

S105  
9E55  
no. 194  
cop. 2

# Consumptive Use and Net Irrigation Requirement Estimates of Monthly Values for Oregon

SPECIAL REPORT 194  
JULY 1965

**Agricultural Experiment Station  
Oregon State University  
Corvallis, Oregon**



## CONTENTS

	Page
Introduction.....	1
Climatic Information.....	2
Computed Consumptive Use and Net Irrigation Requirement.....	18
References.....	71

## LIST OF TABLES

	Page
Table 1. Divisions, Areas, and Weather Stations Within Each Area.....	4
Table 2. Weather Bureau Stations Used in Computing Consumptive Use of Irrigation Water-- Location, Elevation, Latitude, and Years of Record Used.....	5
Table 3. Summary of Average Monthly Temperature (t) and Precipitation (r) for Selected Weather Bureau Stations in Oregon.....	7
Table 4. Computed Consumptive Use and Net Irrigation Requirement.....	20
Table 5. Growing Seasons Used in Computing Consumptive Use and Irrigation Requirement....	66

AUTHORS: Charles R. Dehlinger and Darrell G. Watts are, respectively, former Research Assistant and Assistant Professor, Agricultural Engineering Department. Marvin N. Shearer is Extension Irrigation Specialist.

ACKNOWLEDGMENT: The authors wish to express their sincere appreciation to Mrs. O. E. Smith whose assistance was invaluable throughout the process of preparing this report. Credit should also be given to the OSU extension agents in several departments who gave advice in the preparation of the tables.

This report was prepared in co-operation with the State of Oregon Water Resources Board under Project 64.001.

The preparation of this document was financed in part through an urban planning grant from the Housing and Home Finance Agency, under the provisions of Section 701 of the Housing Act of 1954, as amended.

CONSUMPTIVE USE AND NET IRRIGATION REQUIREMENT  
ESTIMATES OF MONTHLY VALUES FOR OREGON

by  
Charles R. Dehlinger  
Darrell G. Watts  
Marvin N. Shearer

INTRODUCTION

Information on the consumptive use of water by crops is basic to the design of an efficient irrigation system. The allocation of a portion of the water of a river basin for irrigation purposes must be based on the irrigation requirements of the crops to be grown. These requirements must be known on both an annual and a short-term basis. Experiment Station Bulletin 500 (3), issued in 1951, listed estimates of average seasonal consumptive use and net irrigation requirement for the principal crops grown in different areas of Oregon.

This report presents estimates of average monthly consumptive use and net irrigation requirement, as well as revised seasonal values. It will be followed by a bulletin presenting the chance of occurrence of consumptive use values as they vary from the average and capacity suggestions for design of irrigation systems.

Consumptive use can be determined through field experiments or through calculations involving climatological information. Values determined in the field are applicable principally for the years during which they were measured and are costly to obtain. On the other hand, consumptive use may be calculated for any year and locality for which the necessary climatological information is available. However, in calculating the consumptive use, assumptions must be made which, under certain conditions, lead to incorrect values. Where measured consumptive use information was available for areas in Oregon, comparisons between the two techniques were made for specific years. Generally, there was less than two inches difference in seasonal consumptive use values obtained by the two methods.

## CLIMATIC INFORMATION

Consumptive use values calculated in this report are based on climatic data. Precipitation and temperature records from 81 weather stations having good long-term records were used to represent the various regions of Oregon. The state was subdivided into nine major divisions in accordance with United States Weather Bureau procedures. In addition, the seven divisions which are most important agriculturally were subdivided into a total of 27 smaller areas. Boundaries of the divisions and locations of weather stations within the divisions are shown on the map, Figure 1. The divisions, areas, and weather stations in each area are tabulated in Table 1. The station numbers in the table correspond to the numbers on the map.

An alphabetical list of the weather stations showing their elevation, latitude, and number of years of record used in determining average temperature and precipitation is given in Table 2. The mean monthly temperature and precipitation for each station is listed in Table 3.

Monthly temperature and precipitation data for each year of record for each station were collected. Monthly and annual means were calculated for each station. The means for several stations in an area were then averaged to obtain the mean monthly temperature and precipitation for that area. The mean area data were used in computing monthly and annual consumptive use and net irrigation requirements.

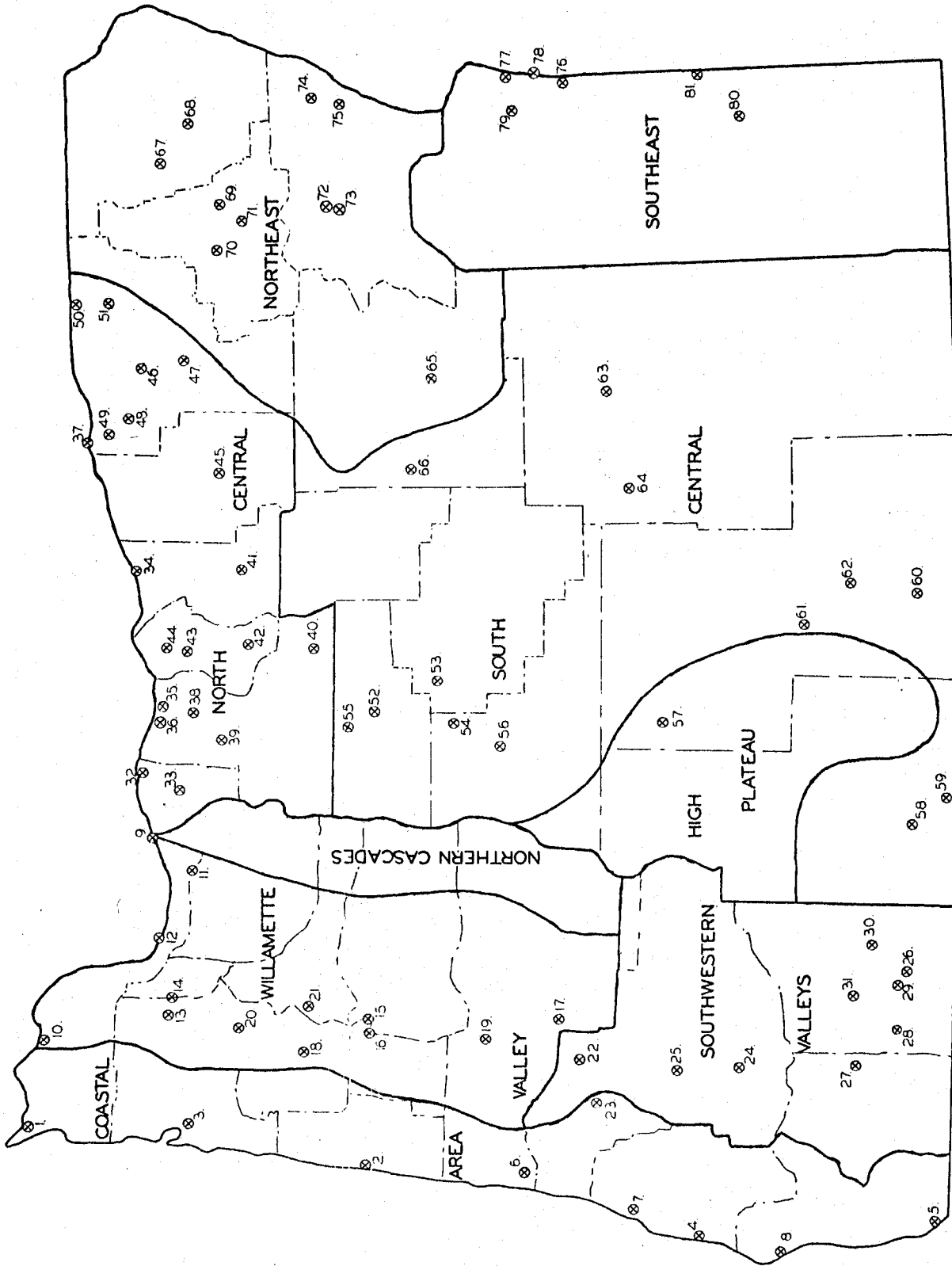


Figure 1. Division Boundaries and Weather Station Locations.

