

BULLETIN No. 49

MAY, 1905

UNIVERSITY OF IDAHO
AGRICULTURAL EXPERIMENT STATION

DEPARTMENT OF AGRONOMY

SOIL TEMPERATURES 1903-1904
SUMMARY OF WEATHER DATA 1894-1904

By G. A. CROSTHWAIT

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MOSCOW, IDAHO

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BULLETINS

The regular bulletins of the Station are sent free to all citizens of Idaho who request them. Late bulletins are:

42. Experiment in Pig Feeding.
43. Planting the Apple Orchard.
44. Alkali and the Treatment of Alkali Lands.
45. Trap Rock of the Palouse Regions as Road Material.
46. Grape Phylloxera.
47. Pruning the Apple Orchard.
48. Raising Calves on Separator Milk.

SOIL TEMPERATURES FOR THE YEAR 1903

For Weeks Ending

Depth	Jan. 7	Jan. 14	Jan. 21	Jan. 28	Feb. 4	Feb. 11	Feb. 18	Feb. 25	Mar. 4	Mar. 11	Mar. 18	Mar. 25	Apr. 1
6 feet	43	42	42	42	42	41	41	40	40	40	40	40	39
5 feet	42	40	40	40	40	40	40	38	38	38	38	38	38
4 feet	40	39	39	39	39	39	39	37	37	37	36	36	38
3 feet	38	38	38	37	37	37	37	36	36	36	35	35	38
2 feet	36	36	35	35	35	35	35	34	34	34	34	34	37
1 foot	35	35	35	35	35	35	34	33	33	33	33	33	38
9 ins.	34	34	34	34	34	33	32	32	32	32	32	32	38
6 ins.	33	34	33	33	34	32	31	31	32	31	32	32	39
3 ins.	33	33	31	33	33	31	28	31	31	32	32	33	39
1 inch	33	32	30	31	31	29	27	32	31	32	32	34	38

SOIL TEMPERATURES FOR THE YEAR 1903

For Weeks Ending

Depth.	Apr. 8	Apr. 15	Apr. 22	Apr. 29	May 6	May 13	May 20	May 27	June 3	June 10	June 17	June 24	July 1
6 feet	39	40	40	40	41	42	43	44	44	46	48	50	51
5 feet	39	39	40	41	42	43	45	45	45	48	50	52	53
4 feet	39	39	40	42	43	44	46	45	46	50	52	55	56
3 feet	39	38	40	43	44	46	47	46	48	52	56	58	59
2 feet	40	38	40	43	45	47	48	47	50				
1 foot	39	38	41	45	47	48	49	47	53	62	67	65	64
9 ins.	39	37	41	46	48	48	47	48	55	61	65	65	63
6 ins.	37	37	42	46	49	50	46	50	58	65	66	66	65
3 ins.	34	35	41	48	48	48	44	49	60	66	65	66	65
1 inch	34	35	39	45	47	47	43	47	60	69	67	66	63

SOIL TEMPERATURES FOR THE YEAR 1903

For Weeks Ending

Depth	July 8	July 16	July 22	July 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9	Sept. 16	Sept. 23	Sept. 30
6 feet	52	53	53	54	55	56	57	57	57	57	56	55	55
5 feet	54	54	55	56	57	58	59	59	59	58	57	56	55
4 feet	56	56	57	59	60	60	61	61	60	59	58	56	55
3 feet	58	58	60	62	62	63	64	63	61	60	58	55	56
2 feet													56
1 foot	60	63	66	67	66	68	68	65	62	61	55	53	55
9 ins.	60	63	66	68	66	67	68	65	61	59	54	54	55
6 ins.	59	66	67	68	67	67	69	64	60	59	51	52	55
3 ins.	58	66	72	71	66	69	70	63	60	58	49	53	56
1 inch	57	67	72	71	66	70	71	60	58	57	47	53	56

