

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

CHARLES F. MARVIN, Chief.

In Cooperation with Maryland State Weather Service.

CLIMATOLOGICAL DATA.

MARYLAND AND DELAWARE SECTION.

JAMES H. SPENCER, Meteorologist and Section Director.

VOL. XXIX. BALTIMORE, MD., OCTOBER, 1924. No. 10.

GENERAL SUMMARY.

This was the driest and sunniest October of record. There was much pleasant weather, and the wind movement was very light.

Clear skies were the rule from the 1st to the 26th, inclusive, and during this period the daily sunshine averaged 90 per cent of the possible amount. Much cloudiness prevailed after the 26th, which reduced the monthly amount of sunshine to about 80 per cent of the possible, or about 20 per cent above normal; this is the greatest of record for October.

Mean monthly temperatures were 1° to 2° above normal in western and north-central Maryland, but 1° to 2° below normal in southern Maryland and on the Eastern Shore.

The cool wave at the close of September continued until the 4th of the month. Cool weather prevailed also during the 8-10th, 13-16th, and 21st-24th. The last cool spell was the coolest period of the month and produced the first general freezing temperatures and killing frosts of the season over the section to the eastward of the Blue Ridge Mountains. Late potato and tomato vines, beans, and other truck crops were killed. Mild periods were 5-7th, 11-12th, 17-20th, and 25th-31st; with the exception of the last one, they were of the "Indian Summer" type.

Monthly rainfall averaged 0.40 inch, or about one-eighth of normal. This is one-half of the monthly rainfall of the previous driest October, namely, 0.87 inch in 1920. In southern Maryland, however, the rainfall this month was not the least in October, as it averaged about one and two-thirds the rainfall during October, 1920, which was the driest October of record in that division.

Light rain fell on the 4th and during the nights of the 7-8th and 19-20th; and light to moderate rains during the 27-28th.

The fine weather of the month was unusually favorable for outdoor operations. Cutting of corn, which is a short crop, was finished during the third decade, except in southern Maryland and on the Eastern Shore; husking began during the third decade. Digging of late potatoes continued in the Allegheny Mountain region, and began in Allegany and Washington Counties during the second decade and over the section to the eastward of the Blue Ridge Mountains during the third. Harvesting of tomatoes and cutting of tobacco ended during the second decade. Picking of apples and pears, digging of sweet potatoes, and harvesting of late truck crops continued throughout the month. Kieffer pears are a large crop. In the Allegheny Mountain region harvesting of buckwheat ended during the first decade. Pastures were fair during the first half of the month, but poor during the second half. Sowing of wheat and rye was finished, except in southern Maryland and on the Eastern Shore. These grains came up nicely in western and north-central Maryland during the second decade and were benefited by the rains of the 27-28th, which aided germination elsewhere over the section.

Rain was much needed at the close of October and forest fire dangers were becoming acute.—*J. B., jr.*

PRESSURE.

The monthly mean sea-level pressure at Washington was 30.21; at Baltimore and Aberdeen, 30.20 inches. The highest at Washington was 30.52; at Baltimore, 30.54; at Aberdeen, 30.53 inches; all on the 31st. The lowest at Washington was 29.83; at Baltimore, 29.81; at Aberdeen, 29.79 inches; all on the 20th.

TEMPERATURE.

The monthly mean for the section, 56.0°, is 0.4° below normal. The highest monthly mean was 59.6° at Solomons; the lowest, 48.8°, at Grantsville. The highest temperature, 88°, occurred at Western Port on the 11th; the lowest, 15°, at Friendsville and Oakland on the 23d. The greatest local monthly range was 64° at Keedysville; the least, 42°, at Cambridge and Crisfield. The greatest daily range was 55° at Oakland and Western Port on the 11th.

PRECIPITATION.

The monthly average for the section, 0.40 inch, is 2.62 inches below normal. The greatest monthly amount was 1.78 inches at Cambridge; the least, "T", at Delaware City and Towson. The greatest amount in 24 hours was 1.78 inches at Cambridge on the 27-28th. The average number of days with 0.01 inch or more, 2, is 5 below normal.

WIND.

The prevailing direction for the section was northwest. The total movement at Washington was 3,442; at Baltimore, 3,306; at Aberdeen, 3,654 miles. The maximum velocity at Washington was 20 miles per hour from the north on the 21st; at Baltimore, 20 miles from the north on the 8th; at Aberdeen, 26 miles from the northwest on the 20th.

SUNSHINE AND CLOUDINESS.

