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A STUDY OF RAINFALL IN MYSORE
STATE DURING 1947-49

The greater part of Tamilnad experienced "draught" conditions during the years 1947 and 1949 on account of the failure of the northeast monsoon rains in these years. The present note aims at analysing the rainfall in the Mysore State in the years 1947-49 with a view to finding to what extent the failure of the northeast monsoon rains contributed to draught conditions in the Mysore State. Unlike in Tamilnad where rains during September to December are the most important for agricultural operations, the main agricultural season for the Mysore State as a whole, is from June to November which covers both the southwest and the northeast monsoon rains. But there are slight variations in agricultural sub-seasons in different parts of the State.* The mean annual rainfall of the State is 37.36 inches and 83 per cent of the annual rainfall occurs during June to November. A statistical study of the rainfall in Mysore State has been made by Anantapadmanabha Rao.¹

2. The State can be divided into two main divisions—Malnad region and Maidan region. The Malnad region comprises the districts of Hassan, Shimoga and Chikmagalur and the Maidan region, the districts of Bangalore, Kolar, Tumkur, Mysore, Mandya and Chitaldrug. Malnad gets 84 per cent of June to November rainfall in June to September while Maidan gets 60 per cent of June to November rainfall between September and November. A map of Mysore showing the two months in which heaviest and second heaviest normal rainfall occur in each district is given in Fig. 1.

3. The rainfall in each district (arithmetic mean of rainfall amounts recorded at several raingauge stations in the district) for each of the months June to November has been taken from the tables *Daily rainfall recorded in Mysore* published by Mysore Government. Percentage departure of the

*Information about agricultural seasons and rains that are important for agricultural operations in Mysore State was obtained by the courtesy of the Director of Agriculture in Mysore. •

rainfall from the normal rainfall of the district has been worked out for each month and for the season as a whole and these figures for all the three years have been incorporated in the table appended. A few broad features of the rainfall during each year as brought out in the table are dealt with in the following paragraph. In describing the rainfall the following terms have been used—

Large excess	+51% or more
Moderate excess	+26 to +50%
Slight excess	+11 to +25%

Normal	+10 to -10%
Slight drought	-11 to -25%
Moderate drought	-26 to -50%
Severe drought	-51% or less

4. 1947—November was the month of very scanty rains throughout the State, the defect being 60 to 90 per cent of the normal. June-July rains are said to be important for "hain crops" in Chikmagalur and Shimoga. But the drought during June was almost

