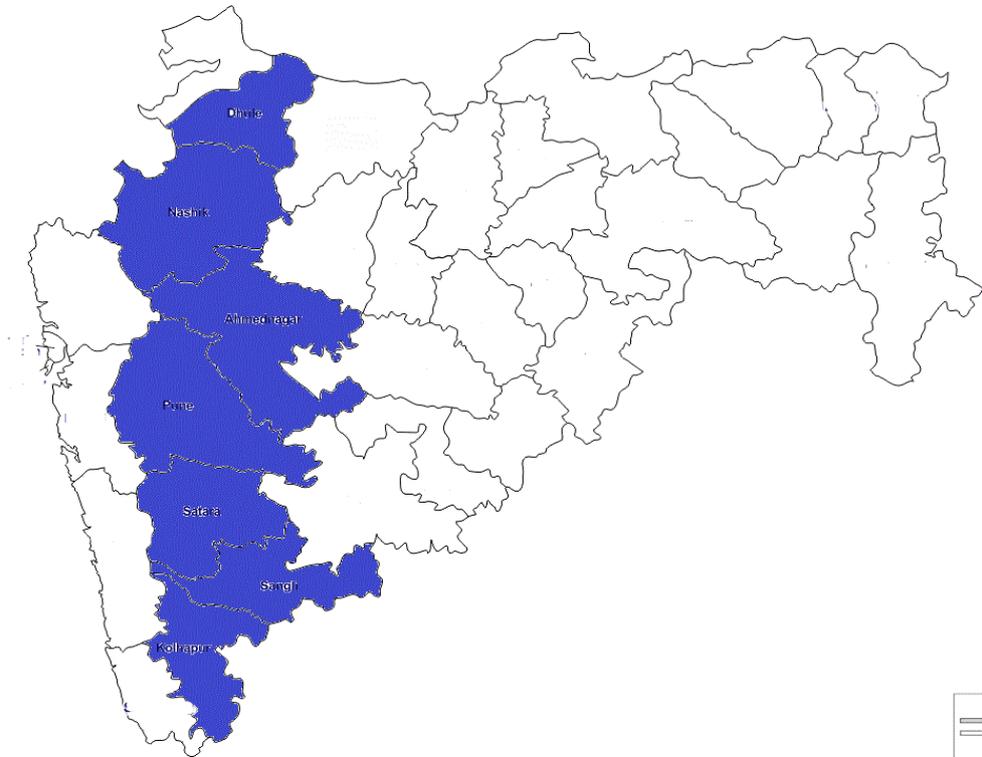
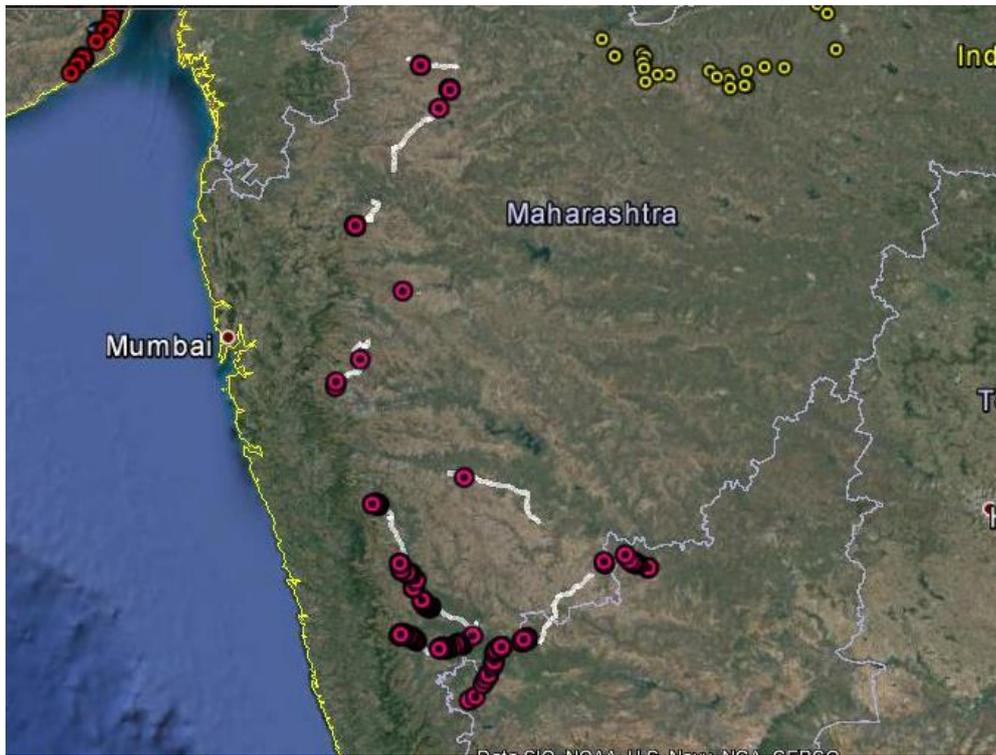