At Washington 80 per cent of the possible sunshine was recorded; at Baltimore, 81 per cent; at Aberdeen, 76 per cent. For the whole section the average number of clear days was 24; partly cloudy, 4; cloudy, 3.

MISCELLANEOUS PHENOMENA (WITH DATES).

Fogs, dense.—Entire section, 4, 5; Coastal Plain, 16.

Frost, killing.—General, first of season, to eastward of Blue Ridge Mountains, 22, except 23 in Chesapeake Bay region.

Temperatures, freezing or below.—Allegheny Mountain highlands, 2, 3, 11, 12, 15, 16, 17, 18, 20, 27, 29, 30; western Maryland, 9, 13, 25, 26; western Maryland and valley districts of north-central Maryland, 10; western and north-central Maryland, 14, 21; entire section, except Chesapeake Bay region, 22; entire section, 23; western and north-central Maryland and interior southern Eastern Shore, 24.

CHANGES IN PERSONNEL.

We regret to announce the resignation of Mr. Jasper Guard, cooperative observer at Friendsville, Md., for the past 5 years. Mr. Guard was reluctant to give up the work, but his frequent absence from home made it necessary. He has rendered good and faithful service, both as cooperative observer and as weather-crop correspondent, for which we express our sincere thanks. Mr. J. J. Friend will continue the observations at Friendsville, beginning November 1, and we are confident that northwest Garrett County will be represented as efficiently in the future as in the past.