SOIL TEMPERATURES FOR THE YEAR 1903

For Weeks Ending

Depth	Oct. 7	Oct. 14	Oct. 21	Oct. 28	Nov. 4	Nov. 11	Nov. 18	Nov. 25	Dec. 2	Dec. 9	Dec. 16	Dec. 23	Dec. 30	Dec. 31
6 feet	54	54	53	52	51	50	50	49	47	47	46	45	44	44
5 feet	54	53	52	52	51	50	49	47	46	45	44	43	43	42
4 feet										44	43	42	41	40
3 feet	54	52	51	51	50	49	46	44	43	42	41	39	39	39
2 feet	53	51	50	50	49	47	43	41	41	40	38	37	36	37
1 foot	51	50	49	49	47	45	40	39	40	37	35	35	35	35
9 ins.	51	50	48	48	46	42	39	38	40	37	35	35	35	35
6 ins.	49	49	47	48	46	40	36	26	39	35	33	33	33	32
3 ins.	47	47	46	47	45	38	35	45	39	32	32	33	32	31
1 inch	43	44	44	46	44	35	32	33	37	28	30	33	31	28

SOIL TEMPERATURES FOR THE YEAR 1904

For Weeks Ending

Depth	Jan. 7	Jan. 14	Jan. 21	Jan. 28	Feb. 4	Feb. 11	Feb. 18	Feb. 25	Mar. 3	Mar. 10	Mar. 17	Mar. 24	Mar. 31
6 feet	44	43	43	42.	41	40.5	40.5	40	39.5	39.5	39	39	39
5 "	42	42	41.	40.	40	39.5	39	39	38.5	38.5	38.5	38.5	38.5
4 "	40.5	39.5	39	39.	38.5	38	38	38	37.5	37.5	37.5	37.5	38
3 "	39	38	38	38.	37	36.5	36.5	36	36	36.5	36	37	37
2 "	37	36	36	36.	35.5	35	35	35	35	35	35.5	36.5	36
1 "	34.5	34	33.5	33.5	33.5	33.5	33	33	33.5	33	34.5	35	35.5
9 ins.	33.5	33.5	33.5	33.	33	33	33	33	33	33	34.5	35.5	35
6 "	32.5	33	32.5	32.	31.5	32.5	32.5	32.5	33	32.5	34	34.5	35.5
3 "	32	32.5	32	30.5	29.	32	32	32	32	33	34	34	34
1 "	30	31.5	30.5	28.5	28	31.5	30.5	32	32	33	34	34	32.5

SOIL TEMPERATURES FOR THE YEAR 1904

For Weeks Ending

Depth	Apr. 7	Apr. 14	Apr. 21	Apr. 28	May 5	May 12	May 19	May 26	June 2	June 9	June 16	June 23	June 30
6 feet	39	39.5	41	42	43	44	44.5	45.5	47	48	48.5	49.5	51
5 "	38.5	39.5	41.5	43	44	44.5	45	47	48	49.5	50	51.5	53
4 "	38	39.5	42	43	44	45	46	47.5	49.5	51	51	53	55
3 "	38	40	44	44	46	46.5	47.5	50	52.5	52.5	53.5	56.5	58
2 "	38	41	46	45	47	47.5	49.5	52.5	54.5	54.5	56	60	61
1 "	38.5	43.5	46.5	47	48.5	48.5	51	56	59	55.5	58	63	64.5
9 ins.	38	44	47	47	47.5	47.5	52	56.5	58	56	58	63	64
6 "	38.5	45.5	47	47	47.5	47	54	57	58.5	55.5	59	64.5	67
3 "	38	47.5	47	47	46.5	46	54.5	58	59.5	55	61	66	69
1 "	38	48.5	44.5	45	46	46	56	60	61	54.5	60.5	65	67.5

SOIL TEMPERATURES FOR THE YEAR 1904

For Weeks Ending

Depth	July 7	July 14	July 21	July 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29
6 feet	52	53.5	54.5	55	55.5	56	57	57.5	57.5	57.5	57.5	57.5	57.5
5 "	54	55.5	56.5	57	57.5	58.5	59	59.5	59.5	59	59	58.5	58
4 "	56.5	58	58.5	58.5	59.5	60.5	61.5	61.5	61	60.5	60.5	59	58.5
3 "	60	61.5	61	58.5	59.5	60.5	64	63.5	63	62	61.5	60.5	59
2 "	63.5	65	63	65.5	65.5	67.5	68	66.5	65	64	63	62	59
1 "	67	68.5	64.5	67.5	67	69	69	65.5	64	63.5	61.5	60	57.5
9 ins.	66.5	67	63	67	66.5	69	68	64.5	64	62.5	61	59.5	57.5
6 "	70.5	68	62.5	68.5	67	70.5	70	65	65.5	64	59	59.5	56
3 "	73.5	68.5	62	70.5	72	72	71.5	65.5	66	65	58	59	55
1 "	67	68	60	69.5	73.5	73	72.5	66	66	65.5	57	58.5	54