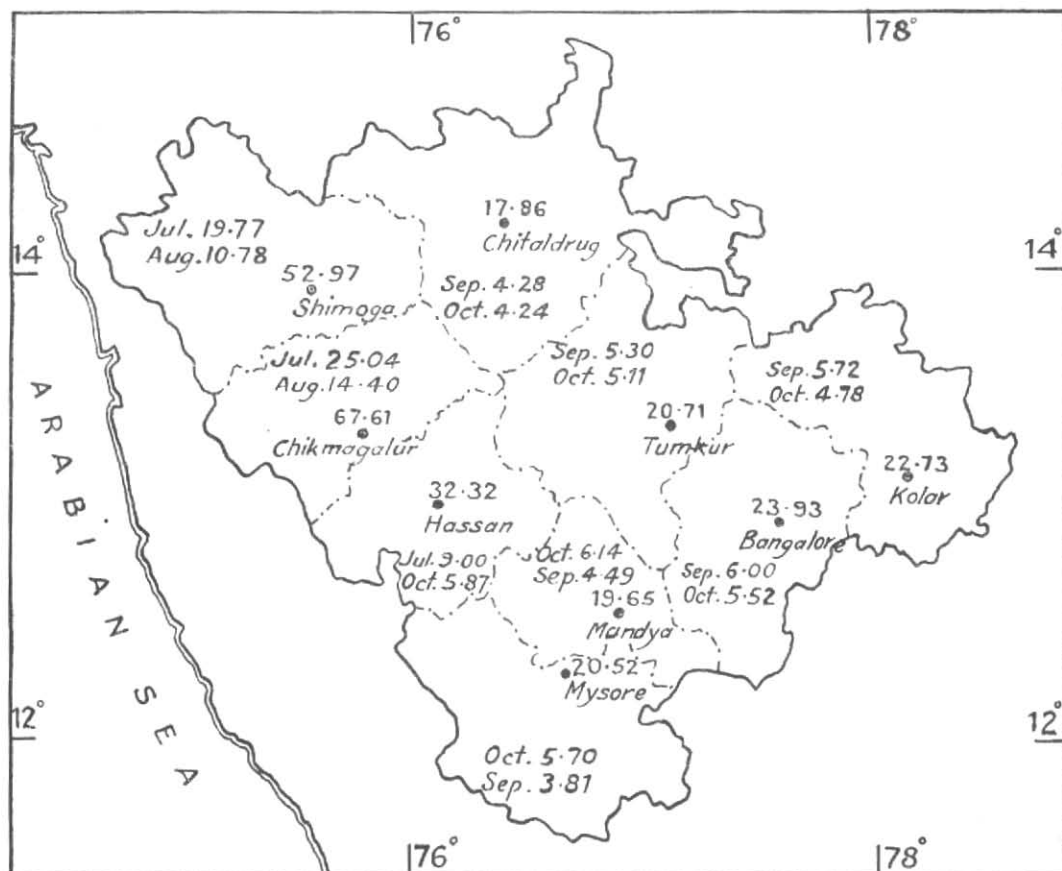


Fig. 1. Map of Mysore State showing June-November average rainfall in inches and months of heaviest and next heaviest normal rainfall in each district

severe in all the three Malnad districts. During October, two of the three Malnad districts got less than 40 per cent of the normal rainfall.

The seasonal rainfall was 2 per cent in excess in Malnad and 3 per cent in excess in Maidan.

1948—In this year, the drought was severe in Maidan districts in September—the defect ranging from 65 to 85 per cent of the normal. September is normally the month of either heaviest or second heaviest rainfall. In particular, Chitaldrug, for which August-September rains are important, got less than 80 per cent of its normal rainfall in September. In Malnad, Hassan also got less than 60 per cent of the normal rainfall in September. Bangalore and Kolar which need rains during June-July for their “hain crops” suffered from slight to moderate drought during June. One interesting feature of June rainfall is that in the midst of general drought in Maidan, Tumkur alone had an excess fall of 114 per cent of the normal. Compared to 1947, the defect during November was small.

The seasonal rainfall was 12 per cent below normal in Maidan and 13 per cent above normal in Malnad.

1949—As in 1947, November was again a month of very scanty rains throughout the State, specially in the Maidan districts where the defect was generally more than 70 per cent. In Mandya, Mysore and Bangalore, there was practically no rainfall in November, the defect being over 90 per cent. June was also a month of general drought throughout the State except in Kolar. During September, all the Maidan districts and Hassan in Malnad suffered from moderate to severe drought. There was, however, copious rainfall in October, specially in the Maidan districts. Thus, during this year, there was drought in the Maidan districts in the important months of September and November, while in 1947, the drought was in November and in 1948 in September.

• The seasonal rainfall was 4 per cent above normal in Maidan and 20 per cent below normal in Malnad.

5. In order to examine how the years, 1947-49, compare with the drought years in the past, a general examination of the rainfall of the Mysore State during the last 57 years was made. The June to November rainfall of each of the two main regions of the Mysore State during the last 57 years, 1893-1949, is shown in the accompanying two graphs (Figs. 2 and 3). A few features of the rainfall of this period can be summarised thus—

In Malnad, 1896 was the wettest year when the rainfall was 45 per cent above normal and 1899 and 1918 were the driest years when the rainfall was 35 per cent below normal. 28 years have been normal years and in 7 out of 57 years, the rainfall has been in moderate to large excess. 4 years have been years of moderate drought. Slight drought has occurred in 9 years of which 1949 is one.

For Maidan 1916 was the year of heaviest rainfall when the rainfall was 62 per cent above normal. 1908 and 1923 have been the driest years when the defect was as much as 43 per cent. There have been 21 normal years and 10 years with rainfall varying from moderate to large excess. The years of moderate drought were 14 as against 4 in Malnad, suggesting Maidan to be more liable to droughts than Malnad. 6 years have been years of slight drought of which 1948 is one. The graphs do not reveal any ‘periodicity’ in the occurrence of droughts or heavy falls.

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1. Ananthapadmanabha Rao, A., *Ind. met. Dep. Sci. Notes*, **1**, 71, pp. 21-34 (1936).