Table 1. Divisions, Areas, and Weather Stations Within Each Area

<p><u>COASTAL</u></p> <p>North Coast:            1-Astoria            2-Newport            3-Tillamook</p> <p>South Coast:            4-Bandon            5-Brookings            6-Canary            7-North Bend            8-Port Orford</p>	<p>Lake Creek--Little Butte Creek:            30-Lake Creek            31-Modoc Orchard</p>	<p>Bend:            56-Bend            57-Fremont</p>
<p><u>WILLAMETTE VALLEY</u></p> <p>Columbia River Below Hood River:            9-Bonneville Dam            10-Clatskanie            11-Headworks            12-Portland Airport</p>	<p><u>NORTH CENTRAL</u></p> <p>Hood River Valley:            32-Hood River ES            33-Parkdale</p>	<p>Klamath:            58-Klamath Falls            59-Merrill</p>
<p>Tualatin Valley:            13-Forest Grove            14-Hillsboro</p> <p>Willamette Valley:            15-Albany            16-Corvallis--State University            17-Cottage Grove            18-Dallas            19-Eugene Airport            20-McMinnville            21-Salem</p>	<p>Columbia River Above Hood River:            34-Arlington            35-Big Eddy            36-The Dalles            37-Umatilla</p>	<p>Lakeview:            60-Lakeview            61-Paisley            62-Valley Falls</p>
<p><u>SOUTHWESTERN VALLEYS</u></p> <p>Umpqua River:            22-Drain            23-Elkton            24-Riddle            25-Roseburg</p> <p>Medford--Grants Pass:            26-Ashland            27-Grants Pass            28-Jacksonville            29-Talent</p>	<p>East Slope Mt. Hood:            38-Dufur            39-Friend</p>	<p>Harney Valley:            63-Burns            64-Squaw Butte ES</p>
	<p>Columbia Basin Wheat Land:            40-Antelope            41-Condon            42-Kent            43-Moro            44-Wasco</p>	<p><u>NORTHEAST</u></p> <p>Wallowa Valley:            67-Enterprise            68-Wallowa</p>
	<p>Pendleton--Heppner:            45-Heppner            46-Pendleton AP            47-Pilot Rock</p> <p>Hermiston:            48-Echo            49-Hermiston</p>	<p>Grand Ronde Valley:            69-Cove            70-LaGrande            71-Union</p>
	<p>Milton--Freewater:            50-Milton            51-Weston</p>	<p>Baker Valley:            72-Baker Airport            73-Baker</p>
	<p><u>SOUTH CENTRAL</u></p>	<p>Pine &amp; Eagle Valleys:            74-Halfway            75-Richland</p>
	<p>Madras--Redmond:            52-Madras            53-Prineville            54-Redmond            55-Warm Springs Res.</p>	<p><u>SOUTHEAST</u></p> <p>Malheur:            76-Adrian            77-Malheur Branch ES            78-Nyssa            79-Vale</p> <p>Jordan Valley:            80-Danner            81-Sheaville</p>

Table 2. Weather Bureau Stations Used in Computing  
Consumptive Use of Irrigation Water--Location,  
Elevation, Latitude, and Years of Record Used

Station	Location on map	Elevation ft.	Latitude N.	Minimum # years of record used
Adrian	76	2,240	43° 44'	41
Albany	15	212	44° 38'	77
Antelope	40	2,690	44° 55'	35
Arlington	34	350	45° 43'	49
Ashland	26	1,750	42° 13'	77
Astoria	1	220	46° 11'	99
Baker Airport	72	3,369	44° 50'	17
Baker	73	3,444	44° 47'	63
Bandon	4	8	43° 07'	16
Bend	56	3,599	44° 04'	58
Big Eddy	35	125	45° 38'	39
Bonneville Dam	9	85	45° 38'	23
Brookings	5	80	42° 03'	44
Burns	63	4,140	43° 35'	23
Canary	6	100	43° 56'	28
Canyon City	65	3,194	44° 23'	21
Clatskanie	10	80	46° 06'	25
Condon	41	2,909	45° 14'	55
Corvallis, State Univ.	16	205	44° 38'	70
Cottage Grove	17	650	43° 47'	44
Cove	69	3,100	45° 19'	42
Dallas	18	350	44° 56'	24
Danner	80	4,000	42° 56'	30
Dayville	66	2,434	44° 28'	61
Drain	22	302	43° 40'	51
Dufur	38	1,325	45° 27'	49
Echo	48	601	45° 45'	52
Elkton	23	125	43° 39'	22
Enterprise	67	3,760	45° 26'	27
Eugene Airport	19	361	44° 27'	19
Forest Grove	13	180	45° 32'	63
Fremont	57	4,300	43° 19'	36
Friend	39	2,430	45° 20'	16
Grants Pass	27	925	42° 26'	71
Halfway	74	2,675	44° 52'	17
Headworks	11	747	45° 27'	54
Heppner	45	1,950	45° 21'	68
Hermiston	49	624	45° 49'	54
Hillsboro	14	203	45° 31'	30
Hood River Exp. Sta.	32	500	45° 41'	71

Table 2. (continued)

Station	Location on map	Elevation ft.	Latitude N.	Minimum # years of record used
Jacksonville	28	1,640	42° 18'	59
Kent	42	2,707	45° 12'	35
Klamath Falls	58	4,190	42° 15'	67
LaGrande	70	2,786	45° 20'	72
Lake Creek	30	2,300	42° 25'	28
Lakeview	60	4,756	42° 11'	71
Madras	52	2,300	44° 38'	47
Malheur Branch Exp. Sta.	77	2,251	43° 59'	18
McMinnville	20	150	45° 13'	67
Merrill	59	4,080	42° 03'	10
Milton	50	1,060	45° 56'	42
Modoc Orchard	31	1,270	42° 27'	46
Moro	43	1,858	45° 29'	30
Newport	2	136	44° 38'	69
North Bend	7	11	43° 25'	29
Nyssa	78	2,185	43° 52'	20
Paisley	61	4,371	42° 42'	34
Parkdale	33	1,740	45° 31'	49
Pendleton Airport	46	1,492	45° 41'	18
Pilot Rock	47	1,817	45° 29'	47
Portland Airport	12	21	45° 36'	22
Port Orford	8	300	42° 44'	51
Prineville	53	2,868	44° 19'	62
Redmond	54	2,994	44° 17'	29
Richland	75	2,215	44° 46'	38
Riddle	24	700	42° 58'	43
Roseburg	25	508	43° 14'	65
Salem	21	195	44° 55'	57
Sheaville	81	4,600	43° 07'	10
Squaw Butte Exp. Sta.	64	4,675	43° 29'	22
Talent	29	1,550	42° 16'	47
The Dalles	36	102	45° 36'	98
Tillamook	3	15	45° 29'	50
Umatilla	37	285	45° 55'	64
Union	71	2,765	45° 13'	50
Vale	79	2,240	43° 59'	64
Valley Falls	62	4,326	42° 29'	44
Wallowa	68	2,935	45° 34'	52
Warm Springs Reservoir	55	3,332	43° 35'	28
Wasco	44	1,300	45° 36'	41
Weston	51	2,100	45° 48'	61



Table 3. Summary of Average Monthly Temperature (t) and Precipitation (r) for Selected Weather Bureau Stations in Oregon

	Adrian		Albany		Antelope		Arlington	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	28.2	1.10	39.3	6.50	30.0	1.49	33.0	1.55
February	34.7	0.93	42.6	5.24	35.0	1.13	38.4	1.11
March	42.9	0.71	46.7	4.28	40.3	1.08	46.4	0.76
April	51.6	0.77	51.6	2.66	46.7	0.88	53.8	0.47
May	59.8	0.95	57.0	2.20	53.2	1.33	61.6	0.60
June	67.1	0.78	61.8	1.40	59.4	1.04	67.9	0.54
July	76.1	0.20	66.8	0.43	67.4	0.26	75.2	0.12
August	73.0	0.27	66.3	0.52	65.8	0.37	74.0	0.15
September	62.8	0.47	61.0	1.69	58.9	0.68	65.7	0.38
October	51.7	0.68	53.2	3.39	49.8	1.01	54.5	0.77
November	38.8	0.88	45.2	6.15	39.6	1.55	42.2	1.38
December	31.4	0.97	40.9	6.81	33.7	1.58	36.4	1.36
Total		8.71		41.27		12.40		9.19

	Ashland		Astoria		Baker Airport		Baker	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	37.9	2.81	40.4	11.91	23.1	0.73	25.4	1.04
February	41.6	2.25	42.6	9.31	29.3	0.72	30.5	0.95
March	45.4	1.98	45.3	8.61	35.6	0.78	37.3	0.98
April	50.4	1.44	49.4	5.28	44.0	0.70	45.1	0.91
May	56.5	1.62	53.5	3.56	52.1	1.66	52.1	1.37
June	62.4	1.08	57.6	2.98	57.5	1.40	58.7	1.28
July	69.3	0.41	60.8	1.20	65.5	0.36	67.1	0.49
August	68.4	0.30	61.4	1.32	62.9	0.43	65.7	0.49
September	62.0	0.84	59.0	3.36	55.8	0.47	57.3	0.64
October	53.3	1.57	54.0	6.30	45.5	0.73	47.8	0.77
November	44.4	2.59	47.0	10.98	34.2	0.81	36.5	1.02
December	38.6	3.06	42.6	12.62	27.1	0.78	28.1	1.13
Total		19.95		77.43		9.57		11.07

Table 3. (continued)

