

RAINFALL.

The records of the daily rainfall (which were commenced by the late Sir George S. Kingeston as early as 1839 so far as Adelaide is concerned and have been systematically continued and greatly extended since 1856 by Mr. C. Todd, Government Meteorologist, &c.) tend to show that the occupation and cultivation of the country has not to any appreciable extent either increased or diminished the average annual rainfall in any given locality. They also show that the fluctuations in the annual depth of rain are not reducible to any law of periodicity. Mr. Todd has established over 340 stations, extending from the northern coast of this island continent to the Southern Ocean, at which the depth of rain is taken and recorded every morning at 9 o'clock for the previous twenty-four hours. These observations show very great differences in the annual depths of rainfall in different localities. As a general rule the rains are the most copious within the tropics and on the southern districts extending from 100 to 200 miles inland, while in some parts of Central Australia it seldom exceeds four or five inches per annum. Thus at Palmerstone, Southport, &c., the annual average exceeds 63 inches, while in the arid country east of Lake Eyre it scarcely exceeds 4 inches.

TABLE I.

Statement of the annual fall of rain registered in Adelaide from 1839 to 1890, inclusive, expressed in inches and decimals:—

Yr.	In.	Yr.	In.	Yr.	In.	Yr.	In.
1839	19.840	1852	27.349	1865	15.906	1878	22.083
1840	24.107	1853	26.995	1866	20.108	1879	20.709
1841	17.956	1854	15.346	1867	19.051	1880	22.226
1842	20.348	1855	23.145	1868	19.987	1881	18.192
1843	17.192	1856	24.921	1869	14.736	1882	15.712
1844	16.878	1857	20.119	1870	21.549	1883	26.701
1845	18.830	1858	20.259	1871	23.157	1884	18.738
1846	20.885	1859	14.460	1872	22.629	1885	15.957
1847	27.612	1860	18.303	1873	20.599	1886	14.420
1848	19.725	1861	24.935	1874	17.173	1887	26.701
1849	25.444	1862	21.251	1875	25.964	1888	14.542
1850	19.274	1863	24.675	1876	13.434	1889	20.872
1851	30.633	1864	19.752	1877	24.949	1890	25.779

It does not appear possible to deduce from this table any support of the theories often advanced of the connection between celestial phenomena and the fall of rain. Indeed, if any such connection does exist at all, it must affect the meteorological condition of the earth as a whole. And though scientists profess to have traced a connection between the eleven-years period of solar spots and terrestrial magnetism and electricity, which future observations may or may not confirm, possibly another century of recorded observations made in both hemispheres will scarcely suffice to establish the theory of the influence of solar spots in augmenting or diminishing the rainfall upon the earth's surface, assuming such influence to exist. So with regard to the local effects upon the annual rainfall, at one time very generally believed to result from the destruction of the primitive forests. The early settlers will remember that on their arrival the site of Adelaide and the surrounding country was heavily timbered, especially to the westward, which was known as the "Black

was heavily timbered, especially to the westward, which was known as the "Black Forest;" yet the removal of hundreds of thousands of tons of timber since then does not appear to have had any appreciable effect in permanently diminishing the average fall of rain. This will appear evident from an inspection of the following:—

TABLE II.

Showing the aggregate depth of rain registered at Adelaide from 1839 to 1890 inclusive, with the annual average, calculated to the end of each year:—

