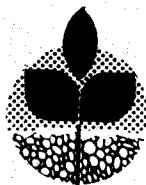
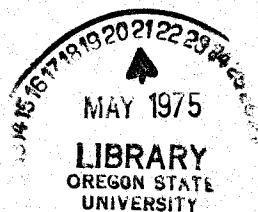


Local Climatological Data for Oregon State University 1974

With Normals, Means, and Extremes

Special Report 277
Revised March 1975



Agricultural Experiment Station
Oregon State University, Corvallis

in cooperation with the

United States Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service

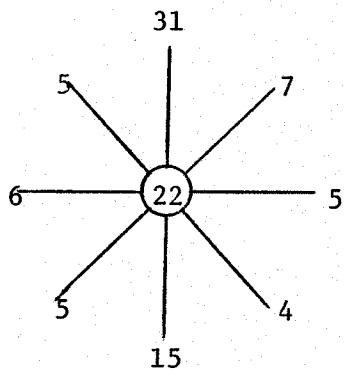
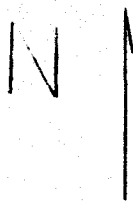
PREFACE

Miscellaneous Paper 105, Agricultural Experiment Station, Oregon State University, entitled "A Summary of Climate and Weather for Corvallis, Oregon 1899 through 1960" by Wheeler Calhoun was published in March 1961. The United States Department of Commerce National Weather Service, working with the Crop Science Department at Oregon State University, has instrumented the Hyslop Field Lab Weather Station to measure additional elements important to agricultural scientists. See Special Report 400, Agricultural Experiment Station, OSU, entitled "Hyslop Farm Microstation Climate Summary" by P. D. Olson and E. M. Bates, published in December, 1973, for additional climatic data. There will be a continuing need for a publication to make these data readily available to researchers. It is planned that local climatological data from Hyslop Field Lab Weather Station will be published annually.

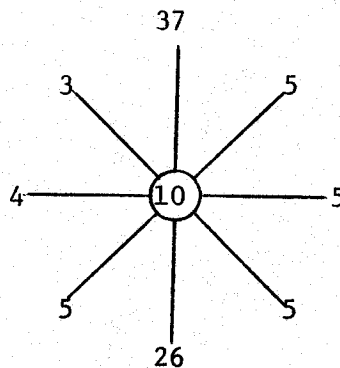
Earl M. Bates
Advisory Agricultural Meteorologist
NOAA, National Weather Service
Oregon State University
Corvallis, Oregon

Wheeler Calhoun, Jr.
Associate Professor of Agronomy
Oregon State University
Corvallis, Oregon

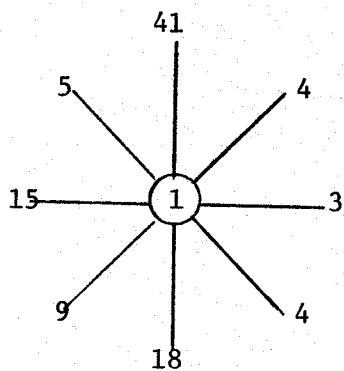
WIND DIRECTIONS



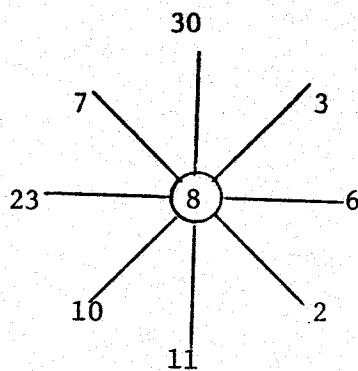
Time: 10PM to 5AM PST



Time: 6AM to 10AM PST



Time: 11AM to 5PM PST



Time: 6PM to 9PM PST

Wind roses for four different time periods of the day at the Hyslop Field Lab.

The number in the center of the wind roses is the percent of time the wind was calm. Numbers at each of the compass points indicate the percentage of time the wind was from that direction.

WIND VELOCITIES

The Monthly Frequency of Duration of Consecutive Hours of Wind
in Ranges of 15 to 19 MPH and 20 MPH and Above for April Through October

Hyslop Field Lab

Month	Range of Wind in MPH	Number of Consecutive Hours					
		1	2	3	4	5	greater than 5
April	15 to 19	11	5	1			
	20 or greater	1					
May	15 to 19	2	0	1	1	0	1
	20 or greater	0					
June	15 to 19	8					
	20 or greater	0					
July	15 to 19	2					
	20 or greater	0					
August	15 to 19	3	1	0	3		
	20 or greater	0					
September	15 to 19	11	5	4	1	1	
	20 or greater	0					
October	15 to 19	8	3	0	1	1	1
	20 or greater	0	1				

This table shows the number of times (frequency) per month that wind at velocities of 15 to 19 MPH and 20 MPH and greater are likely to occur for periods of 1, 2, 3, 4, 5, or more than 5 consecutive hours (duration) at a time.