	Bandon		Bend		Big Eddy		Bonneville Dam	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	45.3	9.12	30.3	1.81	33.4	2.22	35.7	10.87
February	46.5	7.23	34.1	1.34	38.9	1.67	40.1	9.22
March	46.7	6.36	38.6	0.94	46.5	1.18	44.6	8.28
April	49.2	3.70	44.5	0.72	53.9	0.53	51.5	4.85
May	52.3	2.49	50.7	1.13	60.7	0.54	57.3	3.73
June	55.9	1.41	57.0	1.09	66.8	0.54	61.7	2.71
July	57.4	0.38	64.3	0.48	73.3	0.12	67.8	0.82
August	57.4	0.38	62.8	0.39	72.7	0.17	67.0	1.10
September	56.3	1.87	55.6	0.52	65.9	0.56	63.4	2.77
October	53.4	4.37	48.2	0.79	55.3	1.05	54.4	7.52
November	50.0	8.13	38.6	1.58	43.1	2.11	44.4	11.21
December	47.2	8.40	32.4	1.75	37.2	2.34	39.9	12.40
Total	53.84		12.54		13.03		75.48	
	Brookings		Burns		Canary		Canyon City	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	46.6	12.50	25.0	1.64	43.1	12.87	32.8	1.97
February	47.8	10.16	30.2	1.39	45.1	10.47	36.1	1.40
March	48.7	9.10	36.8	0.96	46.3	9.83	41.4	1.56
April	51.0	5.62	45.4	0.67	49.4	5.27	49.0	1.57
May	53.9	3.86	52.8	0.98	53.3	3.61	55.7	1.99
June	57.1	2.31	58.8	0.90	57.2	2.35	60.8	1.36
July	58.5	0.60	68.8	0.38	60.2	0.87	69.7	0.43
August	59.1	0.58	66.5	0.36	60.8	0.97	69.2	0.35
September	59.0	2.43	58.5	0.57	59.3	2.67	61.5	0.94
October	55.6	6.49	47.8	0.90	54.6	7.19	52.2	1.08
November	51.3	10.96	35.8	1.24	48.9	10.22	41.6	1.56
December	48.0	12.56	29.1	1.51	45.3	13.02	34.9	1.64
Total	77.17		11.50		79.34		15.85	

Table 3. (continued)

	Clatskanie		Condon		Corvallis-- State University		Cottage Grove	
<u>Month</u>	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$
January	37.3	9.00	28.7	1.39	39.2	6.58	39.5	6.77
February	40.9	8.05	33.1	1.10	42.4	5.15	42.6	5.61
March	44.3	6.39	39.6	1.06	46.0	4.18	45.6	5.11
April	49.6	3.75	45.6	0.97	50.8	2.42	49.9	3.35
May	55.0	2.53	52.2	1.27	55.9	1.85	54.8	2.44
June	59.2	1.96	58.9	1.09	60.9	1.17	59.8	1.53
July	63.4	0.60	66.8	0.40	66.1	0.29	64.8	0.25
August	63.2	0.97	65.6	0.33	66.0	0.40	64.6	0.51
September	60.4	1.95	57.9	0.78	61.2	1.51	60.0	1.73
October	52.6	4.98	48.6	1.10	53.5	3.13	53.4	3.90
November	43.9	8.23	38.3	1.55	45.3	6.25	45.6	6.60
December	40.3	9.73	31.7	1.39	40.9	6.60	41.1	7.20
<b>Total</b>	58.14		12.43		39.53		45.00	
	Cove		Dallas		Danner		Dayville	
<u>Month</u>	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$
January	28.9	2.16	37.5	8.87	25.6	1.21	33.5	1.22
February	33.4	1.89	41.3	7.33	30.7	1.07	38.0	1.10
March	39.1	2.26	44.3	5.50	37.7	1.03	42.8	1.00
April	46.3	2.33	49.6	2.86	46.0	0.99	49.5	1.06
May	53.0	2.45	55.4	2.10	53.5	1.36	55.3	1.38
June	59.2	2.33	59.8	1.30	60.1	1.06	62.1	1.20
July	67.2	0.55	65.1	0.28	69.1	0.29	69.3	0.42
August	65.2	0.80	64.2	0.54	66.6	0.15	67.2	0.46
September	57.9	1.38	61.5	1.34	57.9	0.61	59.5	0.60
October	48.8	2.05	53.0	3.87	48.0	0.90	50.7	0.83
November	38.5	2.57	44.3	7.36	36.2	1.06	41.4	1.12
December	32.1	2.52	40.7	8.37	30.1	1.32	35.3	1.27
<b>Total</b>	23.29		49.72		11.05		11.66	

Table 3. (continued)

	Drain		Dufur		Echo		Elkton	
<u>Month</u>	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$
January	40.8	7.47	29.8	2.05	32.1	1.37	41.1	8.73
February	44.4	5.89	34.9	1.46	38.4	1.09	45.0	8.02
March	47.4	5.06	41.7	1.01	46.4	0.92	47.8	6.01
April	51.8	2.97	47.9	0.66	53.7	0.78	52.0	3.17
May	56.3	2.35	54.5	0.78	61.3	0.73	57.3	2.38
June	61.2	1.42	60.4	0.77	68.4	0.76	61.9	1.46
July	66.4	0.34	66.9	0.21	75.3	0.20	67.2	0.29
August	65.8	0.39	65.8	0.17	72.7	0.26	66.6	0.39
September	61.3	1.56	59.5	0.68	64.3	0.56	63.4	1.25
October	54.5	3.76	50.1	0.94	54.0	0.86	55.6	4.63
November	46.9	7.08	39.1	1.87	41.9	1.27	47.1	7.28
December	41.8	7.56	33.1	1.93	35.6	1.27	43.7	9.12
Total	45.85		12.53		10.07		52.73	
	Enterprise		Eugene Airport		Forest Grove		Fremont	
<u>Month</u>	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$	$\frac{(t)}{^{\circ}\text{F}}$	$\frac{(r)}{\text{In.}}$
January	23.5	0.89	38.0	6.99	37.3	7.46	25.9	1.29
February	28.1	0.84	42.7	5.14	40.9	6.07	30.3	0.96
March	34.9	1.10	45.1	4.51	45.1	4.75	35.5	0.66
April	43.5	1.20	50.7	2.22	50.3	2.54	40.6	0.65
May	50.3	1.75	55.9	2.06	56.2	1.92	47.2	0.92
June	55.9	2.19	60.7	1.35	61.2	1.29	53.6	0.91
July	63.0	0.62	66.4	0.30	66.2	0.41	60.8	0.43
August	60.5	0.60	65.5	0.42	66.3	0.55	58.5	0.29
September	54.4	1.02	61.7	1.07	61.1	1.64	51.6	0.50
October	45.7	1.13	52.9	4.20	52.6	3.51	43.7	0.69
November	33.8	1.02	45.0	6.14	44.2	7.39	34.4	1.08
December	27.4	0.99	41.2	6.73	39.6	8.18	27.7	1.40
Total	13.35		41.13		45.71		9.78	

Table 3. (continued)

	Friend		Grants Pass		Halfway		Headworks	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	27.2	2.64	39.1	5.61	22.3	3.05	36.7	11.00
February	33.1	2.03	43.1	4.46	28.7	2.65	40.1	8.60
March	37.4	1.32	47.5	3.00	36.9	1.68	44.1	8.83
April	44.1	0.70	52.5	1.74	46.8	1.61	49.5	5.98
May	50.4	1.00	58.3	1.49	54.1	1.90	54.8	5.26
June	55.5	0.81	63.7	0.86	59.7	1.45	59.5	4.09
July	63.9	0.13	70.2	0.20	67.8	0.34	64.9	1.19
August	62.6	0.17	69.3	0.20	65.8	0.33	64.4	1.54
September	57.9	0.57	63.0	0.84	58.7	0.78	59.8	3.98
October	47.4	1.32	54.1	2.35	47.7	1.28	52.7	6.88
November	36.1	2.32	44.6	4.19	35.8	2.35	44.3	11.28
December	31.5	2.75	39.7	5.20	27.9	3.23	39.3	11.33
Total	15.76		30.14		20.65		79.96	
	Hepner		Hermiston		Hillsboro		Hood River Exp. Sta.	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	32.4	1.41	30.8	1.18	37.8	5.95	32.8	5.27
February	36.5	1.25	37.0	0.92	41.5	4.51	37.1	3.94
March	42.9	1.29	45.7	0.45	45.4	3.98	43.4	3.28
April	48.6	1.28	53.5	0.59	51.3	1.89	50.1	1.66
May	55.0	1.39	60.8	0.61	57.0	1.85	56.3	1.12
June	61.2	1.22	67.8	0.63	61.4	1.46	61.6	0.80
July	68.5	0.39	74.3	0.17	66.6	0.38	67.2	0.19
August	67.4	0.37	71.8	0.23	65.7	0.50	66.3	0.26
September	60.0	0.85	63.3	0.48	61.8	1.44	60.0	1.14
October	51.2	1.19	52.7	0.78	53.2	3.32	51.6	2.36
November	41.7	1.40	40.7	1.14	44.0	5.54	41.4	5.24
December	35.2	1.39	34.3	1.13	40.5	6.97	35.8	5.94
Total	13.43		8.31		37.79		31.20	

Table 3. (continued)

