

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

In Cooperation with Maryland State Weather Service

# CLIMATOLOGICAL DATA

15 MARYLAND AND DELAWARE SECTION

JOHN R. WEEKS, Meteorologist and Section Director

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

VOL. XXXVII BALTIMORE, MD., OCTOBER, 1932 No. 10

## GENERAL SUMMARY

This month terminated the long period of deficient rainfall and unusually abundant sunshine of the last three months, July to September, inclusive. The average monthly rainfall was the greatest of record for October. Monthly amounts were 2 to 4 times the normal, except in the Allegheny Mountain region. The month was milder than normal over the eastern half of the section, but cooler than normal over most of the western half. First general killing frosts of the season in the various divisions occurred later than normal. Periods of overcast weather were 4-6th, 12-13th, 16-20th, and 23d-26th; those of mostly clear sky and abundant sunshine were 1st-3d, 7-9th, and 28-30th. Monthly sunshine was 10 per cent below normal. Relative humidity averaged normal. Heavy rains of 5-6th and 17-18th caused high water in all streams. Moderately strong winds were frequent.

The 1st was slightly cool. Cool spells were 6-8th, 11-15th, and 30th-31st. Mild periods were 2d-5th, 9-10th, and 16-27th. Temperatures on 28-29th were seasonable.

Monthly rainfall was unevenly distributed over the section. It averaged two and one-fourth times the normal. In western Maryland totals were 3.5 to 6.5 inches; elsewhere they were mostly 5 to 8 inches, except 8 to 13 inches in the Blue Ridge Mountain region.

There was a light snowfall on the 6th and in the early morning of the 28th in the Allegheny Mountain region.

Grasses and pastures improved from poor to fair. General sowing of wheat and rye, delayed by dry weather, in progress during the second week, was interrupted by the second wet spell, and was not finished. Early-sown grains, up to good stand, were nicely green during the last week, when late-sown grains were coming up. Harvesting tomatoes and sugar corn, cutting tobacco, digging sweet potatoes, and digging late potatoes in western Maryland ended. Harvesting truck, husking corn, and picking late apples and keiffer pears were in progress. Some tobacco was stripped. Digging of late potatoes in central and eastern divisions began during the third decade. Water continued low in deep wells. — J. B., jr.

## TEMPERATURE

The monthly mean for the section, 56.7°, is 0.5° above normal. The highest monthly mean was 61.0° at Crisfield; the lowest, 48.2°, at Sines. The highest temperature, 88°, occurred at Western Port on the 3d; the lowest, 22°, at Grantsville on the 31st. The greatest local monthly range was 61° at Hancock; the least, 40°, at Baltimore. The greatest daily range was 45° at Hancock and Oakland on the 8th.

## PRECIPITATION

The monthly average for the section, 6.39 inches, is 3.51 inches above normal. The greatest monthly amount was 12.68 inches at State Sanatorium; the least, 3.53 inches, at Friendsville. The greatest 24-hour amount was 4.00 inches at State Sanatorium on the 17-18th. The monthly average snowfall for the section, 0.1 inch, is normal. The greatest monthly snowfall was 2.2 inches at Oakland. The average number of days with 0.01 inch or more of precipitation, 9, is 2 above normal.

## MISCELLANEOUS PHENOMENA (WITH DATES)

*Fogs, dense.* — 4, 9, 10, 14, 16, 17, 18, 19, 26.  
*Frosts, killing: first general of season.* — Allegany and Washington Counties, 14; north-central and southern Maryland, 29; Eastern Shore, 31.  
*Halos, lunar.* — 10, 13, 15, 23. *solar.* — 9, 15.  
*Gales on coast.* — Southerly, night 5-6; easterly, 17.  
*Thunder.* — La plata, 5; District of Columbia, 5, 17; Ridgely, 18; Frederick, 26.  
*Winds, high.* — Southeast, 4; south, 5, 26; northwest, 6, 11, 21; southwest, 12, 29, 30; northeast, 17.