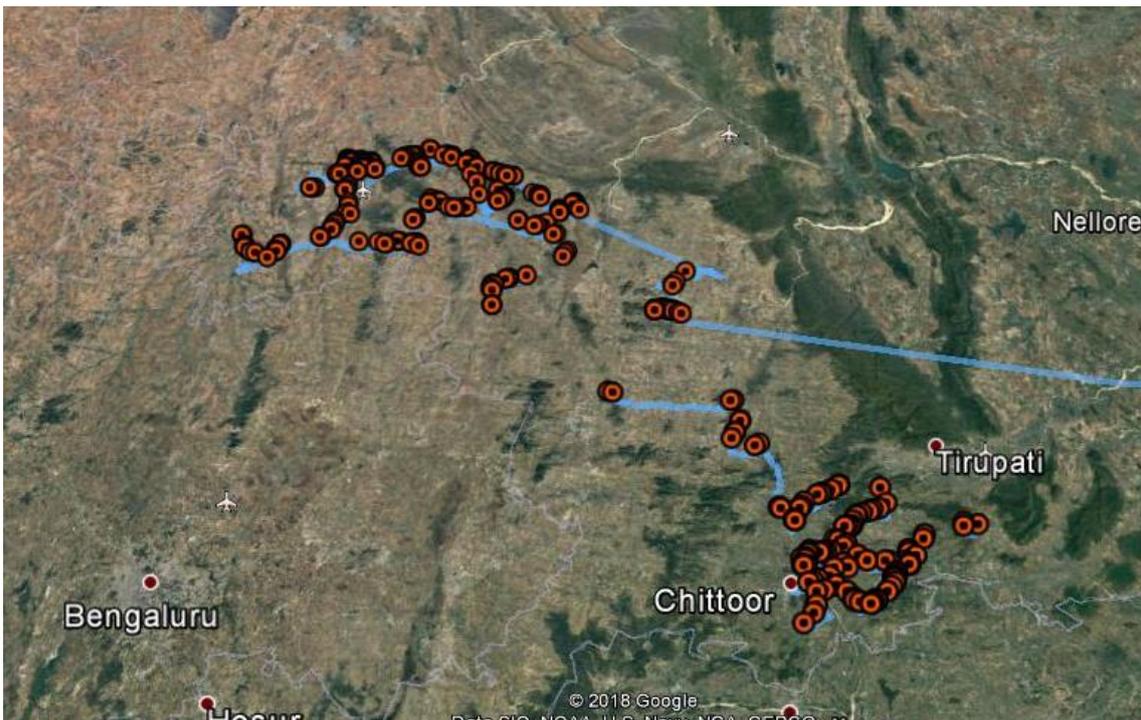
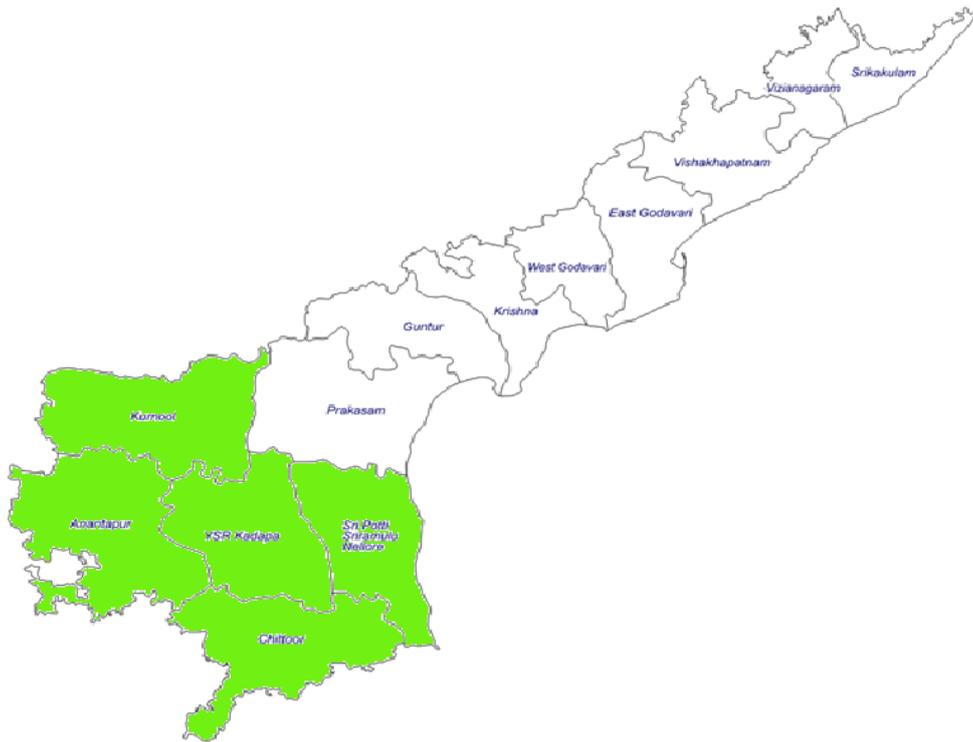