	Jacksonville		Kent		Klamath Falls		La Grande	
Month	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.
January	36.7	3.96	29.1	1.34	29.1	2.05	30.0	2.01
February	41.0	3.37	33.8	1.04	33.5	1.49	33.7	1.93
March	45.9	2.23	39.8	0.96	39.3	1.21	40.1	2.01
April	51.1	1.55	46.4	0.80	46.5	0.84	47.8	1.78
May	57.2	1.51	53.9	1.05	53.4	1.00	55.0	2.01
June	63.5	1.05	60.1	0.98	59.9	0.84	61.4	1.67
July	70.8	0.29	68.3	0.26	68.2	0.30	70.0	0.56
August	70.3	0.30	66.8	0.23	66.9	0.28	68.7	0.64
September	62.8	0.79	59.9	0.61	59.2	0.58	59.9	1.09
October	53.2	1.69	50.2	0.87	49.3	1.06	50.1	1.59
November	43.1	3.67	39.1	1.31	38.6	1.72	39.8	2.20
December	37.4	4.09	33.1	1.29	31.5	1.98	33.2	2.21
Total	24.50		10.74		13.35		19.70	
	Lake Creek		Lakeview		Madras		Malheur Br. Exp. Sta.	
Month	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.
January	37.3	3.26	27.4	1.92	30.5	1.16	27.1	1.19
February	41.0	2.93	30.6	1.79	35.1	0.76	33.9	1.02
March	44.6	3.02	36.0	1.46	40.1	0.62	41.8	0.88
April	50.1	2.29	43.8	1.13	45.8	0.55	51.2	0.71
May	54.9	2.41	50.8	1.39	52.3	1.01	59.2	1.27
June	60.8	1.49	58.1	1.06	59.0	0.79	65.8	0.86
July	67.8	0.22	66.6	0.30	65.8	0.25	74.8	0.08
August	67.0	0.28	65.4	0.24	64.1	0.25	72.1	0.21
September	61.6	1.19	57.1	0.64	57.0	0.61	63.1	0.40
October	52.8	2.87	48.0	1.01	47.5	0.63	51.3	0.80
November	43.9	3.52	37.5	1.58	38.1	1.21	37.9	1.09
December	38.3	3.74	30.2	1.80	32.4	1.15	31.3	1.12
Total	27.22		14.32		8.99		9.63	

Table 3. (continued)

	McMinnville		Merrill		Milton		Modoc Orchard	
<u>Month</u>	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.
January	38.6	7.05	29.0	1.45	31.7	1.58	37.7	3.41
February	42.1	5.42	32.8	1.20	37.8	1.35	42.2	2.89
March	45.9	4.84	36.9	1.11	46.2	1.38	46.5	1.95
April	50.7	2.60	43.9	0.65	53.4	1.28	52.2	1.24
May	56.0	1.84	50.3	1.17	60.5	1.31	58.0	1.20
June	60.6	1.32	55.9	0.97	67.0	1.26	64.2	0.92
July	66.0	0.38	63.4	0.28	74.5	0.27	70.8	0.26
August	65.8	0.48	60.4	0.26	72.3	0.36	69.9	0.24
September	60.9	1.78	56.3	0.61	64.1	0.78	63.4	0.63
October	53.5	3.28	46.4	1.01	54.0	1.21	53.7	1.91
November	45.2	7.12	37.9	1.26	41.6	1.63	43.6	3.22
December	40.8	7.22	31.2	1.74	35.5	1.75	38.4	3.91
Total	43.33		11.71		14.16		21.78	
	Moro		Newport		North Bend		Nyssa	
<u>Month</u>	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.	(t) °F	(r) In.
January	29.8	1.69	43.6	9.91	45.3	10.29	28.7	1.19
February	34.6	1.23	45.0	8.33	46.5	8.36	34.7	1.15
March	41.4	0.94	46.0	7.66	47.6	7.63	42.3	0.94
April	48.3	0.74	48.7	4.66	50.0	3.87	51.7	0.73
May	55.6	0.84	51.9	3.35	53.6	2.77	60.1	1.08
June	61.4	0.73	55.3	2.51	57.0	1.69	66.7	0.83
July	68.9	0.17	57.1	0.78	59.1	0.43	75.8	0.08
August	67.5	0.19	57.4	0.84	59.6	0.50	72.8	0.27
September	61.2	0.64	56.2	2.70	58.2	1.73	62.8	0.57
October	50.7	0.97	53.5	5.51	55.1	5.57	51.3	0.86
November	38.7	1.70	48.9	9.71	50.1	8.57	38.7	1.11
December	33.7	1.64	45.4	10.51	47.1	10.47	32.6	1.23
Total	11.48		66.47		61.88		10.04	

Table 3. (continued)

	Paisley		Parkdale		Pendleton Airport		Pilot Rock	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	30.3	1.07	29.6	7.43	31.1	1.54	32.3	1.43
February	35.4	0.89	34.4	5.24	37.6	1.10	36.7	1.26
March	40.1	0.85	40.4	4.51	43.0	1.14	44.2	1.26
April	46.5	0.74	46.6	2.27	51.2	1.09	50.8	1.35
May	53.1	1.18	52.7	1.70	58.7	1.32	57.9	1.42
June	59.5	1.04	58.2	1.11	64.8	1.08	64.9	1.32
July	68.2	0.43	63.6	0.26	73.3	0.23	72.2	0.31
August	66.4	0.22	62.7	0.34	70.8	0.31	70.6	0.46
September	59.1	0.42	56.9	1.28	64.2	0.67	62.5	0.79
October	49.6	0.69	48.6	3.23	52.7	1.22	52.2	1.12
November	39.0	0.91	38.8	6.77	40.7	1.40	41.3	1.47
December	33.0	1.13	33.2	7.76	35.3	1.46	35.0	1.51
Total		9.57		41.90		12.56		13.70

	Portland Airport		Port Orford		Prineville		Redmond	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	38.4	5.58	46.3	11.89	31.0	0.99	31.8	1.06
February	42.5	4.79	46.9	9.05	35.5	0.84	36.2	0.75
March	46.1	3.90	48.0	8.36	40.0	0.66	40.7	0.57
April	51.9	2.07	50.1	5.12	46.0	0.70	46.8	0.51
May	57.7	2.04	52.8	3.60	52.2	1.09	53.0	0.94
June	61.9	1.57	56.1	2.01	57.8	0.99	58.0	1.07
July	67.8	0.49	58.9	0.58	64.5	0.30	65.8	0.32
August	66.9	0.56	59.4	0.59	62.6	0.31	63.7	0.24
September	65.8	1.70	58.0	2.53	56.0	0.57	58.1	0.45
October	56.9	3.72	54.7	5.83	48.1	0.78	49.6	0.68
November	45.4	5.40	50.2	9.12	43.3	1.10	39.7	0.87
December	41.6	5.75	47.9	11.40	33.3	1.04	35.0	1.03
Total		37.57		70.08		9.37		8.49



Table 3. (continued)

	Richland		Riddle		Roseburg		Salem	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	27.8	1.20	41.3	5.15	41.2	5.07	39.1	5.84
February	34.5	1.04	44.6	3.93	44.3	4.14	42.5	4.98
March	41.5	0.77	47.7	2.90	47.4	3.15	46.2	4.08
April	49.1	0.83	52.1	1.93	52.0	2.05	51.2	2.28
May	56.8	1.33	56.6	1.39	57.0	1.76	56.4	1.88
June	64.2	0.85	62.7	1.03	62.4	1.26	61.6	1.29
July	72.3	0.25	68.2	0.24	68.2	0.24	66.9	0.37
August	70.6	0.33	67.5	0.28	67.8	0.30	66.6	0.43
September	60.8	0.58	62.3	0.94	62.6	1.12	61.7	1.57
October	50.0	0.74	54.3	2.52	54.7	2.67	54.0	3.32
November	39.4	1.16	46.8	4.38	46.8	4.71	45.5	6.59
December	30.6	1.36	42.0	5.13	42.2	5.15	41.0	6.50
Total	10.44		29.82		31.62		39.13	
	Sheaville		Squaw Butte Exp. Sta.		Talent		The Dalles	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	26.1	1.45	24.9	1.31	37.5	2.44	32.9	2.89
February	30.9	0.97	29.7	1.07	41.5	1.93	38.4	1.96
March	35.5	1.31	35.3	1.00	45.8	1.61	46.1	1.37
April	43.4	1.07	43.3	0.72	51.6	1.28	53.6	0.63
May	51.7	1.20	50.4	1.44	57.7	1.42	60.7	0.62
June	59.5	0.99	56.5	1.24	64.3	1.05	66.8	0.56
July	67.8	0.32	67.0	0.25	70.9	0.34	72.9	0.16
August	66.0	0.16	65.1	0.47	69.6	0.22	71.7	0.18
September	58.5	0.37	58.2	0.54	62.8	0.78	63.9	0.69
October	46.9	0.74	47.6	1.05	52.9	1.69	53.9	1.08
November	35.8	0.85	35.4	1.10	43.5	2.40	42.6	2.38
December	29.3	1.31	29.0	1.33	38.2	2.77	36.1	2.80
Total	10.74		11.52		17.93		15.32	

Table 3. (continued)