Climatological Data for October, 1924.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				Number of days.			Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	With precip., 0.01 inch or more.	Clear.			Partly cloudy.	Cloudy.
<i>Maryland.</i>																				
Aberdeen	Harford	80	6	56.3	.....	78	6	28	23	35	0.05	.....	0.05	0.0	1	16	6	9	nw.	U. S. Army.
Annapolis	Anne Arundel	45	56	58.0	-0.1	80	12†	31	23	32	0.34	-3.03	0.34	0.0	1	24	3	4	s.	Joseph Stein.
Baltimore*	Baltimore	115	54	59.4	+1.2	84	6	36	23	28	0.05	-2.97	0.05	0.0	2	23	2	6	n.	U. S. Weather Bureau.
Bell II	Prince Georges	151	4	55.0	.....	84	6	22	23	42	0.43	.....	0.43	0.0	1	24	4	3	nw.	Bureau Plant Industry.
Boysds	Montgomery	424	5	56.6	.....	85	6	24	23	42	0.40	.....	0.40	0.0	2	24	4	3	nw.	James L. Higgins.
Cambridge	Dorchester	25	27	57.0	-2.5	75	17	33	24	32	1.78	-1.63	1.78	0.0	2	26	3	2	sw.	Robert L. Hamill.
Cecilton	Cecil	85	6	57.0	.....	82	6	30	23	34	0.05	.....	0.03	0.0	2	20	7	4	nw.	Wm. F. Coale.
Cheltenham	Prince Georges	230	24	57.0	-0.5	84	6	29	22†	39	0.62	-2.34	0.62	0.0	2	24	3	4	n.	Geo. Hartnell.
Chesapeake City	Cecil	17	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	w.	Harold Steele.
Chevsville	Washington	530	27	54.2	-0.8	82	6	22	23	42	0.34	-2.30	0.34	0.0	2	26	1	4	nw.	D. Paul Oswald.
Clear Springs (a)	do	500	22	55.8	+1.6	81	6	31	23	39	0.52	-2.26	0.52	0.0	1	26	1	4	sw.	Leo A. Cohill.
Clear Springs (b)	do	500	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	n.	E. G. Kinsell.
Coleman II	Kent	80	25	58.2	-0.2	80	6	35	23	29	0.05	-2.99	0.05	0.0	1	23	5	3	s.	Walter B. Harris.
College Park	Prince Georges	87	38	54.6	-1.7	83	6	24	23	41	0.42	-2.31	0.42	0.0	1	26	2	3	nw.	Prof. Thos. H. White.
Crisfield	Somerset	5	6	58.9	.....	78	6	36	23†	30	0.43	.....	0.43	0.0	1	16	11	4	nw.	A. B. Cochran.
Cumberland	Allegany	623	51	55.4	+1.1	84	6	28	23	44	0.39	-2.00	0.35	0.0	2	29	1	1	n.	Harvey H. Weiss.
Darlington	Harford	300	34	55.6	+0.4	83	6	29	23	37	0.06	-3.13	0.06	0.0	1	25	3	3	nw.	Fred. C. Jones.
Easton	Talbot	35	34	57.0	-0.9	78	6†	30	23	35	0.79	-2.47	0.79	0.0	2	28	1	2	n.	Clement E. Bray.
Emmitsburg	Frederick	720	56	57.2	+2.2	80	6	34	23	29	0.23	-3.37	0.20	0.0	2	24	3	4	w.	Mt. St. Mary's College.
Fallston II	Harford	450	55	56.2	+1.0	81	6	30	22	31	0.10	-3.36	0.10	0.0	1	20	8	3	n.	Miss Dora Curtiss.
Ferry Landing II	Calvert	45	8	56.2	.....	80	6	30	22	34	0.51	.....	0.51	0.0	2	18	9	4	nw.	Thos. J. Bourne.
Frederick	Frederick	275	50	56.7	+1.0	85	6	28	23	40	0.28	-2.36	0.28	0.0	2	24	3	4	nw.	Chas. S. Birely.
Freeland	Baltimore	681	5	53.0	.....	80	6	23	23	41	0.20	.....	0.20	0.0	1	25	3	3	w.	Isaac Shaver.
Friendsville	Garrett	1,501	6	50.0	.....	77	5†	15	23	48	0.40	.....	0.40	0.0	2	23	5	3	w.	Jasper Guard.
Frostburg	Allegany	1,929	23	55.2	+0.3	81	5	28	23	46	0.32	-2.69	0.26	0.0	3	27	2	2	e.	J. D. Snyder.
Grantsville	Garrett	2,351	31	48.8	-1.8	78	6	19	23	50	0.15	-2.59	0.15	0.0	2	26	4	1	w.	Rev. J. B. Miller.
Great Falls II	Montgomery	200	35	55.7	-0.7	84	6	24	23	37	1.06	-1.58	0.64	0.0	3	26	2	3	nw.	Chas. E. Sullivan.