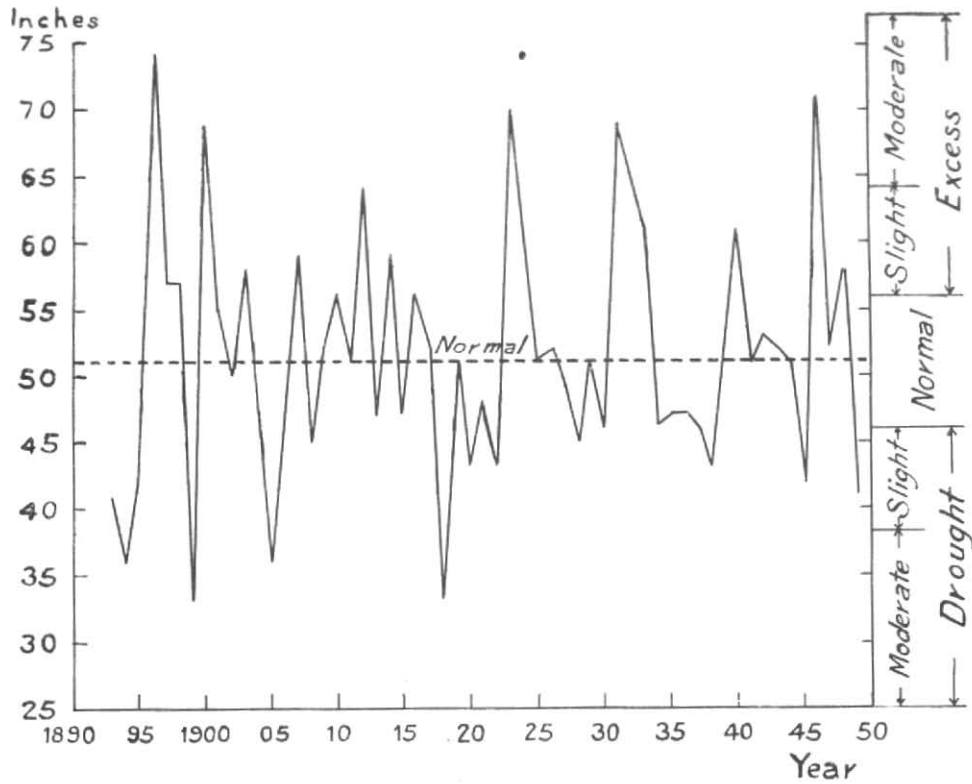


Fig. 2. Malnad Region. Rainfall—June to November

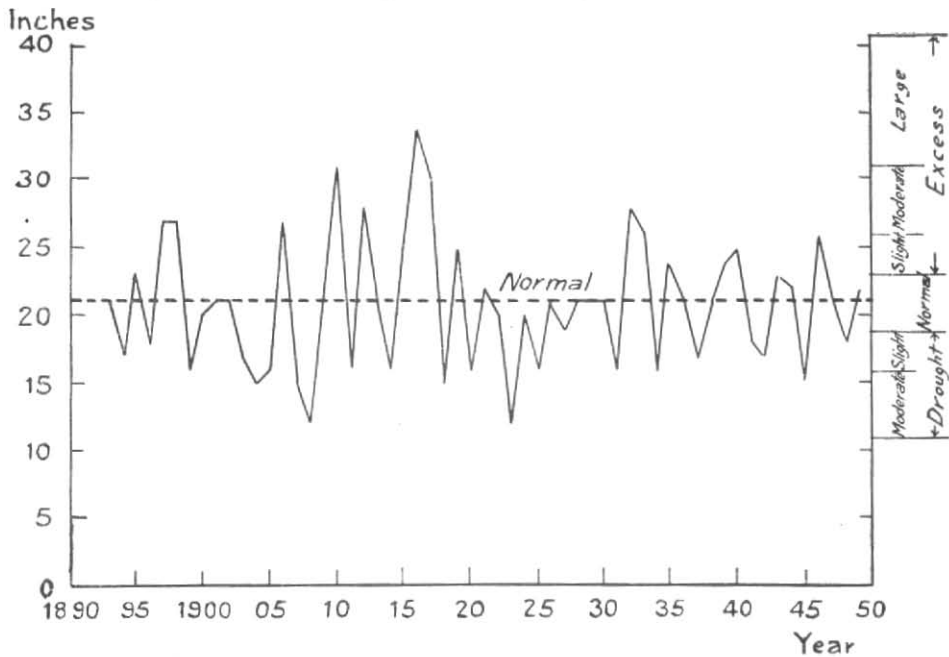


Fig. 3. Maidan Region. Rainfall—June to November

TABLE I

	Jun	Jul	Aug	Sep	Oct	Nov	Total
(a) District Normal rainfall							
MAIDAN DISTRICTS							
Bangalore	2.58	3.09	4.36	6.00	5.52	2.38	23.93
Kolar	2.45	2.98	3.87	5.72	4.78	2.93	22.73
Tumkur	2.43	2.45	3.18	5.30	5.11	2.24	20.71
Mysore	2.52	2.95	2.91	3.81	5.70	2.63	20.52
Mandya	1.83	1.69	2.88	4.49	6.14	2.62	19.65
Chitaldrug	2.25	2.46	2.65	4.28	4.24	1.97	17.86
MALNAD DISTRICTS							
Hassan	5.24	9.00	5.27	4.07	5.87	2.87	32.32
Shimoga	10.77	19.77	10.78	4.81	5.08	1.76	52.97
Chikmagalur	13.06	25.04	14.40	6.35	6.40	2.36	67.61
(b) 1947—Percentage departure from normal							
MAIDAN DISTRICTS							
Bangalore	+ 4	- 6	+ 25	- 45	+ 15	- 59	- 9
Kolar	+ 17	+ 6	+ 45	+ 13	- 17	- 79	- 1
Tumkur	- 10	- 2	+ 135	- 26	+ 17	- 81	+ 8
Mysore	- 63	- 21	+ 32	- 8	+ 45	- 92	- 7
Mandya	+ 87	- 69	+ 5	+ 5	+ 35	- 64	+ 7
Chitaldrug	- 34	+ 26	+ 144	- 16	- 27	- 67	+ 3
MALNAD DISTRICTS							