	Tillamook		Umatilla		Union		Vale	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	42.0	13.76	32.2	1.15	29.1	1.07	26.9	1.22
February	44.1	11.91	38.0	0.83	33.8	1.00	32.7	0.92
March	45.3	10.73	46.5	0.67	39.9	1.25	41.9	0.80
April	48.4	6.35	54.3	0.57	47.0	1.39	50.2	0.72
May	52.2	4.75	61.7	0.61	53.4	1.69	57.9	0.99
June	55.9	3.49	68.8	0.54	59.2	1.66	64.8	0.78
July	58.7	1.27	75.8	0.16	66.4	0.48	73.0	0.20
August	58.8	1.48	73.4	0.24	64.7	0.61	70.2	0.23
September	56.7	3.88	64.8	0.49	57.1	0.87	60.3	0.44
October	52.8	7.64	53.6	0.73	48.4	1.19	49.7	0.70
November	47.7	13.17	42.0	1.03	39.0	1.20	37.4	0.93
December	44.1	14.62	35.1	1.04	32.4	1.21	29.3	1.06
Total	93.05		8.06		13.62		8.99	

	Valley Falls		Wallowa		Warm Springs Reservoir		Wasco	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.	<u>(t)</u> °F	<u>(r)</u> In.
January	30.8	1.24	24.1	1.73	26.3	1.06	30.5	1.69
February	34.1	1.26	29.1	1.56	31.9	0.89	35.9	1.29
March	38.8	1.05	37.8	1.52	40.0	0.65	43.2	0.98
April	45.1	1.05	45.6	1.43	48.6	0.57	49.8	0.69
May	51.6	1.42	52.1	1.75	56.0	0.88	56.4	0.74
June	58.1	1.16	58.4	1.75	63.0	1.04	62.9	0.67
July	66.1	0.39	65.3	0.63	72.7	0.31	70.5	0.18
August	64.4	0.32	63.2	0.67	70.4	0.21	69.5	0.20
September	56.7	0.59	56.1	1.12	62.0	0.43	61.6	0.60
October	47.9	0.94	46.8	1.53	50.8	0.66	51.4	1.02
November	38.1	1.18	35.5	2.03	37.5	0.68	40.0	1.78
December	32.3	1.34	27.8	1.84	30.9	0.95	33.8	1.75
Total	11.94		17.56		8.33		11.59	

Table 3. (continued)

	Weston	
<u>Month</u>	<u>(t)</u> °F	<u>(r)</u> In.
January	31.3	2.39
February	35.3	2.15
March	42.4	2.31
April	49.8	1.99
May	56.3	2.01
June	61.9	1.55
July	70.3	0.42
August	69.4	0.53
September	61.1	1.13
October	51.4	1.84
November	42.2	2.57
December	34.0	2.44
Total	21.33	

COMPUTED CONSUMPTIVE USE AND NET IRRIGATION REQUIREMENT

Table 4 lists the average monthly and seasonal consumptive use and net irrigation requirement for the principal crops grown in Oregon. The data are tabulated according to the areas given in Table 1. Crops listed in Table 4 are, in general, those given in Experiment Station Bulletin 500. Some additions and deletions were made, mostly at the suggestion of OSU extension agents. One important change in this report is that all grass and hay crops, except alfalfa and grass seed crops, are included under the heading "pasture grass."

For a given crop, consumptive use was calculated for the average growing season as determined by average planting and harvest dates for most annual crops, or average start of growth and end of growth dates for perennial crops. For fall-seeded grains, the period used was from the average start of growth date in the spring until harvest. These dates are listed in Table 5. Actual dates may vary from year to year by as much as two weeks to a month. Thus, the listed dates should not be used for the scheduling of planting and harvesting of crops.

The computed values of consumptive use given in Table 4 were determined by using a modified form of the Blaney-Criddle procedure. This procedure is discussed in USDA-SCS Technical Release 21 (2). For the original Blaney-Criddle formula, monthly consumptive use is defined as:

$$u = kf$$

where:  $u$  = monthly consumptive use of water in inches

$k$  = an empirical coefficient for a specific crop

$$f = t \times p$$

and where:  $t$  = mean monthly temperature in degrees Fahrenheit

$p$  = per cent of the total yearly daylight hours occurring in a given month.

The total seasonal consumptive use is the sum of the monthly consumptive use values.

The modified Blaney-Criddle formula bases the "k" factor on both crop and temperature influences. That is, the monthly  $k = k_t \times k_c$ , where  $k_t$  is a monthly temperature coefficient and  $k_c$  is a monthly crop coefficient. That the

monthly "k" value should be, in part, a function of temperature is also consistent with the recent findings of Pruitt (1) at Davis, California.

In computing monthly consumptive use, values of the temperature coefficient were taken from tables in Technical Release 21. The crop coefficient for a given period was determined either directly from curves given in the technical release or from curves modified by results of field measurements and experience in Oregon.

The monthly net irrigation requirement was determined by subtracting the average monthly precipitation from the monthly consumptive use. If the precipitation exceeded consumptive use, the net irrigation requirement was considered to be zero. When the length of time considered was only a third or a half of a month, then one-third or one-half of the total monthly rainfall was considered to have fallen in that period. The computed values of net irrigation requirement do not take into account either water application efficiency or water conveyance efficiency, both of which must be considered when determining the total irrigation water requirement for a field or farm.

Since the computations are based on average climatic data and average growing season lengths, the resulting values of consumptive use and net irrigation requirement are obviously only average and do not reflect the variation which may occur from one year to the next. Approximately half the time the actual monthly consumptive use value will be greater than the computed value, and half the time it will be less than the computed value. The year to year deviation from the mean value is the subject of experiment station work now in progress.

Table 4. Computed Consumptive Use and Net Irrigation Requirement

Area: North Coast

Area: South Coast

Month	Truck crops		Pasture grass		Truck crops		Pasture grass	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	0.53	.....
March	.....	.....	1.32	.....	.....	.....	1.49	.....
April	.....	.....	2.00	.....	.....	.....	2.11	.....
May	.....	.....	2.91	.....	.....	.....	2.96	.....
June	1.04	.....	3.59	0.60	1.03	0.06	3.60	1.65
July	3.57	2.49	4.06	2.98	3.50	2.93	3.98	3.41
August	.....	.....	4.12	2.91	.....	.....	3.72	3.12
September	.....	.....	2.84	.....	.....	.....	2.95	0.70
October	.....	.....	1.95	.....	.....	.....	2.09	.....
November	.....	.....	1.06	.....	.....	.....	1.21	.....
December	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	4.61	2.49	23.85	6.49	4.53	2.99	24.64	8.88

Table 4. (continued)

Area: Columbia River Below Hood River

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	1.26	.....	.....	.....	0.81	.....	0.78	.....	.....	.....	.....	.....
April	2.19	.....	1.61	.....	2.20	.....	2.20	.....	1.30	.....	3.88	.....
May	3.46	0.07	4.19	0.80	3.46	0.07	3.46	0.07	3.99	0.60	5.65	2.26
June	4.31	1.73	5.30	2.72	4.31	1.73	1.93	0.64	6.05	3.47	6.43	3.85
July	5.35	4.57	6.45	5.67	5.35	4.57	.....	.....	3.66	2.88	6.10	5.22
August	4.76	3.72	5.54	4.50	4.76	3.72	.....	.....	0.37	.....	.....	.....
September	3.50	0.90	3.98	1.38	2.03	0.73	.....	.....	.....	.....	.....	.....
October	2.03	.....	1.51	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	0.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	27.53	10.99	28.58	15.07	22.92	10.82	8.37	0.71	15.37	6.95	22.06	11.33

Table 4. (continued)  
 Area: Columbia River Below Hood River (continued)

Month	Truck crops		Corn		Beans (bush)		Beans (pole)		Potatoes		Berries	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	....	....	....	....	....	....	....	....	....	....	....	....
May	....	....	1.96	....	....	....	2.34	0.65	....	....	1.42	....
June	1.31	0.02	4.03	1.45	2.23	0.08	5.30	2.72	1.02	....	2.91	0.33
July	4.71	3.93	6.28	5.50	4.77	3.99	6.45	5.67	5.00	4.22	4.48	3.70
August	....	....	4.97	3.93	1.66	1.14	4.70	3.83	7.16	6.12	4.29	3.25
September	....	....	....	....	....	....	....	....	....	....	3.13	0.53
October	....	....	....	....	....	....	....	....	....	....	1.57	....
November	....	....	....	....	....	....	....	....	....	....	0.59	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	6.02	3.95	17.24	10.88	8.66	5.21	18.79	12.87	13.18	10.34	18.39	7.81



Table 4. (continued)  
 Area: Columbia River Below Hood River (continued)

Month	Orchards (deciduous)		Orchards (deciduous) with cover	
	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....
February	.....	.....	.....	.....
March	.....	.....	.....	.....
April	0.81	.....	1.15	.....
May	3.34	.....	4.15	0.76
June	4.50	1.92	5.30	2.72
July	5.29	4.51	6.45	5.67
August	4.34	3.30	5.54	4.50
September	2.13	.....	3.98	1.38
October	0.55	.....	1.51	.....
November	.....	.....	.....	.....
December	.....	.....	.....	.....
Seasonal total	20.96	9.73	28.08	15.03

Table 4. (continued)