Figure 1b: Surveyed districts (colour shaded) and GPS points in Gujarat



**Figure 1c: Surveyed districts (colour shaded) and GPS points in**





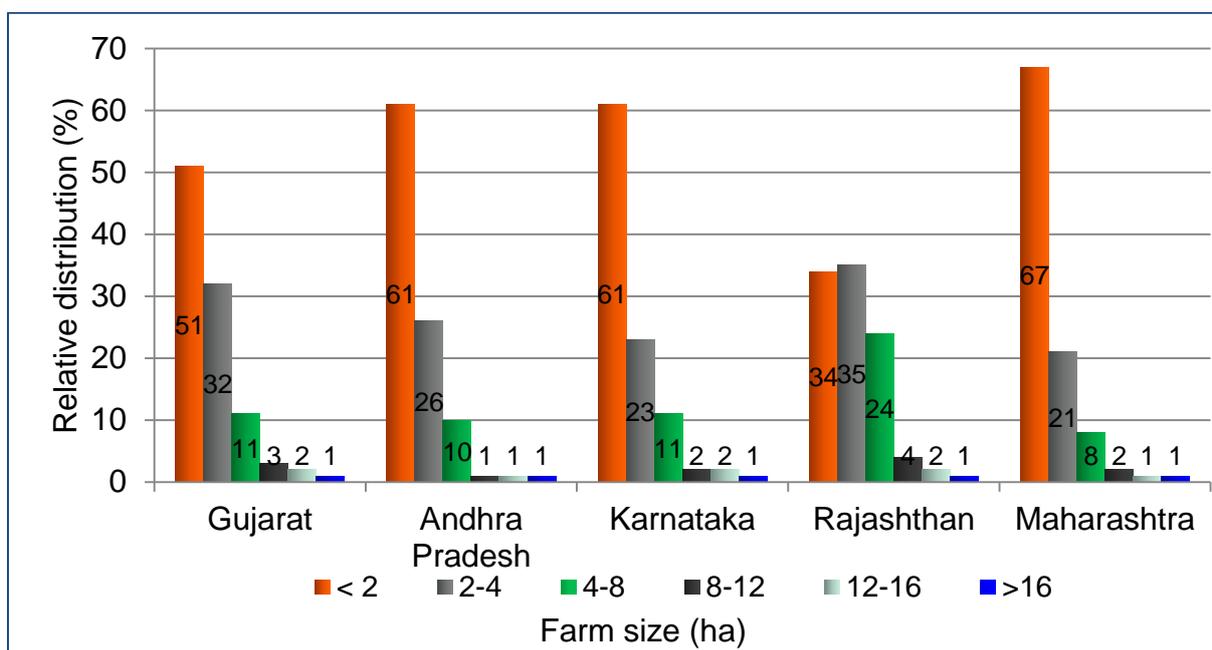
**Figure 1e: Surveyed districts (colour shaded) and GPS points in Andhra Pradesh**

### Relative abundance of different sizes of land holdings:

On the basis of size of the farm holdings owned, the groundnut farmers were grouped into six categories viz., 2 ha or less, <2 to 4 ha, <4 to 8 ha, < 8 to 12 ha, <12-16 ha and < 16 ha. The relative abundance of farmers belonging to each of these categories is shown in figure 2.

In all five states, the largest extent (half to two-thirds, 51% to 67%) of farmers belonged to 2 ha or less category. One-fifth (21%) to one-third (to 35%) to <2 to 4 ha category, a small proportion (8-24%) to <4 to 8 ha category while all those belonging to <8 ha categories formed the smallest (3 to 7%) group even on a combined basis.

Thus it was concluded that in India groundnut crop is cultivated mostly by the farmers having farm land smaller than two hectares.



**Figure 2: Farm size distribution in the surveyed states (figures have been rounded to the nearest whole numbers)**

### Period of sowing:

In the surveyed states, on a combined basis the sowing operations began in the first week of June and were concluded in the second week of August. The weeks during which sowing of more than 10% of the final acreage of the state was completed are indicated in table 3.

The peak period of sowing lasted for about one month in all the states except for Karnataka where it was protracted for over 40 days. However, the bulk of sowing began earliest in Rajasthan and Maharashtra i.e. in the first week of June. In Gujarat the bulk of the sowing began in the third week of June while in Andhra Pradesh and Karnataka in the first week of July. Maximum extent of sowing was done during 8 June to 14 June in both Rajasthan (28%) and Maharashtra (42%); and during 28 June to 5 July in Gujarat (31.2%), Andhra Pradesh (25.2%) and Karnataka (22.9%). Thus at national level, the period of 8 June to 5 July appeared to be the period of maximum coverage.