Hassan	- 66	- 5	+ 52	+ 8	- 19	- 82	- 13
Shimoga	- 49	+ 40	+ 67	+ 68	- 56	- 86	+ 17
Chikmagalur	- 52	+ 15	+ 35	+ 17	- 43	- 60	- 2
(c) 1948—Percentage departure from normal							
MAIDAN DISTRICTS							
Bangalore	- 18	+ 24	+ 28	- 67	- 25	- 33	- 20
Kolar	- 31	- 5	+ 44	- 73	+ 26	- 13	- 11
Tumkur	+ 114	+ 53	+ 7	- 82	+ 7	+ 57	+ 8
Mysore	- 15	- 61	+ 105	- 75	- 38	- 11	- 22
Mandya	- 35	- 72	+ 68	- 71	+ 3	- 16	- 14
Chitaldrug	- 25	- 22	+ 85	- 84	- 16	+ 55	- 11
MALNAD DISTRICTS							
Hassan	- 8	- 27	+ 109	- 68	+ 11	- 24	+ 1
Shimoga	+ 10	+ 20	+ 88	- 17	- 46	+ 157	+ 27
Chikmagalur	+ 5	- 21	+ 70	- 16	- 15	+ 90	+ 9
(d) 1949—Percentage departure from normal							
MAIDAN DISTRICTS							
Bangalore	- 23	+ 73	+ 11	- 24	+ 65	- 90	+ 9
Kolar	+ 58	+ 71	+ 71	- 34	+ 81	- 48	+ 30
Tumkur	- 24	+ 69	+ 53	- 28	+ 61	- 87	+ 12
Mysore	- 55	+ 12	- 10	- 70	+ 44	- 97	- 18
Mandya	- 30	+ 52	- 25	- 59	+ 100	- 98	+ 3
Chitaldrug	- 45	- 43	+ 7	- 24	+ 45	- 87	- 15
MALNAD DISTRICTS							
Hassan	- 55	- 40	+ 10	- 53	+ 58	- 82	- 31
Shimoga	- 39	- 26	+ 5	+ 17	+ 51	- 45	- 12
Chikmagalur	- 48	- 26	+ 7	+ 25	- 42	- 73	- 7