## PRESSURE, HUMIDITY, SUNSHINE AND WIND

Stations	Atmospheric pressure reduced to sea level				Mean relative humidity		Sunshine		Wind †						
	Average	Highest	Date	Lowest	Date	8 a. m.	Local 11 a. m.	Hours	Percentage	Average hourly velocity	Direction		Highest		
											Miles	Direction	Miles	Direction	
Aberdeen, Md.	30.06	30.44	31	29.66	18	85	62	78	176	51	7.3	s.	27	ne.	17
Baltimore Md.	30.04	30.42	31	29.65	18	78	56	70	188	54	11.0	sw.	31	ne.	17
Elkton, W. Va.	30.10	30.47	8	29.60	17	88	57	73	170	49	5.9	w.	37	se.	17
Harrisburg, Pa.	30.04	30.50	26	29.64	16	79	60	62	138	40	7.8	w.	27	sw.	26
Norfolk, Va.	30.06	30.44	31	29.63	17	84	65	76	228	66	11.6	s.	30	s.	27
Philadelphia, Pa.	30.06	30.46	31	29.57	6	77	56	66	163	49	13.1	w.	35	s.	6
Pittsburgh, Pa.	30.04	30.33	14	29.61	26	74	55	62	125	36	11.3	sw.	32	sw.	29
Washington, D. C.	30.03	30.41	31	29.63	18	80	56	69	172	50	7.1	s.	24	nw.	11

† Velocity of wind in miles per hour by 4-cup anemometer.

## COMPARATIVE DATA FOR MARYLAND AND DELAWARE FOR OCTOBER

Years	Temperature			Precipitation				Number of days				
	Mean	Highest	Lowest	Average	Greatest local	Least local	Greatest 24-hour rain	Average snowfall	Rainy	Clear	Partly cloudy	Cloudy
Normals..	56.2	.....	.....	2.88	.....	.....	.....	0.1	7	17	7	7
Extremes..	98	.....	4	.....	12.68	T.	5.47	.....	.....	.....	.....	.....
1895.....	50.3	82	4	1.96	3.59	0.44	1.78	T.	4	23	5	3
1896.....	52.6	85	16	1.69	5.19	0.30	2.48	T.	5	15	8	8
1897.....	56.6	91	20	3.21	8.17	0.65	2.29	0.0	10	13	7	11
1898.....	57.0	89	17	4.81	8.28	2.87	3.21	T.	10	15	7	8
1899.....	57.2	88	15	2.09	5.97	0.35	3.32	0.0	5	16	8	8
1890.....	59.6	91	20	2.43	5.30	1.10	2.77	T.	4	13	7	10
1901.....	54.9	82	16	1.77	2.27	0.21	2.22	T.	4	10	7	7
1902.....	57.3	89	17	5.73	10.72	2.05	3.75	T.	7	14	8	4
1903.....	56.6	89	20	4.28	9.63	1.58	3.10	T.	6	17	8	8
1904.....	53.6	91	14	2.62	5.30	1.13	3.65	T.	3	20	7	4
1905.....	56.6	93	20	2.77	5.75	1.10	2.11	T.	6	17	8	6
1906.....	55.3	88	12	5.09	9.02	1.80	3.60	0.1	14	10	7	14
1907.....	51.2	83	15	2.41	4.23	1.03	2.67	T.	6	21	7	8
1908.....	57.5	90	15	2.28	4.26	0.53	2.50	0.0	6	17	7	7
1909.....	51.7	86	19	1.72	4.41	0.51	2.20	T.	6	18	7	6
1910.....	58.9	92	15	3.46	8.26	0.98	5.47	0.1	7	19	7	5
1911.....	56.3	85	23	3.40	6.23	2.03	2.21	T.	10	12	7	12
1912.....	58.1	96	18	1.62	8.93	0.21	2.63	T.	4	20	6	5
1913.....	58.2	92	13	4.57	6.45	1.78	3.02	T.	11	12	8	11
1914.....	59.3	93	13	1.74	3.19	0.39	1.74	T.	6	14	7	9
1915.....	57.9	88	19	3.88	6.06	1.85	3.70	T.	9	16	8	8
1916.....	55.6	91	19	1.90	4.05	0.63	2.65	T.	5	18	8	5
1917.....	50.9	87	18	5.83	9.55	2.01	3.46	1.0	10	15	8	8
1918.....	59.6	89	21	1.36	3.22	0.16	1.20	0.0	6	17	8	6
1919.....	62.5	96	27	3.21	6.55	1.90	1.85	0.0	10	10	8	12
1920.....	60.3	91	25	0.87	2.35	0.17	1.21	0.1	2	22	4	4
1921.....	55.9	85	20	1.08	2.62	0.51	1.55	T.	3	22	4	4
1922.....	58.4	94	15	1.87	5.58	0.74	5.30	0.0	6	19	8	5
1923.....	54.9	90	18	2.53	4.08	0.78	3.34	T.	6	17	8	6
1924.....	56.0	88	15	0.40	1.78	T.	1.78	0.0	2	24	4	4
1925.....	51.2	87	16	5.38	9.48	3.28	2.30	3.2	15	7	11	13
1926.....	56.0	94	21	3.28	5.61	1.59	2.13	0.1	10	12	9	10
1927.....	58.7	98	24	5.88	10.63	3.19	3.37	0.5	9	20	4	7
1928.....	57.8	90	13	1.03	2.27	0.19	1.89	T.	5	16	8	7
1929.....	53.6	85	23	5.44	9.27	2.41	4.58	0.1	9	15	8	8
1930.....	54.1	89	7	0.82	2.29	T.	1.40	0.1	5	18	9	6
1931.....	59.3	91	22	1.78	4.08	0.71	1.85	T.	6	17	9	5
1932.....	66.7	88	22	6.39	12.68	3.53	4.00	0.1	9	10	9	12