MONTHLY EVAPORATION FOR CROP SEASON

From Standard Weather Bureau
Open Pan (1953-1974)
(inches)

Year	Apr	May	Jun	Jul	Aug	Sep	Oct
1953	.73	2.64	3.43	6.77	5.48	4.13	1.65
1954	3.01	4.19	3.43	5.06	3.77	2.70	1.34
1955	1.16	4.44	5.04	5.30	6.72	4.25	1.30
1956	2.99	4.52	4.53	7.74	5.72	4.26	1.66
1957	2.71	3.43	4.62	7.05	5.87	5.07	1.55
1958	1.11	5.20	4.51	8.29	8.31	4.80	2.54
1959	2.80	3.27	5.00	9.13	8.11	3.57	1.84
1960	2.37	2.90	7.27	9.89	6.87	4.72	2.30
1961	2.01	2.33	6.97	8.53	7.06	4.55	1.97
1962	3.24	3.26	6.87	8.13	6.74	5.01	1.05
1963	2.61	4.31	5.20	6.52	8.16	4.68	1.63
1964	2.75	4.25	4.75	6.77	6.20	4.56	2.26
1965	2.86	4.96	6.31	8.96	6.35	6.57	2.04
1966	3.99	6.16	7.49	8.31	8.77	4.69	2.62
1967	2.61	5.61	6.69	9.08	8.69	6.49	2.18
1968	*	3.83	6.17	8.35	5.39	3.96	1.61
1969	2.73	5.83	5.36	7.61	8.31	4.34	1.25
1970	3.21	4.87	7.08	9.36	8.19	4.86	2.81
1971	3.33	5.48	4.91	7.82	6.99	5.22	2.28
1972	2.23	5.58	6.00	10.27	8.42	5.40	3.15
1973	4.41	6.10	6.50	9.48	6.88	5.54	2.11
1974	2.70	4.16	6.99	6.82	8.92	6.97	3.22
MEAN	2.64	4.42	5.68	7.96	7.08	4.83	2.01

* Missing data.

Latitude 44° 38'
 Longitude 123° 12'
 Elevation (ground) 225 ft.

METEOROLOGICAL DATA FOR THE CURRENT YEAR

Hyslop Field Laboratory, Corvallis, Oregon
 1974

Month	Temperature							Degree days	Precipitation						Relative humidity				Wind			Number of days														
	Averages			Extremes					Total	Greatest in 24 hrs.	Date	Snow, Sleet			4 A.M.	10 A.M.	4 P.M.	10 P.M.	Average hourly speed	Prevailing direction	Fastest mile			Evaporation in inches	Mean Daily Radiation in Langley's	8 A.M. Sky			Precipitation .01 inch or more	Snow, Sleet, 1.0 or more	Thunderstorms	Heavy fog	Max. temp.		Min. temp.	
	Daily maximum	Daily minimum	Monthly	Highest	Date	Lowest	Date					Total	Greatest in 24 hrs.	Date							Speed	Direction	Date			Clear	Partly cloudy	Cloudy					90° and above	32° and below	32° and below	Zero and below
J	43.5	29.9	36.7	58	15	9	10	11.59	2.74	15	.4	.4	12	81	80	64	79	S				110	15	0	16	19	0	0	5	15	0					
F	47.3	35.0	41.2	26	26	28	7	7.52	.92	28	.3	.2	23	93	93	69	90	S				126	3	1	24	26	0	0	0	11	0					
M	54.0	37.2	45.6	68	27	26	8	8.87	1.61	28	T	T	14	87	78	59	79	S				208	9	0	22	22	0	0	0	4	0					
A	57.5	40.7	49.1	70	30	30	12	2.39	.55	9	0	0	0	89	77	47	74	S				2.70	329	9	3	18	17	0	0	0	1	0				
M	63.6	42.4	53.0	77	6	34	30	1.46	.33	15	0	0	0	92	64	38	72	N				4.16	424	11	4	16	14	0	0	0	0	0				
J	74.6	48.4	61.5	92	30	40	26	.61	.33	5	0	0	0	91	55	33	65	N				7.00	529	16	1	13	4	1	0	0	0	0				
J	77.5	49.5	63.5	95	31	44	12	1.81	.87	9	0	0	0	93	51	33	67	N				6.82	489	14	8	9	8	2	4	0	0	0				
A	82.2	51.8	67.0	96	1	43	15	0	0	-	0	0	0	91	49	26	65	N				8.92	472	17	5	9	0	8	0	0	0	0				
S	83.6	48.2	65.9	97	25	38	30	.07	.06	9	0	0	0	74	53	21	48	N				6.97	370	25	1	4	2	0	8	0	0	0				
O	68.1	37.4	52.8	82	2	32	24	1.41	.38	29	0	0	0	90	75	33	70	N				3.22	230	18	3	10	7	0	0	0	2	0				
N	53.4	38.5	46.0	68	13	28	30	6.88	1.58	7	0	0	0	95	86	73	91	S				88	5	8	17	16	0	0	0	5	0					
D	49.3	37.1	43.2	65	12	28	28	8.15	1.70	27	0	0	0	94	89	82	95	S				59	5	5	21	23	1	0	0	7	0					
Year	62.9	41.3	52.1	96	Aug 1	9	Jan 10	50.76	2.74	Jan 15	.7	.4	Jan 12					S				39.79	147	39	179	158	4	21	5	45	0					