**Table 3: Peak period of sowing of groundnut in the surveyed states**

Period	Gujarat	Rajasthan	Maharashtra	Andhra Pradesh	Karnataka
1 Jun – 7 Jun	#	14.0	20.7	#	#
8 Jun – 14 Jun	#	28.0	42.0	#	#
15 Jun – 20 Jun	13.1	23.0	11.4	#	#
21 Jun – 27 Jun	12.1	18.5	11.4	#	#
28 Jun – 5 Jul	31.2	#	#	25.2	22.9
6 Jul – 12 Jul	18.3	#	#	14.2	11.1
13 Jul – 19 Jul	#	#	#	10.2	<10
20 Jul – 26 Jul	#	#	#	15.2	<10
27 Jul – 9 Aug	#	#	#	#	17.7
Total coverage in peak period	74.7	83.5	85.5	64.8	51.7

The sign '#' values less than 10.

### Scenario of groundnut crop varieties:

A vast majority of farmers used either their home-grown seed or procured the same from the local vendors. The vendors sell the seeds which are quite often a mixture of varieties. This seed material is sold under the guise of any popular authentic variety or any other assigned name. As a majority of farmers relied on local seed vendors they were not able to ascertain the true identity of the seed material used by them for raising their crops. However, on the basis of information furnished by the farmers, the state wise list of varieties sown is described below.

In Gujarat, the list of varieties included Akshay, Amrut, Apple, Avani 20, Bold, Desi, Dharnidhar, G-10, 11, 13, 17, 20, 22, 29, 30, 31, G-33, 37, 38, 39, 41, 47, G-555, G-99, Gavabeej, Gujarat II, Handeji, Israeli, J2, 20, 29, JV bold, Khedut, Kranti 93, Mandav 37, Prerna, Rohini, Super Bombay, Swastika 99, Swati, Sweta, T-33, TGS 26 and TG 41. The varieties GG 20 and GG 22 were the most favourite ones.

In Andhra Pradesh, the varieties used were Dharni, JL, K, K-6, Natu, Nati, Kadiri 2, 5, 6, Nagana, TAG-24 and Narayani. The variety among all above K and K6 were the most popular ones.

Ajaati, Badami, DTBTH, GAFA6, Ganagkaveri, GL, GL24, GI-6, GTBT, GPBD 4, Jowari, JL2, K6, KF6, M25, Shiggou, trupti and Kopargaon-1 are the varieties used by the farmers of Karnataka. The variety GPBD 4 appeared to be the most popular one.

In Rajasthan, the list of varieties included 20HA, Akshay, Algora, Archana, Ardgi, Awani 20, M-13, Fara10, 20, G10, 20, G10 (Dharti), Gajrat, Galkot, GG13, GG 20, Girnar, Kadav, Lodha, Shankar, Mangal kalash, Matra, G21 and N-13.

Varieties G10, G 22, G 15, MH-1, JL 24, JL 22, JL-286, Unnati, Warna, Vikram, Korad, Kopergaon1 and 2, Phule, Vyas and TLG were used by the farmers of Maharashtra.

### Use of pesticides

For managing diseases and insect pests, application of pesticides was widely practiced by the farmers in all the five states.

In Gujarat and Rajasthan, nearly all the farmers (98 to 99%) applied pesticides for their crop husbandry. The extent of farmers using pesticide although quite high in Maharashtra (88%), Karnataka (82%) and AP (77%) yet was not as high as in Gujarat and Rajasthan.

#### **Change in acreage: kharif-2018 vis-à-vis Kharif 2017:**

At the national level, with respect to Kharif-2017, in Kharif 2018 there was a decrease in acreage by 6.3 %.

The all-India kharif 2018 acreage was 38,90,000 hectares. Rajasthan, Gujarat, Maharashtra, Karnataka and Andhra Pradesh jointly accounted for 32,55,186 hectares i.e. 83.7% of national acreage. The kharif 2018 crop acreages of the surveyed states, their shares in the national acreage and also the change in acreage with respect to kharif 2017 are given in table 4.

**Table 4: Change in groundnut acreage from kharif-2017 to kharif-2018**

STATE	Kharif 2017		Kharif 2018		
	Acreage (ha)	Share (%)	Acreage (ha)	Share (%)	Change (%)
Rajasthan	590700	14.2	549052	14.1	-7.1
Gujarat	1625600	39.1	1467600	37.7	-10.0
Maharashtra	213800	5.1	195594	5.0	-8.5
Karnataka	378000	9.1	382940	9.8	1.3
Andhra Pradesh	666000	16.0	660000	16.9	-1.0
Sub-total	3474100	83.7	3255186	83.7	-6.3
Others	678400	16.3	634814	16.3	-6.4
All India	4152500	100	3890000	100	-6.3

Source: Directorate of Economics and Statistics, Govt. of India

Compared to kharif 2017, there was a decrease in acreage in all the states covered under survey except Karnataka. The maximum decrease was observed in Gujarat (-10.0%) while it was negligible in Andhra Pradesh (1.0%). The increase in Karnataka was only nominal (1.3%). On all-India basis, however, there was a significant decrease by 6.3%.