Climatological Data, October, 1932

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				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 in. or more	Clear	Partly cloudy		Cloudy	Prevailing direction of wind
<i>Maryland</i>																				
Aberdeen	Harford	80	14	56.5	+0.5	80	3	31	31	31	4.37	+2.12	2.01	0.0	8	10	9	12	s.	U. S. Army.
Annapolis	Anne Arundel	45	67	59.2	+1.1	78	4	36	31	26	5.47	+2.20	1.87	0.0	7	11	8	12	sw.	Louis E. Foster.
Baltimore*	Prince Georges	115	62	58.6	+0.4	79	2	39	39	28	7.17	+4.28	3.80	0.0	10	9	10	12	sw.	U. S. Weather Bureau.
Boysd	Montgomery	375	13	54.4	-1.5	82	2	28	31	40	7.20	+4.46	3.35	0.0	6	11	7	13	nw.	Bureau Plant Industry.
Cambridge (near)	Dorchester	25	39	59.6	+0.5	83	4	32	31	38	5.20	+2.04	1.90	0.0	4	13	9	9	s.	Ralph F. Staley.
Cecilton	Cecil	85	14	57.9	+0.4	84	5	32	31	33	5.63	+3.18	1.98	0.0	8	11	8	12	sw.	Matt Harding.
Cheltenham	Prince Georges	230	32	57.9	+0.7	82	3	30	31	40	6.36	+4.08	2.93	0.0	7	12	7	12	nw.	James Reese Short.
Chesville	Washington	530	35	54.4	-0.1	80	3	27	14	34	7.46	+4.66	2.76	0.0	11	8	11	12	nw.	Geo. Hartnell.
Clear Spring	do.	600	35	56.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	D. Paul Oswald.
Coleman†	Kent	80	35	58.6	+0.3	83	3	36	31	30	4.70	+1.86	1.55	0.0	5	11	8	12	nw.	Mrs. Anna Bevan Cohlh.
College Park	Prince Georges	87	46	57.8	+1.7	84	3	28	31	40	6.13	+3.43	2.52	0.0	9	12	6	13	sw.	Walter B. Harris.
Crisfield	Somerset	5	13	61.0	+0.7	80	3	37	29	28	5.87	+3.43	1.93	0.0	5	10	12	9	nw.	Prof. Thos. H. White.
Cumberland	Allegany	623	60	55.3	+1.0	87	3	31	29	41	4.59	+2.18	1.33	0.0	40	7	13	11	nw.	A. B. Cochrane.
Darlington	Harford	300	42	55.4	+0.3	78	4	27	31	33	6.33	+3.15	2.62	0.0	8	9	10	12	nw.	Harvey H. Weiss.
Easton	Talbot	35	42	59.3	+1.6	83	4	31	31	39	6.33	+3.18	1.90	0.0	7	13	7	11	w.	Fred. C. Jones.
Elkton	Cecil	28	6	56.5	.....	85	3	29	31	38	5.98	.....	1.96	0.0	7	11	8	12	w.	Clement E. Bray.
Emmitsburg	Frederick	720	64	55.8	+0.8	80	3	30	14	29	9.85	+6.44	2.70	0.0	14	14	7	10	nw.	H. W. Bouchelle.
Fallston†	Harford	450	63	56.2	+1.0	81	3	33	14	33	7.51	+4.09	2.85	0.0	9	9	10	12	nw.	Mc. St. Mary's College.
Ferry Landing††	Calvert	110	16	58.4	+0.7	81	3	31	31	34	4.98	+2.27	2.19	0.0	5	13	8	10	nw.	Miss Dora Curtiss.
Frederick	Frederick	325	58	57.1	+1.4	84	3	30	31	35	8.50	+5.79	2.68	0.0	11	12	7	12	w.	Thos. J. Bourne.
Friendsville	Garrett	1,501	14	51.3	-0.3	79	3	25	29	42	3.53	+0.34	1.00	0.0	11	6	10	15	.....	August T. Brust.
Frostburg	Allegany	1,929	31	53.0	-1.1	80	2	28	31	35	6.39	+3.23	2.13	0.0	16	6	12	12	w.	Joab J. Friend.
Grantsville	Garrett	2,351	39	49.5	-0.5	78	3	22	31	44	4.43	+1.62	1.29	0.2	12	6	10	15	w.	T. F. Lewis.