NORMALS, MEANS, AND EXTREMES

Month	Temperature							Normal degree days	Precipitation						Relative humidity				Wind			Mean number of days																
	Normal			Extremes					Normal total	Maximum monthly	Year	Minimum monthly	Year	Snow, Sleet			4 A.M.	10 A.M.	4 P.M.	10 P.M.	Mean hourly speed	Prevailing direction	Fastest		Mean Daily Radiation in Langley's	Average Daytime Sky Cover, Tenths	Mean Monthly Evaporation in inches	8 A.M. Sky Cover			Precipitation .01 inch or more	Snow, Sleet, 1.0 or more	Thunderstorms	Heavy fog	Max. temp.		Min. temp.	
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year							Mean total	Maximum monthly	Year							Maximum in 24 hrs.	Year				Speed	Direction	Clear					Partly cloudy	Cloudy	90°	32°
(a)	30 e	30 e	30 +	79		79		30 +	79		79		65		34	79						8	8	8	8				8	15	20	34	34	34	34	34	34	34
J	44.4	32.1	38.8	64	1940	-1	1950	7.06	15.51	1970	1.99	1920	4.28	1965	4.8	51.9	1950				S				101	.8		3	9	19	19			0	1	13	0	
F	49.5	34.7	43.1	69	1916	-5	1899	4.63	15.23	1904	.12	1920	2.76	1961	0.8	9.5	1923				S				143	.7		5	10	13	17			0	#	7	0	
M	54.0	36.8	45.5	78	1947	13	1891	4.20	11.70	1904	.43	1926	1.89	1916	0.6	6.5	1891				S				237	.7		7	12	12	19			0	0	7	0	
A	61.0	40.5	50.1	91	1926	24	1968	2.50	7.99	1937	.22	1939	2.06	1937	T	1.5	1911				S				334	.7	2.55	9	12	9	13			0	0	9	0	
M	67.7	45.5	55.7	99	1922	28	1915	1.77	5.71	1896	.16	1947	2.23	1941	0	0	-				N				472	.6	4.35	10	13	8	11			0	0	0	0	
J	72.9	49.2	61.0	102	1925	32	1929	1.15	3.84	1952	0	1918	2.14	1952	0	0	-				N				528	.5	5.58	10	12	8	8			1	0	0	0	
J	81.2	51.6	65.9	107	1946	36	1921	0.33	2.72	1947	0	1967	1.75	1947	0	0	-				N				562	.3	7.95	17	11	3	2			4	0	0	0	
A	81.1	51.2	65.8	102	1960	35	1910	0.55	5.24	1968	0	1955	1.35	1968	0	0	-				N				473	.3	7.01	16	10	5	3			3	0	0	0	
S	75.8	48.3	62.0	103	1944	26	1919	1.31	5.40	1920	T	1942	2.18	1969	0	0	-				N				364	.4	4.69	14	11	5	6			2	0	0	0	
O	64.2	43.0	53.2	90	1936	13	1919	3.78	9.70	1950	T	*	2.26	1924	0.2	5.0	1936				N				211	.6	1.95	8	12	11	13			0	0	1	0	
N	52.2	37.2	45.3	73	1890	10	1896	6.04	18.28	1973	.22	1890	3.16	1921	0.3	9.5	1955				S				104	.7		4	10	16	17			0	#	6	0	
D	46.8	35.1	41.0	66	1950	-14	1919	6.83	14.47	1968	2.33	1930	3.58	1941	0.8	20.5	1919				S				68	.8		3	8	20	20			0	#	9	0	
Yr.	62.6	42.1	52.3	107	1946 Jul	-14	1919 Dec	39.70	18.28	1973 Nov	0	1967	4.28	1965 Jan	7.5	51.9	1950 Jan				S				34.08		106	130	129	146			10	1	52	#		