SOIL TEMPERATURES FOR THE YEAR 1904

For Weeks Ending

Depth	Oct. 6	Oct. 13	Oct. 20	Oct. 27	Nov. 3	Nov. 10	Nov. 17	Nov. 24	Dec. 1	Dec. 8	Dec. 15	Dec. 22	Dec. 29	Dec. 29-31
6 feet	56.5	56	55	54	53	52	51	50	50	49	48	47	46	45.5
5 "	57.5	57	55.5	54	53	52	51	50	49	48	47	46.5	45	44.5
4 "	57.5	56.5	55	53.5	52	51	50	49	48	45	45	44	43.5	43
3 "	58	57	55	52.5	52	50.5	49	47.5	46.5	44.5	43.5	43	42.5	42
2 "	58	56.5	53	51	49.5	48	47	45.5	45	43.5	40.5	40	39.5	38.5
1 "	57	54.5	49.5	48	47.5	46	45.5	43.5	43	39	37	38.5	37.5	35.5
ins.	56.5	54	49	47.5	47	46	45.5	43.5	42.5	37	36.5	38	36	34.5
6 "	56	52	48	47.5	46	45	43	40.5	40.5	35	34.5	36.5	33	32.5
3 "	54.5	50.5	45	45.5	45	43	42	40	40	31.5	33	35.5	31	32.5
1 "	54	49	43.5	44	45	42.5	41	39.5	40	31.5	33	36	30.5	33