On the basis of district wise acreages in the five states, 42 districts were identified for survey in each state. The names of the districts and their respective share (%) in the state acreage are given in tables 5a to 5e.

#### **Estimated production**

The data generated on yield by the survey and the data on acreage collected from the state/central government agencies were used for estimating production of groundnut in each of the districts surveyed and accordingly the production figures for each of the five states were estimated. The shares of the estimated production of each district in the total estimated production of the respective state are also indicated in tables 5a to 5b.

## Rajasthan

In nine districts of Rajasthan, the highest yield (2456 kg/ha) was estimated for Bikaner and the lowest (813 kg/ha) for Dausa. The highest production was estimated for Bikaner which accounted for the largest acreage too as well as 38% of total production of Rajasthan. The total production of in shell groundnut for Rajasthan was estimated at 1126206 MT with an average yield of 2051 kg/ha (table 5a).

**Table 5a: Estimates of production of kharif-2018 groundnut (in shell) in Rajasthan**

District	Acreage (ha)	Share (%)	Farmers (no.)	Yield (kg/ha)	Production (MT)	Share (%)
Bikaner	173422	31.6	175	2456	425984	37.8
Jodhpur	125000	22.8	125	1808	226000	20.1
Churu	45800	8.3	45	2384	109224	9.7
Jaipur	31538	5.7	30	1442	45483	4.0
Hanumangarh	20160	3.7	20	1925	38800	3.4
Sikar	19600	3.6	20	2469	48396	4.3
Nagaur	14629	2.7	15	1421	20792	1.8
Tonk	11150	2	10	2159	24075	2.1
Dausa	8923	1.6	10	813	7257	0.6
Subtotal	450222	82.0	450	-	946012	84.0
Others	98830	18.0	-	-	180194	16.0
Total	<b>549052</b>	<b>100</b>	<b>450</b>	<b>2051</b>	<b>1126206</b>	<b>100</b>

## Gujarat

As shown in table 5b, in Gujarat in all ten districts were surveyed. The highest yield was estimated for Jamnagar (1,641 kg/ha) and the lowest for Dwarka (1,007 kg/ha). The highest production was estimated for Rajkot which accounted for the second largest acreage in the state. The total production for Gujarat was estimated at 20,84,780 MT with an average yield of 1,421 kg/ha (table 5b).

## Maharashtra

In seven districts of Maharashtra, the highest yield (2518 kg/ha) was estimated in Dhule while the lowest (839 kg/ha) was in Kolhapur. The highest production was estimated for Sangli which was followed by Kolhapur. The total production in Maharashtra was estimated at 266162 MT with an average yield of 1361 kg/ha (table 5c)

## Karnataka

In Karnataka, in all eleven districts were covered (table 5d). The highest yield (2267 kg/ha) was estimated for Haveri and the lowest (255 kg/ha) for Tumakuru. The highest production was estimated for Haveri which was followed by Dharwad. The total production was estimated at 2,87,178 MT with an average yield of 750 kg/ha (table 5d).

**Table 5b: Estimates of production of kharif-2018 groundnut (in shell) in Gujarat**

District	Acreage (ha)	Share (%)	Farmers (no.)	Yield (kg/ha)	Production (MT)	Share (%)
Rajkot	238400	16.2	250	1628	388210	18.6
Junagadh	230800	15.7	240	1338	308730	14.8
Dwarka	175800	12	100	1007	176949	8.5
Jamnagar	130400	8.9	120	1641	214049	10.3
Banaskantha	126300	8.6	130	1419	179258	8.6
Amreli	107200	7.3	150	1239	132826	6.4
Gir somnath	97100	6.6	130	1444	140230	6.7
Bhavnagar	95900	6.5	90	1098	105303	5.1
Kutch	16300	1.1	40	1366	22267	1.1
Subtotal	1218200	83	1250	-	1667825	80
Others	249400	17	-	-	416955	20
<b>Total</b>	<b>1468000</b>	<b>100</b>	<b>1250</b>	<b>1421</b>	<b>2084780</b>	<b>100</b>

**Table 5c: Estimates of production of kharif-2018 groundnut (in shell) in Maharashtra**

District	Acreage (ha)	Share (%)	Farmers (no.)	Yield (kg/ha)	Production (MT)	Share (%)
Kolhapur	43763	22.4	55	839	36696	13.8
Satara	36648	18.7	40	926	33931	12.7
Nashik	26905	13.8	30	1305	35114	13.2
Sangli	26739	13.7	30	1901	50842	19.1
Pune	13831	7.1	20	1700	23513	8.8
Dhule	8685	4.4	20	2518	21873	8.2
Ahmednagar	7625	3.9	15	949	7234	2.7
Subtotal	164196	83.9	210	-	209203	78.6
Others	31398	16.1	-	-	56959	21.4
<b>Total</b>	<b>195594</b>	<b>100</b>	<b>210</b>	<b>1361</b>	<b>266162</b>	<b>100</b>