Hancock	Washington	455	14	54.2	.....	83	6	21	23	44	0.44	-2.19	0.40	0.0	2	27	1	3	n.	W. E. Grove.
Ilchester	Howard	260	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	n.	Richard C. Norris.
Keetsville	Washington	400	21	54.8	-1.6	85	6	21	23	45	0.50	-2.43	0.50	0.0	1	27	0	4	n.	J. A. Miller.
La Plata	Charles	190	8	57.4	.....	83	6†	30	22†	43	1.26	.....	1.10	0.0	3	25	4	2	nw.	John P. Burdette.
Laurel	Prince Georges	320	25	55.3	-0.5	83	6	26	23	39	0.28	-2.65	0.28	0.0	2	27	1	3	n.	Evan G. Chaney.
Millington	Kent	27	27	56.2	-1.5	82	6	25	23	42	0.12	-3.02	0.08	0.0	2	25	4	2	w.	Henry L. Higman.
Oakland	Garrett	2,461	25	49.3	-0.3	78	11	15	23	55	0.50	-2.78	0.38	0.0	3	24	3	4	ne.	R. E. Weber.
Princess Anne	Somerset	17	49	56.6	-1.2	79	7	29	24	36	0.33	-3.01	0.33	0.0	2	21	6	4	nw.	James R. Stewart.
Public Landing II	Worcester	10	9	56.1	.....	80	17	30	23	33	0.53	.....	0.32	0.0	2	25	2	4	e.	Louis C. de Guibert.
Ridgely	Caroline	57	3	56.2	-1.2	80	6	28	23	38	0.45	-2.73	0.45	0.0	1	23	4	4	n.	Albert White.
Rock Hall	Kent	25	9	57.2	.....	79	6†	28	23	38	0.16	.....	0.16	0.0	1	24	5	2	s.	Charles Judefind.
Salisbury	Wicomico	23	19	57.0	-1.9	83	7	30	24	37	0.31	-3.22	0.25	0.0	3	25	4	2	nw.	W. A. Simpkins.
Solomons	Calvert	20	33	59.6	-0.9	81	6	37	23	25	0.85	-1.88	0.67	0.0	2	21	2	8	ne.	Dr. W. H. Marsh.
State Sanatorium	Frederick	1,460	16	56.4	+0.6	80	6	30	23	36	0.18	-2.56	.....	0.0	2	24	3	4	n.	Dr. V. F. Cullen.
Takoma	Montgomery	320	26	56.6	+0.3	80	6	32	23	28	1.18	-1.55	0.70	0.0	3	22	5	4	n.	L. M. Mooers.
Towson	Baltimore	465	12	.....	.....	.....	.....	.....	.....	T.	-2.68	T.	0.0	0	24	4	3	.....	Albert E. Walden	
Western Port	Allegany	1,000	31	57.4	+2.6	88	11	26	23	55	0.33	-1.93	0.28	0.0	3	.....	.....	.....	.....	Norris Bruce.
Westminster	Carroll	770	15	56.0	+1.1	83	6	28	23	37	0.20	.....	0.16	0.0	2	26	2	3	.....	Prof. S. P. Catrider.
Woodstock	Baltimore	415	54	55.5	+0.6	83	6	23	23	44	0.19	-2.90	0.19	0.0	1	23	2	6	nw.	Rev. J. B. Mahoney, S. J.
<i>Dist. of Columbia.</i>																				
Washington**		112	54	57.4	0.0	83	6	34	23	33	0.44	-2.65	0.44	0.0	2	22	5	4	nw.	U. S. Weather Bureau.
<i>Delaware.</i>																				
Bridgeville	Sussex	45	1	57.2	-0.1	81	6†	30	23	37	0.60	-2.77	0.33	0.0	3	25	2	4	nw.	George Ray.
Delaware City	Newcastle	10	38	57.2	-0.6	80	6	32	23	31	T.	-2.54	T.	0.0	0	27	3	1	nw.	H. C. Price.
Dover	Kent	34	35	56.7	-0.6	82	6	31	23	34	0.19	-2.87	0.11	0.0	3	27	3	1	nw.	Arthur G. Livingston.
Millford	do	20	42	56.0	-2.8	80	6	32	22†	33	0.79	-2.62	0.60	0.0	2	26	2	3	nw.	Chas. J. Holzmueller.
Millsboro	Sussex	20	32	57.0	-0.9	84	6	30	21†	42	0.71	-2.87	0.54	0.0	2	25	3	3	nw.	G. L. Ellis.
Wilmington	Newcastle	86	31	57.0	-0.4	79	5†	33	23	31	0.05	-3.13	0.04	0.0	2	25	5	1	nw.	Street and Water Depts.
For Maryland and District of Columbia				55.9	-0.3	88	11	15	23	55	0.40	-2.58	1.78	0.0	2	24	4	3	nw.	
For Delaware				56.8	-1.0	84	6	30	21†	42	0.39	-2.80	0.60	0.0	2	26	3	2	nw.	
For entire section				56.0	-0.4	88	11	15	23	55	0.40	-2.62	1.78	0.0	2	24	4	3	nw.	