TEMPERATURE—SUMMARY FOR ELEVEN YEARS—MOSCOW, IDAHO

Year	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.		Annual Average
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1894	45.	-3.	45.	-8.	58.	12.	76.	25.	86.	30.	84.	32.	90.	40.	96.	34.	86.	32.	74.	28.	57.	20.	48.	3.	70.6
	Mean	27.4	Mean	25.7	Mean	37.3	Mean	46.	Mean	54.6	Mean	57.1	Mean	71.7	Mean	67.5	Mean	58.8	Mean	46.2	Mean	41.1	Mean	29.4	20.4
1895	46.	1.	47.	9.	56.	12.	76.	26.	81.	30.	96.	33.	92.	40.	94.	38.	84.	28.	74.	21.	67.	10.	56.	-1.	72.4
	Mean	28.6	Mean	32.5	Mean	36.8	Mean	48.7	Mean	51.1	Mean	57.4	Mean	68.2	Mean	62.3	Mean	48.4	Mean	45.4	Mean	37.8	Mean	32.1	17.7
1896	48.	20.	67.	25.	68.	18.	88.	26.	84.	31.	92.	34.	97.	40.	93.	38.	85.	30.	76.	28.	56.	14.	57.	20.	73.4
	Mean	36.1	Mean	40.8	Mean	40.7	Mean	44.9	Mean	47.5	Mean	60.4	Mean	70.0	Mean	65.1	Mean	56.1	Mean	50.4	Mean	30.8	Mean	38.4	24.7
1897	48.	-12.	62.	10.	56.	0.	78.	32.	92.	32.	89.	36.	92.	38.	93.	30.	85.	32.	80.	31.	59.	0.	48.	8.	73.5
	Mean	23.9	Mean	33.6	Mean	32.5	Mean	50.1	Mean	58.8	Mean	57.7	Mean	65.7	Mean	64.1	Mean	54.2	Mean	51.4	Mean	34.4	Mean	28.6	19.7
1898	39.	-4.	55.	18.	59.	5.	75.	27.	78.	28.	86.	32.	95.	34.	100.	39.	84.	31.	66.	23.	50.	19.	48.	2.	70.4
	Mean	23.3	Mean	35.6	Mean	30.9	Mean	45.6	Mean	50.3	Mean	57.9	Mean	65.4	Mean	69.6	Mean	58.6	Mean	44.2	Mean	31.9	Mean	25.7	21.2
1899	50.	-16.	49.	-17.	51.	16.	70.	27.	72.	27.	80.	34.	93.	41.	86.	38.	84.	30.	78.	11.	58.	32.	44.	17.	67.9
	Mean	30.1	Mean	25.5	Mean	34.8	Mean	43.3	Mean	47.8	Mean	55.7	Mean	65.4	Mean	57.9	Mean	58.8	Mean	44.6	Mean	48.8	Mean	32.5	20.7
1900	51.	17.	48.	-2.	68.	29.	76.	25.	79.	27.	88.	35.	98.	46.	93.	47.	83.	45.	70.	32.	55.	-5.	52.	7.	71.7
	Mean	34.7	Mean	29.3	Mean	44.6	Mean	46.9	Mean	54.5	Mean	63.5	Mean	69.5	Mean	64.3	Mean	58.1	Mean	48.0	Mean	35.4	Mean	34.6	25.2
1901	46.	7.	50.	11.	61.	26.	70.	26.	84.	32.	83.	32.	94.	39.	99.	43.	79.	35.	56.	26.	51.	8.	51.	8.	71.0
	Mean	28.6	Mean	31.2	Mean	39.6	Mean	43.2	Mean	55.7	Mean	53.6	Mean	63.4	Mean	69.8	Mean	52.9	Mean	35.4	Mean	41.1	Mean	31.2	32.5
1902	58.	-12.	58.	-8.	61.	15.	65.	22.	83.	30.	95.	35.	90.	30.	96.	36.	95.	30.	80.	31.	56.	13.	50.	6.	73.5
	Mean	26.8	Mean	36.2	Mean	36.4	Mean	43.9	Mean	52.4	Mean	58.2	Mean	61.0	Mean	66.6	Mean	58.7	Mean	50.9	Mean	34.7	Mean	28.7	19.4
1903	49.	10.	49.	4.	60.	19.	68.	25.	90.	28.	88.	40.	85.	37.	97.	39.	85.	31.	71.	31.	64.	12.	60.	17.	72.2
	Mean	33.8	Mean	30.6	Mean	34.8	Mean	42.2	Mean	52.8	Mean	61.0	Mean	68.5	Mean	64.3	Mean	54.3	Mean	50.1	Mean	37.4	Mean	31.4	24.4
1904	45.	11.	51.	11.	54.	13.	79.	28.	79.	32.	89.	32.	94.	40.	98.	42.	90.	33.	78.	30.	60.	26.	57.	11.	72.8
	Mean	30.7	Mean	31.4	Mean	34.2	Mean	49.3	Mean	53.5	Mean	59.0	Mean	65.6	Mean	68.4	Mean	60.9	Mean	51.1	Mean	44.5	Mean	33.2	29.7
Average	47.3	1.7	51.9	5.3	59.3	15.0	72.8	29.3	82.5	29.7	88.2	34.1	93.0	38.6	96.0	38.1	86.3	33.3	75.1	27.4	58.0	12.6	51.9	8.9	71.8
Mean	29.2	32.0	36.6	49.9	58.6	62.6	72.8	82.5	89.9	92.6	98.3	105.8	110.5	116.6	121.4	125.4	128.3	130.9	132.4	133.8	134.5	134.5	134.5	134.5	134.5

Explanation of Table

Reading from left to right, the maximum, minimum and mean temperature for each month and the averages for the same for the year are given.
 At the bottom are given the averages of the maximum, minimum and mean monthly temperature for a period of eleven years.
 The mean monthly temperature is the average of the mean daily temperatures, which are one-half the sum of the daily maximum and minimum temperatures.