**Andhra Pradesh**

In five districts of Andhra Pradesh, the highest yield (1442 kg/ha) was estimated for Chittoor and the lowest (724 kg/ha) for Anantapur. The highest production was estimated for Anantapur which also accounted for the largest acreage (56%). The total production of in-shell groundnut was estimated at 5,82,972 MT with an average yield of 883 kg/ha (table 5e)

**Table 5d: Estimates of production of kharif-2018 groundnut (in shell) in Karnataka**

District	Acreage (ha)	Share (%)	Farmers (no.)	Yield (kg/ha)	Production (MT)	Share (%)
Chtradurga	96432	25.2	110.0	309	29835	10.4
Bellary	43461	11.3	52.0	600	26071	9.1
Tumakuru	40717	10.6	50.0	255	10376	3.6
Gagag	38762	10.1	40.0	876	33971	11.8
Dharwad	29828	7.8	30.0	1475	44010	15.3
Belgaum	23494	6.1	30.0	1048	24633	8.6
Haveri	19619	5.1	20.0	2267	44483	15.5
Davangere	17261	4.5	20.0	1199	20698	7.2
Chikaballapur	16185	4.2	20.0	266	4309	1.5
Koppal	13345	3.5	15.0	653	8715	3.0
Vivaypura	6874	1.8	23.0	700	4813	1.7
Subtotal	345978	90.3	410	-	251913	87.7
Others	36962	9.7	-	-	35265	12.3
<b>Total</b>	<b>382940</b>	<b>100</b>	<b>410</b>	<b>750</b>	<b>287178</b>	<b>100</b>

**Table 5e: Estimates of production of kharif-2018 groundnut (in shell) in Andhra Pradesh**

District	Acreage (ha)	Share (%)	Farmers (no.)	Yield (kg/ha)	Production (MT)	Share (%)
Anantapur	447363	56.4	500	724	324247	55.6
Chittoor	101226	24.6	120	1442	145958	25.1
Kurnool	89766	14	100	927	83240	14.3
YSR Kadapa	7257	1.3	20	1036	7518	1.3
Nellore	6369	1.7	10	1594	10149	1.7
Subtotal	651981	98.8	-	-	571113	98.0
Others	7787		-	-	11859	2.0
<b>Total</b>	<b>659768</b>	<b>100</b>	<b>750</b>	<b>883</b>	<b>582972</b>	<b>100</b>

### All India Production

The figures for estimated state wise production and estimated all India production are given in table 6. With an estimated production of 20,84,780 MT, Gujarat had a share of 40.1% in the national production and this was followed by Rajasthan (11,26,206 MT) with a share of 21.6%, Andhra Pradesh (5,82,970) with a share of 11.2%, Karnataka (2,87,178 MT) with a share of 5.5% and Maharashtra (2,66,162 MT) with a share of 5.1%. The five states collectively accounted for 83.6% of the national production. Among the five states, the highest yield of 2,051 kg/ha was estimated for Rajasthan which was followed by 1,421 kg/ha for Gujarat, 1,361

kg/ha for Maharashtra, 883 kg/ha for Andhra Pradesh and 750 kg/ha for Karnataka. The national average yield was estimated at 1,336 kg/ha (Table 6)