(a) Length of record, years.
 * Missing data
 † Also earlier dates, months or years
 e 1931-1960 (adjusted to present location)
 + 1941-1970, 30-year normal
 # Less than 1
 T Trace

Soil Temperature at 4-inch Level
Hyslop Field Lab, Corvallis, Oregon
Average for 11 years - 1960-1971

Date	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min
1	42	39	42	39	44	41	53	45	59	49	70	58	77	63	83	70	76	64	66	57	53	48	44	43
2	41	39	42	38	45	41	52	45	60	49	72	59	78	64	83	70	75	64	65	56	52	48	44	42
3	40	39	42	38	46	40	54	43	61	50	74	59	79	65	83	69	75	65	65	55	52	47	44	42
4	40	38	44	40	46	40	55	44	63	55	73	60	82	66	82	69	76	64	65	55	51	48	43	41
5	39	37	43	40	47	41	54	46	63	52	73	60	81	66	81	68	76	64	63	56	51	48	43	41
6	38	37	43	39	46	40	55	47	62	51	74	60	82	67	83	68	75	65	64	55	49	46	44	42
7	38	37	43	39	47	41	55	45	63	51	72	62	80	67	84	69	74	64	64	54	49	45	44	42
8	38	36	43	39	48	41	57	46	66	53	73	61	82	67	84	69	73	64	63	56	49	46	43	41
9	38	36	44	38	48	41	55	48	67	53	71	61	79	66	84	70	74	63	64	56	50	46	43	41
10	38	37	44	40	47	42	53	47	65	43	73	60	82	65	85	71	73	62	62	55	50	47	43	41
11	38	36	44	40	49	44	55	46	65	54	71	60	79	66	85	68	74	63	61	54	50	48	42	40
12	39	36	44	41	49	43	56	45	68	54	72	60	80	66	83	70	74	61	61	54	51	48	42	40
13	38	36	45	41	48	42	54	45	65	54	74	60	81	66	82	69	73	61	59	53	50	47	41	39
14	40	37	45	41	48	42	56	46	65	54	75	61	83	68	81	68	72	61	59	52	49	47	41	39
15	41	39	44	41	48	43	55	46	66	54	75	62	81	68	82	68	71	61	59	52	49	47	40	39
16	41	39	45	42	50	43	56	47	67	54	75	62	82	68	82	68	71	60	59	51	49	46	40	39
17	42	40	45	42	50	47	54	46	68	55	77	63	82	67	80	67	71	61	58	50	49	45	41	38
18	42	40	46	43	49	43	55	45	69	55	76	63	84	68	81	67	68	60	57	49	48	44	39	38
19	43	41	46	42	50	42	43	46	70	56	79	63	83	68	79	67	68	60	56	49	47	44	39	38
20	43	40	46	42	49	41	55	45	68	57	78	63	83	68	79	66	67	59	56	49	47	44	40	39
21	43	40	47	41	50	43	55	46	69	57	77	63	81	68	78	68	67	58	55	51	46	44	41	40
22	42	41	46	41	52	43	57	46	70	57	78	64	82	68	79	66	68	58	55	49	46	43	43	40
23	42	40	46	40	51	44	57	49	68	57	76	63	82	67	79	67	67	59	55	51	45	43	43	41
24	41	39	47	41	51	44	57	49	69	56	75	62	83	68	78	66	67	58	56	50	46	42	43	41
25	42	40	47	41	52	43	57	49	69	56	74	62	84	68	75	66	68	59	55	50	47	44	43	41
26	42	40	47	42	50	44	58	50	71	57	76	63	83	69	77	65	67	58	54	49	46	43	43	41
27	42	39	46	42	52	44	59	49	71	57	75	63	83	68	75	65	68	58	53	48	45	42	42	41
28	41	39	41	37	52	45	59	49	71	57	74	62	85	69	76	65	68	58	52	49	44	41	42	40
29	41	39	41	37	52	45	60	48	72	58	74	61	85	69	77	64	68	57	53	48	44	42	42	41
30	42	39			52	45	60	48	71	58	75	62	85	70	77	65	66	58	53	47	44	42	41	40
31	41	39			53	45			71	58			84	70	75	64			53	48			41	40