SUMMARY FOR 11 YEARS

MOSCOW, IDAHO

PRECIPITATION

		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1894	Rain	1.78	.00	2.42	1.38	1.53	1.23	.12	.25	.89	3.80	1.48	.00	14.88
	Snow	4.23	2.98	1.01	.00	.00	.00	.00	.00	.00	.00	.73	1.15	10.10
	Total	6.01	2.98	3.43	1.38	1.53	1.23	.12	.25	.89	3.80	2.21	1.15	24.98
1895	Rain	.12	.72	.00	1.14	2.17	.41	.90	.32	3.33	.00	1.12	.00	10.23
	Snow	2.01	.22	1.16	.16	.00	.00	.00	.00	.00	.00	.26	1.81	5.62
	Total	2.13	.94	1.16	1.30	2.17	.41	.90	.32	3.33	.00	1.38	1.81	15.85
1896	Rain	.09	1.27	1.11	.57	3.01	2.21	.17	1.33	.81	1.07	4.10	2.65	18.39
	Snow	.20	.00	.00	.00	.59	.00	.00	.00	.00	.00	1.42	.45	2.66
	Total	.29	1.27	1.11	.57	3.60	2.21	.17	1.33	.81	1.07	5.52	3.10	21.05
1897	Rain	.28	1.00	2.52	.40	1.20	2.72	.85	.35	1.67	1.10	4.29	2.21	18.59
	Snow	.73	1.19	.93	.00	.00	.00	.00	.00	.00	.00	1.42	.35	4.27
	Total	1.01	2.19	3.45	.40	1.20	2.72	.85	.35	1.67	1.10	5.86	2.56	22.86
1898	Rain	.45	1.89	.35	1.02	2.09	1.31	.79	1.29	1.30	.83	1.36	.80	13.48
	Snow	1.75	.15	1.45	.00	.00	.00	.00	.00	.00	.00	2.28	.91	6.54
	Total	2.20	2.04	1.80	1.02	2.09	1.31	.79	1.29	1.30	.83	3.64	1.71	20.02
1899	Rain	2.10	.30	.41	2.95	2.12	1.24	.47	2.38	1.38	2.28	4.13	.66	20.42
	Snow	2.10	2.35	1.20	.00	.00	.00	.00	.00	.00	.40	.00	2.10	8.15
	Total	4.20	2.65	1.61	2.95	2.12	1.24	.47	2.38	1.38	2.68	4.13	2.76	28.57
1900	Rain	3.47	1.53	2.37	1.78	3.27	.47	.35	.73	.79	3.24	2.07	3.23	23.35
	Snow	.15	.25	.11	.03	.00	.00	.00	.00	.00	.00	.12	.41	1.07
	Total	3.62	1.78	2.48	1.81	3.27	.47	.35	.73	.79	3.24	2.19	3.64	24.42
1901	Rain	1.64	3.01	2.28	1.61	2.30	2.06	.59	.17	1.36	.71	2.91	2.53	21.17
	Snow	1.20	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.58	1.82
	Total	2.84	3.05	2.28	1.61	2.30	2.06	.59	.17	1.36	.71	2.91	3.11	22.99
1902	Rain	.87	2.89	1.18	1.21	.74	.06	2.33	.27	1.29	1.24	5.91	1.57	19.56
	Snow	1.42	.60	.24	.00	.00	.00	.00	.00	.30	.00	.68	2.16	5.10
	Total	2.29	3.49	1.42	1.21	.74	.06	2.33	.27	1.29	1.24	6.59	3.73	24.66
1903	Rain	2.72	.22	1.36	.31	3.39	1.80	.57	1.43	1.57	1.65	1.43	1.57	18.02
	Snow	1.08	.00	.41	.56	.24	.00	.00	.00	.00	.00	1.36	.80	4.45
	Total	3.80	.22	1.77	.87	3.63	1.80	.57	1.43	1.57	1.65	2.79	2.37	22.47
1904	Rain	.12	.14	1.01	1.21	.73	2.74	1.30	.11	.38	1.49	.69	.80	10.72
	Snow	1.10	1.36	1.76	.00	.00	.00	.00	.00	.00	.00	.00	.45	4.67
	Total	1.22	1.50	2.77	1.21	.73	2.74	1.30	.11	.38	1.49	.69	1.25	15.39
Average	Rain	1.24	1.18	1.37	1.23	2.05	1.48	.77	.79	1.34	1.58	2.68	1.46	17.16
	Total	1.45	.83	.75	.07	.08	.00	.00	.00	.00	.04	.72	1.01	4.95
		2.69	2.01	2.12	1.30	2.13	1.48	.77	.79	1.34	1.62	3.40	2.47	22.11

Explanation of Table.

Reading from left to right, the inches of rain, melted snow, and total precipitation for each month, and the sum of each for the year are given. (The approximate snowfall in inches may be found by multiplying the inches of melted snow by ten.)

At the bottom are given the average inches of rain, melted snow, and total precipitation for each month during a period of eleven years.