Area: Tualatin Valley

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU <sup>1</sup> In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	1.31	....	....	....	0.83	....	0.80	....	....	....	....	....
April	2.22	....	1.63	0.52	2.22	....	2.22	....	1.31	....	3.93	1.71
May	3.52	1.63	4.26	2.37	3.52	1.63	3.52	1.63	4.07	2.18	5.75	3.86
June	4.43	3.05	5.45	4.07	4.43	3.15	1.99	1.30	6.21	4.83	6.60	5.22
July	5.42	5.02	6.54	6.14	5.42	5.02	....	....	3.71	3.31	6.19	5.79
August	4.86	4.33	5.67	5.14	4.86	4.33	....	....	0.38	0.20	....	....
September	3.38	1.84	3.85	2.31	2.02	0.45	....	....	....	....	....	....
October	1.90	....	1.44	....	....	....	....	....	....	....	....	....
November	0.64	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	27.68	15.87	28.84	20.55	23.30	14.58	8.53	2.93	15.68	10.52	22.47	16.58

Table 4. (continued)  
 Area: Tualatin Valley (continued)

Month	Truck crops		Beans (bush)		Beans (pole)		Potatoes		Berries		Onions	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	....	....	....	....	....	....	....	....	....	....	0.55	....
May	....	....	....	....	2.40	1.45	....	....	1.45	....	2.35	0.46
June	1.34	0.65	2.29	1.14	5.45	4.07	1.04	0.35	2.99	1.61	3.80	2.42
July	4.77	4.37	4.84	4.44	6.54	6.14	5.07	4.67	4.54	4.14	4.77	4.37
August	....	....	1.69	1.42	4.81	4.37	7.33	6.80	4.39	3.86	3.21	2.68
September	....	....	....	....	....	....	....	....	3.03	1.49	....	....
October	....	....	....	....	....	....	....	....	1.47	....	....	....
November	....	....	....	....	....	....	....	....	0.57	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	6.11	4.02	8.82	7.00	19.20	16.03	13.44	11.82	18.44	11.10	14.68	9.93

Table 4. (continued)

Area: Tualatin Valley (continued)

Month	Peas		Orchards (deciduous)		Orchards (deciduous) with cover	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....
March	0.39	.....	.....	.....	.....	.....
April	2.01	.....	0.83	0.09	1.17	0.43
May	3.17	1.28	3.40	1.51	4.22	2.33
June	1.20	0.51	4.63	3.25	5.45	4.07
July	.....	.....	5.37	4.97	6.54	6.14
August	.....	.....	4.44	3.91	5.67	5.14
September	.....	.....	2.06	0.52	3.85	2.31
October	.....	.....	0.53	.....	1.44	.....
November	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....
Seasonal total	6.77	1.79	21.26	14.25	28.34	20.42

Table 4. (continued)

Area: Willamette Valley

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	1.34	.....	.....	.....	0.84	.....	0.81	.....	.....	.....	.....	.....
April	2.22	.....	1.61	0.33	2.22	.....	2.22	.....	1.31	.....	3.93	1.37
May	3.45	1.05	4.17	2.12	3.45	1.40	3.45	1.40	3.98	1.93	5.63	3.58
June	4.35	2.98	5.34	3.97	4.35	2.98	1.94	1.26	6.09	4.72	6.47	5.10
July	5.39	5.04	6.49	6.14	5.39	5.04	.....	.....	3.69	3.34	6.15	5.80
August	4.82	4.34	5.61	5.13	4.82	4.34	.....	.....	0.38	0.20	.....	.....
September	3.41	1.86	3.88	2.33	2.01	1.23	.....	.....	.....	.....	.....	.....
October	2.26	.....	1.47	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	0.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	27.91	15.27	28.57	20.02	23.08	14.99	8.42	2.66	15.45	10.19	22.18	15.85

Table 4. (continued)  
 Area: Willamette Valley (continued)

Month	Truck crops		Beans (pole)		Potatoes		Berries		Beans (bush)		Onions	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	....	....	....	....	....	....	....	....	....	....	0.54	....
May	....	....	2.35	1.32	....	....	1.42	....	....	....	2.30	0.25
June	1.32	0.64	5.37	4.00	1.03	0.34	2.95	1.58	2.26	1.12	3.76	2.39
July	4.74	4.39	6.49	6.14	5.03	4.68	4.51	4.16	4.79	4.44	4.74	4.39
August	....	....	4.76	4.36	7.25	6.77	4.34	3.86	1.67	1.43	3.18	2.70
September	....	....	....	....	....	....	3.05	1.50	....	....	....	....
October	....	....	....	....	....	....	1.53	....	....	....	....	....
November	....	....	....	....	....	....	0.60	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	6.06	5.03	18.97	15.82	13.31	11.79	18.40	11.10	8.72	6.99	14.52	9.73

Table 4. (continued)

Area: Willamette Valley (continued)

Month	Peas		Tomatoes		Orchards (deciduous)		Orchards (deciduous) with cover		Corn		Mint	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	0.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.86	.....
April	2.01	.....	.....	.....	0.81	.....	1.15	0.30	.....	.....	2.26	.....
May	3.10	1.05	1.76	.....	3.33	1.28	4.14	2.09	1.95	.....	3.44	1.39
June	1.18	0.49	3.61	2.24	4.56	3.19	5.37	4.00	4.18	2.81	4.37	3.00
July	.....	.....	5.85	5.50	5.32	4.97	6.49	6.14	6.31	5.96	5.42	5.07
August	.....	.....	3.06	2.72	4.39	3.91	5.61	5.13	5.03	4.55	.....	.....
September	.....	.....	.....	.....	2.07	0.52	3.87	2.32	.....	.....	.....	.....
October	.....	.....	.....	.....	0.54	.....	1.47	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	6.68	1.54	14.28	10.46	21.02	13.87	28.10	19.98	17.47	13.32	16.35	9.46

Table 4. (continued)

Area: Umpqua River

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	1.49	.....	1.73	.....	0.91	.....	0.88	.....	.....	.....	.....	.....
April	2.34	.....	2.73	0.20	2.34	.....	2.34	.....	1.38	.....	4.13	1.60
May	3.49	1.52	4.23	2.26	3.49	1.52	3.49	1.52	4.04	2.07	5.71	3.84
June	4.49	3.20	5.51	4.22	4.49	3.20	1.99	1.35	6.29	5.00	6.68	4.39
July	5.55	5.27	6.69	6.41	5.55	5.27	.....	.....	3.80	3.52	6.33	6.05
August	4.97	4.63	5.79	5.45	4.97	4.63	.....	.....	0.39	0.28	.....	.....
September	3.50	2.28	3.98	2.76	2.07	2.46	.....	.....	.....	.....	.....	.....
October	2.10	.....	1.54	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	0.81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	28.74	16.90	32.20	21.30	23.82	17.08	8.70	2.87	15.90	10.87	22.85	15.88



Table 4. (continued)  
 Area: Umpqua River (continued)

Month	Truck crops		Beans (pole)		Beans (bush)		Tomatoes		Orchards (deciduous)		Orchards (deciduous) with cover	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	.....	.....	1.63	0.36	.....	.....	.....	.....	0.84	.....	1.18	0.34
May	.....	.....	4.23	2.26	0.25	.....	1.82	.....	3.38	1.41	4.19	2.22
June	1.36	0.72	5.51	4.22	3.32	2.03	4.93	3.64	4.69	3.40	5.51	4.22
July	4.89	4.61	5.44	5.21	4.70	4.42	3.26	3.06	5.49	5.21	6.69	6.41
August	.....	.....	.....	.....	0.46	0.40	.....	.....	4.54	4.20	5.79	5.45
September	.....	.....	.....	.....	.....	.....	.....	.....	2.13	0.91	3.98	2.76
October	.....	.....	.....	.....	.....	.....	.....	.....	0.56	.....	1.54	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	6.25	5.33	16.81	12.05	8.73	6.85	10.01	6.70	21.63	15.13	28.88	21.40

Table 4. (continued)

Area: Medford--Grants Pass

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	1.38	.....	1.60	.....	0.86	.....	0.83	.....	.....	.....	.....	.....
April	2.26	0.76	2.63	1.13	2.26	0.76	2.26	0.76	1.33	.....	4.00	2.50
May	3.57	2.06	4.32	2.81	3.57	2.06	3.57	2.06	4.12	2.61	5.83	4.32
June	4.71	3.70	5.78	4.77	4.71	3.70	2.06	1.56	6.60	5.59	7.01	6.00
July	6.06	5.75	7.31	7.00	6.06	5.75	.....	.....	4.15	3.84	6.91	0.60
August	5.40	5.14	6.29	6.03	5.40	5.14	.....	.....	0.42	0.34	.....	.....
September	3.54	2.73	4.02	3.21	2.18	1.78	.....	.....	.....	.....	.....	.....
October	1.98	0.15	1.50	0.59	.....	.....	.....	.....	.....	.....	.....	.....
November	0.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	29.57	20.29	33.45	25.54	25.04	19.19	8.72	4.38	16.62	12.38	23.75	13.42

Table 4. (continued)  
 Area: Medford--Grants Pass (continued)