Year.	Total.	Average.	Year.	Total.	Average.
1839	19.840	19.840	1865	580.633	21.505
1840	43.947	21.973	1866	600.741	21.455
1841	61.963	20.634	1867	619.792	21.372
1842	82.221	20.555	1868	639.779	21.326
1843	99.413	19.883	1869	654.515	21.113
1844	116.291	19.382	1870	678.055	21.189
1845	135.121	19.303	1871	701.212	21.249
1846	162.006	20.251	1872	723.832	21.280
1847	189.619	21.069	1873	741.341	21.267
1848	209.254	20.935	1874	761.514	21.153
1849	234.798	21.345	1875	790.478	21.394
1850	254.072	21.173	1876	803.912	21.156
1851	284.705	21.900	1877	828.861	21.253
1852	312.045	22.289	1878	850.944	21.274
1853	339.040	22.603	1879	871.653	21.260
1854	354.386	22.149	1880	893.879	21.283
1855	377.531	22.268	1881	912.071	21.211
1856	402.452	22.358	1882	927.813	21.037
1857	422.601	22.242	1883	964.574	21.213
1858	442.851	22.143	1884	973.312	21.159
1859	457.311	21.777	1885	989.199	21.047
1860	475.814	21.628	1886	1,003.619	20.909
1861	499.849	21.733	1887	1,029.320	21.037
1862	521.700	21.737	1888	1,043.862	20.877
1863	545.375	21.815	1889	1,074.734	21.073
1864	565.127	21.736	1890	1,100.513	21.164

We may here state that the greatest depth of rain registered in Adelaide in one month was 7.8 inches, in June, 1847, and the greatest in one day 3.5 inches, on March 5, 1878.

The following table illustrates the important bearing which the rainfall has upon the agricultural interest:—

TABLE III.

Showing the depth of rain registered at Adelaide during each of the nine most and the nine least prolific years:—

Years.	Most prolific.		Years.	Least prolific.	
	Rainfall	Yield per acre.		Rainfall	Yield per acre.
	Inches	bus. lb.		Inches	bus. lb.
1863	23.675	14 0	1867	19.051	4 40
1866	20.108	14 20	1869	14.736	5 45
1870	23.540	11 30	1871	23.157	5 44
1872	22.620	11 30	1876	13.434	5 24
1874	17.173	11 45	1880	22.226	4 58
1875	28.964	11 57	1881	18.192	4 34
1879	20.709	9 47	1882	15.742	4 18
1887	25.701	10 0	1885	15.867	8 10
1889	30.872	9 30	1888	14.542	3 48
Av'gs.	23.707	11 35	Av'gs.	17.441	4 42

This table illustrates the general rule that copious rains tend to produce an abundant harvest, and *vice versa*. We think we are justified in saying that there has been no instance of a defective fall of rain during the growing months that was followed by a good average yield of wheat. The year 1874 looks

average yield of wheat. The year 1874 looks at first sight as an exceptional case, but it is not so, for of the 17·173 inches recorded that year 15·177 inches fell between April and October. On the other hand 1887 was the memorable red-rust year, and in 1871 the rainfall from April to October was but 14·835 inches, thus below that of 1874.

TABLE IV.

The following table shows the fall of rain in Adelaide during 1890 and the number of wet days, with a comparative statement of the rainfall during the corresponding period of previous years, expressed in inches and decimals:—

Months.	1890.	Wet days.	Wettest year, 1889.	Driest year, 1876.	Average, 1839 to 1890
January ...	0·623	10	2·984	0·198	0·738
February ...	1·928	3	0·231	0·480	0·682
March ...	0·576	3	0·813	0·503	0·985
April ...	1·000	7	5·854	1·819	1·822
May ...	1·643	11	4·086	1·022	2·880
June ...	4·221	15	4·752	1·279	2·982
July ...	8·363	20	1·211	2·207	2·702
August ...	3·734	20	3·589	1·808	2·534
September ...	1·752	13	1·504	1·116	1·971
October ...	2·544	20	3·608	1·400	1·783
November ...	2·196	11	2·107	1·056	1·159
December ...	0·199	4	0·333	0·492	0·931
Totals ...	25·779	137	20·572	13·634	21·164

The greatest depth registered on any one day last month was 0·069 on the 23rd. The total rainfall last year as compared with that of previous years was 5·098 below that of 1889, 12·345 above that of the driest year, and 4·815 above the general average.

A law student once defined libel as "something a man says and afterwards wishes to goodness he hadn't."

A young lady at Davenport, Iowa, is gradually becoming copper-coloured. The change began eighteen months ago on the tips of her fingers and soles of her feet. She is in good health, and the doctors are mystified by the occurrence.