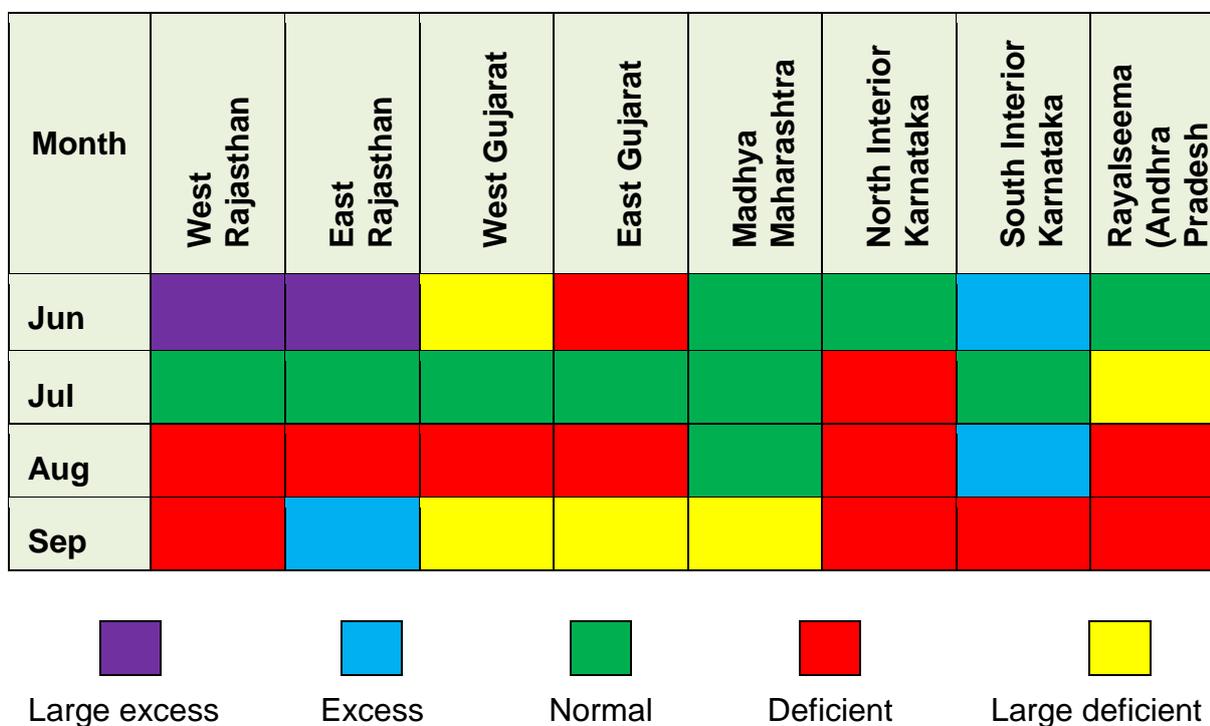
**Table 6: All India production of in-shell groundnut**

District	Acreage (ha)	Share (%)	Farmers (no.)	Production (MT)	Share (%)
Andhra Pradesh	660000	17.0	750	582972	11.22
Gujarat	1467600	37.7	1280	2084780	40.12
Karnataka	382940	9.8	410	287178	5.53
Maharashtra	195594	5.0	210	266162	5.12
Rajasthan	549052	14.1	450	1126206	21.67
Subtotal	3255186	83.7	-	4347298	83.67
Others	634814	16.3	-	848692	16.33
Total	3890000	100	3070	5195990	100

### Seasonal rainfall

The Meteorological Department of India has divided the states into two or more meteorological sub-divisions. Accordingly from the point of view of survey the important subdivisions are West Rajasthan, East Rajasthan, West Gujarat, East Gujarat, Madhya Maharashtra, North interior Karnataka, South Interior Karnataka and Rayalseema.

The graphical representation of rainfall pattern in the meteorological sub divisions of the major groundnut growing regions is given in figure 3.



**Figure 3: Graphical representation or rainfall pattern in the meteorological subdivisions of the major groundnut growing states of India**

With respect to long time average, the descriptors used by the IMD to categorise the extent of rainfall in the subdivisions are: Normal- minus 19 per cent to plus 19 per cent; Deficient- minus 20 per cent to minus 59 per cent; Large deficient- minus 60 per cent or more; Excess- plus 20 per cent to plus 59 percent; Large excess- plus 60% or more; and No rains- 0 per cent.

Thus in year 2018, the onset of monsoon was highly deficient (delayed) in West Gujarat while it was deficient in East Gujarat- this state accounted for 37.7% of the national acreage. In Rayalseema, drought like situation prevailed in July which was followed by deficient rains in the rest of the season. In West Rajasthan rains were deficient in the later stages of the crop.

Due to a combined effect of shrinkage in acreage by 6.3% and irregular and deficient rainfall, the kharif 2018 the estimated groundnut production (51.95 lakh MT) was lower than 62.21 lakh MT of kharif-2017 season.

#### **Disclaimer**

SGS is responsible for the process of gathering, processing and analysing the information supplied by the farmers in India from structured face-to-face interviews. All information contained herein reflects the opinions and forecasts of the interviewed farmers at the time of survey.

Screener Id:  /  /  /  /  / 

### Groundnut Crop Survey - Kharif - 2018/19

Respondent Name: ..... GPS Location : .....

Telephone No:..... GPS Location : .....

Village : ..... Interview Date: .....

Block / Tehsil : ..... Team No : .....

District: ..... Team Leader : .....

State: ..... Team Member: .....

Good Morning, my name is..... and I work for SGS India. At this moment we are studying Groundnut cultivation practices being adopted in the Country. Can I have your attention for some questions?

#### SECTION A (IDENTIFICATION/ SCREENING)

##### A.1.

- I. Are you a farmer or responsible for farming in this region?
- a. Yes (go to next section)
- b. No (Stop the interview)
- II. Have you grown Groundnut in last 2/3 years in your fields?
- a. Yes (go to next section)
- b. No (Stop the interview)

#### SECTION B (FARM MANAGEMENT)

B.1. Total Land Size of the Farmer Area ..... Unit ..... (Conversion 1 Acre= ..... Local Unit)

B.2. Type of Land

a. Owned Land  unit

b. Rented Land  unit

If the Land is on Rental basis then from how much years .....