Great Falls†	Montgomery	200	43	55.7	-0.4	80	2	30	31	40	6.85	+4.21	2.30	0.0	9	12	6	13	sw.	Floyd J. Miller.
Hancock (Tonoloway)	Washington	455	22	54.1	-0.1	86	3	25	31	45	6.45	+3.53	1.98	0.0	10	8	12	11	.....	Chas. E. Sullivan.
Hancock (City)	do.	421	8	.....	.....	.....	.....	.....	.....	.....	6.20	+3.28	1.75	0.0	10	.....	.....	.....	.....	American Fruit Growers.
Keedysville	do.	400	25	56.3	-0.3	83	3	29	31	37	6.18	+3.02	2.39	0.0	11	10	9	12	s.	William R. Murray.
La Plata	Charles	190	12	57.6	0.0	82	3	30	31	36	8.69	+6.27	3.39	0.0	8	13	7	11	nw.	J. A. Miller.
Laurel	Prince Georges	320	38	57.1	+1.4	81	3	33	29	35	6.60	+3.76	2.80	0.0	9	12	6	13	nw.	Walter M. Page.
Lutherville	Baltimore	340	6	55.6	.....	81	2	27	31	40	6.84	.....	2.77	0.0	9	10	9	12	w.	Evan G. Chaney.
Maryland Line	do.	840	8	55.4	.....	79	3	32	14	29	7.34	.....	2.60	0.0	8	8	11	12	nw.	August W. Clark, P. M.
Mechanicsville	St. Marys	165	6	.....	.....	.....	.....	.....	.....	.....	5.86	.....	2.00	0.0	5	13	7	11	sw.	Chester L. Fulton.
Millington	Kent	27	35	58.4	+1.2	83	3	28	31	36	5.10	+2.19	1.51	0.0	9	13	7	11	sw.	Zach S. Graves.
Oakland	Garrett	2,461	33	49.5	+0.2	78	3	23	29	45	3.98	+0.58	1.22	2.2	11	6	10	15	w.	Henry L. Higman.
Parkton§	Baltimore	780	2	55.4	.....	80	3	32	14	31	7.36	.....	2.96	0.0	14	8	11	12	w.	R. E. Weber.
Picardy	Allegany	900	6	55.0	.....	85	3	30	29	37	5.13	.....	2.02	0.0	9	7	13	11	w.	C. B. Cornell.
Pleasant Hill ††	Baltimore	660	8	.....	.....	.....	.....	.....	.....	.....	5.63	.....	2.20	0.0	7	11	8	12	nw.	American Fruit Growers.
Pocomoke City	Worcester	37	27	.....	.....	.....	.....	.....	.....	.....	5.92	+2.84	1.83	0.0	7	10	11	10	.....	J. E. Henry.
Princess Anne	Somerset	17	57	58.8	+1.2	81	4	33	29	35	7.19	+4.09	2.00	0.0	5	11	11	9	nw.	Wm. H. Dryden.
Ridgely	Caroline	57	11	59.1	+1.9	83	4	31	31	36	5.83	+2.86	1.85	0.0	6	12	8	11	sw.	James R. Stewart.
Rock Hall	Kent	25	18	58.5	+0.2	84	4	28	31	38	5.95	+3.40	1.95	0.0	5	12	7	12	nw.	Albert White.
Salisbury	Wicomico	23	27	60.0	+1.5	82	3	33	31	34	6.76	+3.71	2.00	0.5	11	10	10	nw.	Charles Judefind.	
Sines (Deep Creek)	Garrett	2,040	5	48.2	.....	77	3	24	31	43	3.80	.....	1.51	0.5	15	6	10	15	nw.	Homestead Dairy Farms.
Snow Hill	Worcester	15	2	59.0	.....	81	4	31	31	35	6.70	.....	2.79	0.0	6	10	11	10	sw.	C. E. MacMurray.
Solomons§§	Calvert	20	41	60.1	-0.2	80	3	36	31	27	4.18	+1.63	1.65	0.0	7	13	8	10	se.	Richard Leake.
State Sanatorium	Frederick	1,460	24	54.8	-0.4	78	3	34	14	26	12.68	+9.58	4.00	0.0	12	10	9	12	.....	J. J. Daley.
Stevensville	Queen Annes	12	16	59.2	.....	83	4	34	14	32	5.92	.....	2.05	0.0	4	12	7	12	w.	Dr. V. F. Cullen.
Takoma	Montgomery	320	34	58.2	+2.1	82	2	32	31	32	6.14	+3.59	2.21	0.0	8	12	6	13	sw.	T. R. Price.