Month	Truck crops		Onions		Orchards (deciduous)		Orchards (deciduous) with cover	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	0.36	.....	.....	.....	.....	.....
April	.....	.....	1.44	.....	0.84	0.34	1.19	0.69
May	.....	.....	2.97	1.46	3.45	1.94	4.28	2.77
June	1.46	0.96	4.20	3.19	4.92	3.91	5.78	4.77
July	5.34	5.03	5.14	4.83	5.99	5.68	7.31	7.00
August	.....	.....	3.32	3.06	4.92	4.66	6.29	6.03
September	.....	.....	.....	.....	2.16	1.35	4.02	3.21
October	.....	.....	.....	.....	0.55	.....	1.50	0.58
November	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	6.80	5.99	17.43	12.54	22.83	17.88	30.37	25.05

Table 4. (continued)  
 Area: Lake Creek--Little Butte Creek

<u>Month</u>	<u>Pasture grass</u>		<u>Alfalfa</u>		<u>Legume seed</u>		<u>Grass seed</u>		<u>Spring grains</u>		<u>Fall seeded grains</u>	
	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	1.33	0.47	1.55	.....	0.85	.....	0.81	.....	.....	.....	.....	.....
April	2.24	1.62	2.61	0.84	2.24	0.47	2.24	0.47	1.32	.....	3.96	2.19
May	3.43	3.32	4.16	2.35	3.43	1.62	3.43	1.62	3.97	2.16	5.61	3.80
June	4.53	5.62	5.56	4.35	4.53	3.32	1.98	1.38	6.35	5.14	6.74	5.53
July	5.86	4.97	7.07	6.83	5.86	5.62	.....	.....	4.02	3.78	6.69	6.45
August	5.23	2.59	6.09	5.83	5.23	4.97	.....	.....	0.41	0.33	.....	.....
September	3.50	.....	3.98	3.07	2.13	2.68	.....	.....	.....	.....	.....	.....
October	1.97	.....	1.49	0.30	.....	.....	.....	.....	.....	.....	.....	.....
November	0.66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	28.75	18.59	32.51	23.57	24.27	18.68	8.46	3.47	16.07	11.41	23.00	17.97

Table 4. (continued)  
 Area: Lake Creek--Little Butte Creek (continued)

<u>Month</u>	Truck crops		Orchards (deciduous)		Orchards (deciduous) with cover	
	<u>CU</u> In.	<u>IR</u> In.	<u>CU</u> In.	<u>IR</u> In.	<u>CU</u> In.	<u>IR</u> In.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	0.81	0.22	1.15	0.56
May	....	....	3.32	1.51	4.12	2.31
June	1.40	0.80	4.72	3.51	5.56	4.35
July	5.16	4.92	5.80	5.56	7.07	6.83
August	....	....	4.77	4.51	6.09	5.83
September	....	....	2.14	1.23	3.98	3.07
October	....	....	0.55	....	1.49	0.29
November	....	....	....	....	....	....
December	....	....	....	....	....	....
Seasonal total	6.56	5.72	22.11	16.54	29.46	23.24

Table 4. (continued)

Area: Hood River Valley

Month	Pasture grass		Alfalfa		Grass seed		Spring grains		Fall seeded grains		Berries	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	1.23	0.24	1.46	0.53	1.96	....	1.16	....	3.46	1.49	....	....
May	3.20	1.79	3.88	2.47	3.20	1.79	3.70	1.29	5.20	3.79	0.45	....
June	4.19	3.23	5.15	4.19	1.84	1.36	5.87	4.91	6.10	5.14	2.01	1.05
July	5.23	5.00	6.31	6.08	....	....	3.58	3.35	3.33	3.19	4.15	3.92
August	4.61	4.31	5.36	5.06	....	....	0.36	0.26	....	....	4.15	3.85
September	2.99	1.78	3.41	2.20	....	....	....	....	....	....	2.68	1.47
October	1.11	....	2.32	1.39	....	....	....	....	....	....	1.18	....
November	....	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	22.56	16.35	27.89	21.92	7.00	3.15	14.67	9.81	18.09	13.61	14.62	10.29

Table 4. (continued)  
 Area: Hood River Valley (continued)

<u>Month</u>	Orchards (deciduous)		Orchards (deciduous) with cover	
	<u>CU</u> In.	<u>IR</u> In.	<u>CU</u> In.	<u>IR</u> In.
January	....	....	....	....
February	....	....	....	....
March	....	....	....	....
April	....	....	....	....
May	....	....	3.84	2.43
June	3.10	1.69	5.15	4.19
July	4.37	3.41	6.31	6.08
August	5.17	4.94	5.36	5.06
September	4.20	3.90	3.41	2.20
October	1.82	0.61	....	....
November	....	....	....	....
December	....	....	....	....
Seasonal total	18.66	14.55	24.07	19.96

Table 4. (continued)  
 Area: Columbia River Above Hood River

Month	Pasture grass		Alfalfa		Grass seed		Spring grains		Fall seeded grains		Berries	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.67	1.39	1.94	1.66	2.59	2.04	1.53	0.98	4.57	4.02	.....	.....
May	4.27	3.68	5.16	4.57	4.27	3.68	4.93	4.34	6.92	6.33	0.94	0.63
June	5.61	5.06	6.89	6.34	2.45	2.18	7.86	7.31	8.17	7.62	3.29	2.74
July	7.06	6.92	8.53	8.39	.....	.....	4.84	4.70	4.47	4.29	5.69	5.55
August	6.18	5.99	7.19	7.00	.....	.....	0.49	0.43	.....	.....	5.56	5.37
September	3.87	3.34	4.41	3.88	.....	.....	.....	.....	.....	.....	3.56	3.03
October	1.41	0.96	1.18	0.88	.....	.....	.....	.....	.....	1.43	1.60	0.69
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.46	0.21	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	30.07	27.34	35.30	32.72	9.31	7.90	19.65	17.76	24.13	24.15	20.85	18.01



Table 4. (continued)  
 Area: Columbia River Above Hood River (continued)

<u>Month</u>	Orchards (deciduous)		Orchards (deciduous) with cover	
	<u>CU</u> In.	<u>IR</u> In.	<u>CU</u> In.	<u>IR</u> In.
January	....	....	....	....
February	....	....	....	....
March	....	....	....	....
April	1.49	1.16	2.21	1.88
May	4.12	3.53	5.12	4.53
June	5.85	5.30	6.89	6.34
July	6.99	6.85	8.53	8.39
August	5.63	5.44	7.19	7.00
September	2.36	1.83	4.41	3.88
October	....	....	....	....
November	....	....	....	....
December	....	....	....	....
Seasonal total	26.44	24.11	34.35	32.02

Table 4. (continued)  
Area: East Slope of Mt. Hood

Month	Pasture grass		Alfalfa		Grass seed		Spring grains		Fall seeded grains		Berries	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.13	0.79	1.31	0.97	1.72	1.04	1.01	0.33	3.03	2.35	.....	.....
May	2.91	2.02	3.52	2.63	2.91	2.02	3.36	2.47	4.72	3.83	0.41	0.11
June	3.86	3.07	4.74	3.95	1.69	1.30	5.41	4.62	5.62	4.83	2.02	1.23
July	5.22	5.05	6.29	6.12	.....	.....	3.57	3.40	3.23	3.13	4.14	3.97
August	5.01	4.84	5.84	5.67	.....	.....	0.37	0.31	.....	.....	4.52	4.35
September	3.02	2.39	3.43	2.80	.....	.....	.....	.....	.....	.....	2.71	2.08
October	1.09	0.52	0.91	0.53	.....	.....	.....	.....	.....	.....	1.12	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	22.24	18.68	26.04	22.67	6.32	4.36	13.72	11.13	16.60	14.14	14.92	11.74

Table 4. (continued)  
 Area: East Slope of Mt. Hood (continued)

<u>Month</u>	Orchards (deciduous)		Orchards (deciduous) with cover	
	<u>CU</u> In.	<u>IR</u> In.	<u>CU</u> In.	<u>IR</u> In.
January	....	....	....	....
February	....	....	....	....
March	....	....	....	....
April	1.06	0.61	1.59	1.14
May	2.81	1.92	3.49	2.60
June	4.03	3.24	4.74	3.95
July	5.16	4.99	6.29	6.12
August	4.57	4.40	5.84	5.67
September	1.84	1.21	3.43	2.80
October	....	....	....	....
November	....	....	....	....
December	....	....	....	....
Seasonal total	19.47	16.37	25.38	22.28

Table 4. (continued)  
 Area: Columbia Basin Wheat Land

Month	Pasture grass		Alfalfa		Grass seed		Spring grains		Fall seeded grains		Berries	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.22	0.75	1.42	1.01	1.85	1.03	1.09	0.27	3.27	2.45	.....	.....
May	3.17	2.12	3.83	2.78	3.17	2.12	3.66	2.61	5.14	4.09	0.66	0.10
June	4.28	3.38	5.26	4.36	1.85	1.40	6.01	5.11	6.24	5.34	2.51	1.61
July	5.80	5.55	7.01	6.76	.....	.....	3.97	3.72	3.60	3.44	4.67	4.42
August	5.55	5.29	6.47	6.21	.....	.....	0.41	0.33	.....	.....	5.00	4.74
September	3.17	2.51	3.60	2.94	.....	.....	.....	.....	.....	.....	2.91	2.25
October	1.15	0.66	0.96	0.63	.....	.....	.....	.....	.....	.....	1.30	0.31
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.17	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	24.34	20.26	28.55	24.69	6.87	4.55	15.14	12.04	18.25	15.32	17.22	13.43