##### B.3. Cropping System

Single Cropping

Mixed Cropping

inter Cropping

<input type="text"/>
<input type="text"/>
<input type="text"/>

% of farmer's total land (must sum up to 100%)

#### SECTION C (HISTORICAL CROP SURFACE)

C. What is the Groundnut acreage this year and previous year on the field?

Crop	Type Of Groundnut Seed (variety)	Area (Unit.....)		Production (Unit.....)	
		2017-18	2018-19	2017-18	2018-19
Groundnut					

#### SECTION D (SHOWING, HARVESTING)

D.1. When have you sowed, harvested? (For the 2017/18 crop the farmer shall estimate harvesting)

Crop	Action	D.1.1. Crop 2017-18 (Week/ Month)	D.1.2. Crop 2018-19 (Week/ Month)
Groundnut	A. Sowing Time		
Groundnut	B. Variety Sown		
Groundnut	C. Expected Harvesting Time		

Screener Id:

	/			/			
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**D.2.** Do you consider the sowing time to be, for current crop(2018/19)?

Early	Timely	Late	If not Timely, Reason for not the same

**D.2b** What is the Gap between Rows/Band in groundnut crops :=  in ft

**D.2C** What is the Gap between two consecutive plants :=  in ft

**D.3.** What made you choose this variety? (Interviewer to probe for specific points.)

.....

.....

### SECTION E (USE OF TECHNOLOGY)

**E.1.** Are you satisfied with the seed performance this year as compared to last year?

Good  Average  Bad

Action	% of Bought/Own seed for Crop 2017-18		% of Bought/Own seed for Crop 2018-19	
	Brought	Owned	Brought	Owned
Seed Utilization				

Note: For each crop, bought + own should totalize 100%

**E.2.** How do you decide what seed / fertilizers/chemicals to use: (Please tick more than one option, if answered)

- a. Self  d. Price/ Cost of inputs
- b. Neighbour/ Fellow Farmers  e. Others (Specify) .....
- c. Seller/ Retailer

**E.3.** Irrigation/ Pesticides

E.3. Action	E.3.A. Crop 2017-18	E.3.B. Crop 2018-19
A. Type / Source of Irrigation(Flood / Other)		
B. No. of Irrigation		
C. No. of times you sprayed Fungicides and/or Pesticides		
D. No. of times you sprayed Herbicides		
E. Others (Specify)		

### SECTION F (CROP CONDITION)

**F.1.** Please specify the following:

Parameters	Year		If Bad, Reason 2017-18	If Bad, Reason 2018-19
	2017-18	2018-19		
Crop Condition				
Weather Condition				

Please Select Bad, Normal, Good.

Parameters	Year		Major Disease/ Pest 2017-18	Major Disease/ Pest 2018-19
	2017-18	2018-19		
Disease Attack				
Pest Attack				

Please Select Low, Normal, Sever.

Screener Id:

	/			/			
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**SECTION G (PRICE INFORMATION)**

**G.1. Selling Price**

Selling Price Rs. Per Quintal 2017-18	Selling Price Rs. Per Quintal 2018-19 (Expected)

**G.2. Produce Utilization**

Percentage of the produce Used for Consumption  % / Value  
 Percentage of the produce Sell in the market  % / Value

**G.3.** Have you stored the produce last year? Yes  No

**G.4.** If Yes, What percentage of Produce was stored?  % / Value

**G.5.** For how many months you had stored the produce?  Months

**G.6.** Are you willing to store the produce this year 2018-19? Yes  No

**G.7.** If Yes, What percentage of produce are you willing to store?  %

**G.8.** A- Which are most competitive crops of Groundnut in your region? Give name of at-least two crops in order.....  
 B- If farmer switch from Groundnut to another crop, what is the reason for that?.....  
 C- What are the major problems you face in Groundnut cultivation in your region?.....  
 D- What facility / benefit / Help you expect from government and/or any other government bodies to continue Groundnut cultivation on your field?.....

**G.9. Where you sell your produce?**

Village Grain Market   
 District Grain Market   
 At Farm

**SECTION H (REMARKS)**

**H** To be answered by interviewer

**H.1.** Quality of information from the farmer (encircle the rank you feel most appropriate)

Least Satisfied Most Satisfied

0 1 2 3 4 5 6 7 8 9 10

**H.2.** General Remarks / Opinion of Agronomist about Groundnut cultivation, farmers' intention.

**H.3.**

Details about Pods and seed of Groundnut

Specs	2017/18	2018/19	Remarks
Average No. of Pods per plant			
Average Size of Groundnut (Consider seed size of 2017/18 as Normal) (Small / Same / Bold)	Normal		