Average Daily Radiation in Langleys

National Weather Service - Hyslop Field Laboratory, Corvallis, Oregon

Eight Year Average

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	85	112	174	195	378	549	569	495	399	331	144	70
2	78	124	189	314	480	503	673	541	446	312	181	68
3	120	111	163	387	448	480	681	533	428	300	136	87
4	101	97	165	306	420	549	554	420	421	267	129	75
5	87	89	182	330	374	516	556	506	368	289	144	64
6	95	121	205	326	316	453	508	494	380	268	144	90
7	92	168	259	339	419	539	533	515	399	276	111	73
8	85	161	275	288	408	468	512	532	401	281	93	65
9	102	124	199	239	353	453	469	533	406	235	114	72
10	109	135	163	351	457	518	516	578	359	202	118	89
11	77	145	213	359	478	474	575	552	432	168	134	97
12	82	125	214	302	488	601	655	450	397	208	109	74
13	68	142	223	353	539	568	590	471	384	210	108	58
14	87	125	207	339	519	456	623	508	361	261	101	55
15	57	123	249	410	445	481	638	489	350	260	97	46
16	71	125	243	326	535	571	543	446	389	261	112	50
17	104	112	331	320	502	538	600	507	382	210	67	93
18	99	134	288	270	511	620	591	473	310	225	73	43
19	110	137	268	331	535	600	606	446	320	150	138	39
20	129	182	324	272	420	572	549	459	263	132	61	39
21	122	165	249	348	558	560	599	434	271	139	65	66
22	123	168	211	394	408	516	570	469	297	129	63	55
23	98	183	269	339	470	528	595	428	349	147	42	57
24	117	181	241	353	442	473	596	381	357	180	74	67
25	129	208	241	424	484	516	562	484	347	172	80	97
26	116	191	206	334	494	538	566	472	346	164	70	72
27	122	183	242	367	544	499	541	441	403	121	97	82
28	137	126	257	400	576	552	607	469	306	168	111	54
29	114		293	347	514	541	561	470	311	205	114	66
30	93		308	376	532	597	569	332	345	152	77	64
31	113		292		573		514	341		118		78

PROBABILITY DATES OF
FIRST FALL OCCURRENCE OF VARIOUS FREEZING
TEMPERATURES

Ten Per Cent Chance Of:

	32°	28°	24°
Albany	October 13	October 31	November 9
Corvallis	October 11	October 25	November 12
Eugene	October 9	October 25	November 7
Forest Grove	September 25	October 19	November 4
Portland	November 3	December 2	December 9
Salem	October 9	October 22	November 7

Twenty Per Cent Chance Of:

	32°	28°	24°
Albany	October 20	November 6	November 20
Corvallis	October 18	November 1	November 23
Eugene	October 16	November 1	November 18
Forest Grove	October 3	October 26	November 15
Portland	November 10	December 9	December 20
Salem	October 16	October 29	November 18

Fifty Per Cent Chance Of:

	32°	28°	24°
Albany	November 3	November 22	December 14
Corvallis	November 1	November 17	December 17
Eugene	October 30	November 17	December 12
Forest Grove	October 17	November 11	December 9
Portland	November 24	December 25	January 13
Salem	October 30	November 14	December 12

Data for these tables extracted from OAES, Station Bulletin 581

PROBABILITY DATES OF
LAST SPRING OCCURRENCE OF VARIOUS FREEZING
TEMPERATURES

WILLIAMETTE VALLEY

Fifty Per Cent Chance Of:

	24°	28°	32°
Albany	January 21	February 20	April 2
Corvallis	January 28	February 27	April 15
Eugene	January 21	March 6	April 8
Forest Grove	February 10	March 29	April 26
Portland	January 15	January 24	February 28
Salem	February 1	March 9	April 19

Twenty Per Cent Chance Of:

	24°	28°	32°
Albany	February 13	March 12	April 17
Corvallis	February 20	March 19	April 30
Eugene	February 13	March 28	April 23
Forest Grove	March 5	April 18	May 11
Portland	February 7	February 13	March 15
Salem	February 24	March 28	May 4

Ten Per Cent Chance Of:

	24°	28°	32°
Albany	February 25	March 21	April 26
Corvallis	March 4	March 28	May 9
Eugene	February 25	April 6	May 2
Forest Grove	March 17	April 27	May 20
Portland	February 19	February 22	March 24
Salem	March 8	April 7	May 13

Data for these tables extracted from OAES, Station Bulletin 581