Towson	Baltimore	465	10	.....	.....	.....	.....	.....	.....	.....	7.08	+4.14	2.00	0.0	10	9	10	12	.....	Milton L. Seaman.
Western Port	Allegany	1,000	39	55.2	+0.3	83	3	29	29	43	5.50	+3.11	2.02	0.0	12	.....	.....	.....	.....	Metropolitan District.
Westminster	Carroll	770	23	55.4	-0.3	80	2	28	31	33	7.86	+4.98	3.10	0.0	10	12	7	12	sw.	Norris Bruce.
Woodstock	Baltimore	415	62	56.4	+1.5	82	3	28	31	38	6.53	+3.48	2.90	0.0	9	11	8	12	w.	Harry J. Mathias.
<i>Dist. of Columbia</i>																				
Washington**	.....	112	62	58.0	+0.6	81	3	36	31	31	7.40	+4.56	3.68	0.0	10	12	4	15	s.	Woodstock College.
<i>Delaware</i>																				
Bridgeville	Sussex	45	9	59.0	+1.7	83	3	30	31	38	6.31	+3.23	2.00	0.0	7	11	10	10	nw.	George Ray.
Delaware City	New Castle	12	46	57.9	+0.4	81	2	33	31	33	5.85	+3.25	1.90	0.0	8	9	10	12	nw.	James E. Maden.
Dover	Kent	34	43	58.6	+1.5	84	3	33	31	32	5.90	+3.11	1.87	0.0	7	10	10	11	nw.	Arthur G. Livingston.
Millford	Sussex	20	50	59.4	+1.1	85	3	30	31	36	8.18	+5.00	2.05	0.0	9	11	10	10	nw.	Chas. J. Holzmueller.
Millsboro	do.	20	40	59.2	+1.5	82	3	31	31	37	8.00	+4.69	1.80	0.0	7	10	11	10	nw.	G. L. Ellis.
Wilmington§§	New Castle	86	39	.....	.....	.....	.....	.....	.....	.....	5.71	+2.59	2.95	0.0	10	9	10	12	nw.	Street Department.
Wilmington§§§	do.	260	21	57.6	+0.7	80	2	34	14	31	6.21	+3.09	2.37	0.0	8	9	10	12	nw.	Water Department.
<i>Means and extremes:</i>																				
For Maryland and District of Columbia.	.....	.....	.....	56.5	+0.4	88	3	22	31	45	6.35	+3.48	4.00	0.1	9	10	9	12	nw.	.....
For Delaware	.....	.....	.....	58.6	+1.1	85	3	30	31	38	6.70	+3.69	2.37	0.0	8	10	10	11	nw.	.....
For entire section	.....	.....	.....	56.7	+0.5	88	3	22	31	45	6.39	+3.51	4.00	0.1	9	10	9	12	nw.	.....

The departures from normal temperature and precipitation are computed only for such stations as have 10 or more years of record, but all complete reports are used in determining section or division means. Data in italics determined from surrounding stations. † Precipitation is less than 0.01 inch rain



Daily Temperatures for October, 1932

Table with columns for Stations, 31 days, and Mean. Rows include Maryland stations (Aberdeen to Washington, D.C.) and Delaware stations (Bridgeville to Wilmington).

§Instruments are read in morning; maximum temperature then read is charged to preceding day, on which it almost always occurs. Temperatures at Aberdeen, Baltimore, Sines, and Washington are from midnight to midnight; other stations, except Cumberland, are for 24-hour period ending late in afternoon, near sunset. Data in italics determined from surrounding stations.