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means. Data in italics determined from surrounding stations. Reference letters, a, b, c, appearing in the table indicate number of days missing; for example, b represents two days, etc. † Post office addresses of these stations are as follows: of Bell, Glendale; of Coleman, Worton; of Fallston, Bagley; of Ferry Landing, Owings; of Great Falls, Bethesda; of Ilchester, Elkridge; of Public Landing, Snow Hill. ‡ Also on other dates. T. Precipitation is less than 0.01 inch rain or melted snow. * Customhouse Building, Gay and Water Streets. ** Weather Bureau Building, 24th and M Streets.

Daily Precipitation for October, 1924.

Stations.	Watersheds.	Day of month.																															Total.					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
<i>Maryland.</i>																																						
Aberdeen**	Atlantic																																	.05	T.		0.05	
Annapolis	do																																	.34	T.		0.34	
Baltimore***	do				T.				T.	T.																							.04	.01		0.05		
Bell	do																																	.43			0.43	
Boys	do																																	.40			0.40	
Cambridge	do																																		.10	1.68	1.78	
Cecilton	do				T.					.02																								.03			0.05	
Cheltenham	do																																	.25	.37		0.62	
Chesapeake City	do																																	.12			0.12	
Chesville	do																																	.09	.25		0.34	
Clear Spring(a)	do																																	.52			0.52	
Clear Spring(b)	do																																	.54			0.54	
Coleman	do																																	.05			0.05	
College Park	do																																	.42			0.42	
Crisfield	do																																	.43			0.43	
Cumberland|||	do		.04																															.35			0.39	
Darlington	do																																	.06			0.06	
Easton	do																																	.04	.75		0.79	
Emmitsburg	do																																	.20	.03		0.23	
Fallston	do																																	.10			0.10	
Ferry Landing	do																																	.21	.30		0.51	
Frderick	do								T.													T.											.04	.24		0.28		
Freeland	do																																	.20			0.20	
Friendsville	Ohio																																	.30	.10		0.40	
Frostburg	Atlantic		.06																			T.												.12	.14		0.32	
Grantsville	Ohio																						T.											.10	.05		0.15	
Great Falls|||	Atlantic		.42																															.62	.02		1.06	
Hancock	do																						.04											.15			0.44	
Ichester	do																																	.15			0.15	
Keedysville	do																						T.											.50			0.50	
La Plata	do										.16																							.35	.75		1.26	
Laurel	do																																	.09	.19		0.28	
Millington	do											.08																						.04			0.12	
Oakland	Ohio																																	.28	.10		0.50	
Princess Anne	Atlantic																							.12										.15	.18		0.33	
Public Landing	do											.21																						.32			0.53	
Ridgely	do																																		T.	.45	0.45	
Rock Hall	do																																	.16			0.16	
Salisbury	do																																	.04	.21		0.31	
Solomons	do											.06																						.18	.67		0.85	
State Sanatorium	do																																	*	.18	T.	0.18	
Takoma|||	do		.70																															.45	.03		1.18	
Towson	do																																		T.	.18	T.	
Western Port	do		.05																																T.	.16	.04	0.33
Westminster	do																																		T.	.19	T.	0.20
Woodstock	do																																		T.	.19	T.	0.19
<i>District of Columbia.</i>																																						
Washington***	Atlantic								T.																										T.	.17	.27	0.44
<i>Delaware.</i>																																						
Bridgeville	Atlantic										.27																								*	.33		0.60
Delaware City	do		T.																																T.	.06		0.19
Dover	do					.02					.11																								T.	.60		0.79
Millford	do										.19																								T.	.54	T.	0.71
Millsboro	do										.17																								T.	.01		0.71
Wilmington	do										.04																								T.	.01		0.05

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.
 ***Regular Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight. **Precipitation is for 24-hour period, midnight to midnight.
 ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. *Precipitation included in the next following measurement.
 T. Trace, or less than 0.01 inch. Data in italics determined from surrounding stations.

COMPARATIVE DATA FOR MARYLAND AND DELAWARE FOR OCTOBER.

Year.	Temperature.				Precipitation.						Number of days with 0.01 inch or more.	Year.	Temperature.				Precipitation.						Number of days with 0.01 inch or more.
	Mean.	Departure from the normal.	Highest.	Lowest.	Average.	Departure from the normal.	Greatest local.	Least local.	Greatest in 24 hours.	Snowfall.			Mean.	Departure from the normal.	Highest.	Lowest.	Average.	Departure from the normal.	Greatest local.	Least local.	Greatest in 24 hours.	Snowfall.	
1895	50.3	-6.1	82	4	1.96	-1.06	3.50	0.44	1.73	T.	4	1910	58.9	+2.5	92	15	3.46	+0.44	8.26	0.98	5.47	0.1	7
1896	52.6	-3.8	85	16	1.69	-1.33	5.19	0.30	2.48	T.	5	1911	56.3	-0.1	85	23	3.40	+0.38	6.23	2.03	2.21	T.	10
1897	56.6	+0.2	91	20	3.21	+0.19	8.17	0.55	2.26	0.0	8	1912	58.1	+1.7	96	18	1.62	-1.40	8.93	0.21	2.68	T.	4
1898	57.0	+0.6	89	17	4.81	+1.79	8.28	2.87	3.21	T.	10	1913	58.2	+1.8	92	13	4.57	+1.55	6.45	1.78	3.02	T.	11
1899	57.2	+0.8	88	15	2.67	-0.35	5.34	0.35	3.32	0.0	5	1914	59.3	+2.9	93	13	1.74	-1.28	3.19	0.39	1.74	T.	6
1900	60.6	+4.2	91	20	2.13	-0.89	5.30	1.10	2.77	T.	4	1915	57.9	+1.5	88	19	3.88	+0.86	6.06	1.85	3.70	T.	9
1901	54.9	-1.5	92	16	1.17	-1.85	2.27	0.21	2.22	T.	4	1916	55.6	-0.8	91	19	1.90	-1.12	4.05	0.63	2.65	T.	5
1902																							

Daily Temperatures for October, 1924.

Table with columns for Stations, 1-31, and Mean. Rows list various locations in Maryland and Delaware with their daily temperature ranges and monthly averages.

* 1, 2, 3, etc., indicate respectively 1, 2, 3, etc., days missing from the record. † Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs. ‡ Data in italics determined from surrounding stations.