Table 4. (continued)  
 Area: Columbia Basin Wheat Land (continued)

<u>Month</u>	Orchards (deciduous)		Orchards (deciduous) with cover	
	$\frac{\text{CU}}{\text{In.}}$	$\frac{\text{IR}}{\text{In.}}$	$\frac{\text{CU}}{\text{In.}}$	$\frac{\text{IR}}{\text{In.}}$
January	.....	.....	.....	.....
February	.....	.....	.....	.....
March	.....	.....	.....	.....
April	1.16	0.61	1.73	1.18
May	3.06	2.01	3.80	2.75
June	4.47	3.57	5.26	4.36
July	5.74	5.49	7.01	6.76
August	5.06	4.80	6.47	6.21
September	1.93	1.27	3.60	2.94
October	.....	.....	.....	.....
November	.....	.....	.....	.....
December	.....	.....	.....	.....
Seasonal total	21.42	17.75	27.87	24.20

Table 4. (continued)  
 Area: Pendleton--Heppner

Month	Pasture grass		Alfalfa		Grass seed		Spring grains		Fall seeded grains		Corn	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.40	0.78	1.63	1.01	2.15	0.91	1.27	0.03	3.80	2.56	.....	.....
May	3.61	2.23	4.37	2.99	3.61	2.23	4.17	2.79	5.85	4.47	1.10	0.41
June	4.83	3.62	5.93	4.72	2.09	1.44	6.77	5.56	7.03	5.82	3.89	2.68
July	6.39	6.08	7.71	4.40	.....	.....	4.38	4.07	3.98	3.78	7.51	7.20
August	6.08	5.70	7.07	7.69	.....	.....	0.46	0.33	.....	.....	4.24	4.00
September	3.47	2.70	3.95	3.18	.....	.....	.....	.....	.....	.....	.....	.....
October	1.26	0.67	1.05	0.66	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	27.04	21.78	31.71	24.65	7.85	4.58	17.05	12.78	20.66	16.63	16.74	14.29

Table 4. (continued)  
 Area: Pendleton--Heppner (continued)

Month	Berries		Orchards (deciduous)		Orchards (deciduous) with cover	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	....	....
April	....	....	1.33	0.50	1.98	1.15
May	0.75	0.01	3.49	2.11	4.33	2.95
June	2.83	1.62	5.04	3.83	5.93	4.72
July	5.14	4.83	6.32	6.01	7.71	7.40
August	5.48	5.10	5.54	5.16	7.07	6.69
September	3.20	2.43	2.12	1.35	3.95	3.18
October	1.43	0.25	....	....	....	....
November	0.19	....	....	....	....	....
December	....	....	....	....	....	....
Seasonal total	19.02	14.24	23.84	18.96	30.97	26.09

Table 4. (continued)

Area: Hermiston

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	0.92	0.58	....	....	....	....	....	....
April	2.58	1.89	1.92	1.58	2.55	1.86	2.55	1.86	1.50	0.81	4.50	3.81
May	4.25	3.58	5.14	4.47	4.25	3.58	4.25	3.58	4.91	4.24	6.89	6.22
June	5.71	5.01	7.01	6.31	5.71	5.01	5.71	5.01	8.01	7.31	8.31	7.61
July	7.18	6.99	8.66	8.47	7.18	6.99	3.22	3.13	4.91	4.72	4.54	4.42
August	6.04	5.79	7.03	6.78	6.04	5.79	....	....	0.49	0.41	....	....
September	3.69	3.17	4.20	3.68	2.36	2.10	....	....	....	....	....	....
October	1.95	1.13	1.00	0.76	....	....	....	....	....	....	....	....
November	....	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	31.40	27.56	34.96	32.05	29.01	25.91	15.73	13.58	19.82	17.49	24.24	22.06



Table 4. (continued)  
 Area: Hermiston (continued)

Month	Corn		Berries		Peas		Orchards (deciduous)		Orchards (deciduous) with cover		Mint	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	0.22	....	....	....	....	....	....	....
March	....	....	....	....	1.18	0.49	....	....	....	....	....	....
April	....	....	....	....	2.43	1.74	1.57	1.11	2.35	1.89	2.59	1.90
May	1.30	0.97	0.95	0.59	3.59	2.92	4.10	3.43	5.09	4.42	4.25	3.58
June	4.59	3.89	3.35	2.65	1.23	0.88	5.95	5.25	7.01	6.31	5.67	4.97
July	8.42	8.23	5.77	5.58	....	....	7.10	6.91	8.66	8.47	7.24	7.05
August	4.39	4.23	5.44	5.19	....	....	5.51	5.26	7.03	6.78	2.24	2.11
September	....	....	3.39	2.87	....	....	2.25	1.73	4.20	3.68	....	....
October	....	....	1.53	0.71	....	....	....	....	....	....	....	....
November	....	....	0.20	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	18.70	17.32	20.63	17.59	8.65	6.03	26.48	23.69	34.34	31.55	21.99	19.61

Table 4. (continued)  
 Area: Milton--Freewater

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	0.83	....	....	....	....	....	....	....
April	2.35	0.71	1.73	0.91	2.32	0.68	2.32	0.68	1.37	....	4.09	2.45
May	3.80	2.14	4.61	2.95	3.80	2.14	3.80	2.14	4.39	2.73	6.17	4.51
June	5.02	3.61	6.16	4.75	5.02	4.61	5.02	3.61	7.04	5.63	7.31	5.90
July	6.65	6.30	8.02	7.67	6.65	6.30	2.91	2.73	4.56	4.21	4.14	3.90
August	5.77	5.32	6.72	6.27	5.77	5.32	....	....	0.46	0.31	....	....
September	3.53	2.57	4.01	3.05	2.25	1.77	....	....	....	....	....	....
October	1.88	0.35	1.08	0.57	....	....	....	....	....	....	....	....
November	....	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	29.00	21.00	32.33	26.17	26.64	20.82	14.05	9.16	17.82	12.88	21.71	16.76

Table 4. (continued)  
 Area: Milton--Freewater (continued)

Month	Corn		Berries		Peas		Tomatoes		Orchards (deciduous) with cover		Orchards (deciduous)	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	0.20	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	1.06	.....	.....	.....	.....	.....	.....	.....
April	.....	.....	.....	.....	2.21	0.57	.....	.....	2.12	1.03	1.42	0.33
May	1.16	0.33	0.84	.....	3.21	1.55	1.98	0.32	4.56	2.90	3.68	2.02
June	4.03	2.62	2.94	1.53	1.09	0.38	5.51	4.10	6.16	4.75	5.24	3.83
July	7.81	7.46	5.35	5.00	.....	.....	3.83	3.58	8.02	7.67	6.58	6.23
August	4.16	3.86	5.20	4.75	.....	.....	.....	.....	6.72	6.27	5.26	4.81
September	.....	.....	3.24	2.28	.....	.....	.....	.....	4.01	3.05	2.15	1.19
October	.....	.....	1.48	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	0.20	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	17.16	14.27	19.25	13.56	7.77	2.50	11.32	8.00	31.59	25.67	24.33	18.41

Table 4. (continued)  
Area: Madras--Redmond

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	1.81	1.23	1.35	1.06	1.14	0.85	1.16	0.87	0.51	0.22	3.15	2.57
May	3.02	2.04	3.66	2.68	3.02	2.04	3.02	2.04	3.05	2.07	4.90	3.92
June	4.08	3.11	5.01	4.04	4.08	3.11	1.77	1.28	5.41	4.44	5.94	4.97
July	5.53	5.23	6.67	6.37	5.53	5.23	....	....	5.17	4.87	3.42	3.22
August	4.70	4.45	5.47	5.22	4.70	4.45	....	....	0.73	0.57	....	....
September	2.97	2.45	3.38	2.86	1.87	1.61	....	....	....	....	....	....
October	....	....	....	....	....	....	....	....	....	....	....	....
November	....	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	22.11	18.51	25.54	22.23	20.34	17.29	5.95	4.19	14.87	12.17	17.41	14.68

Table 4. (continued)  
 Area: Madras--Redmond (continued)

<u>Month</u>	Potatoes		Mint	
	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>
January	....	....	....	....
February	....	....	....	....
March	....	....	....	....
April	....	....	1.78	1.20
May	0.20	0.07	3.03	2.05
June	2.22	1.25	4.09	3.12
July	7.21	6.91	5.59	5.29
August	6.92	6.67	1.72	1.59
September	....	....	....	....
October	....	....	....	....
November	....	....	....	....
December	....	....	....	....
Seasonal total	16.55	14.90	16.21	13.25

Table 4. (continued)

Area: Bend

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Potatoes	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	1.41	0.72	1.07	0.73	0.90	0.56	0.92	0.58	0.40	0.06	....	....
May	2.42	1.39	2.93	1.90	2.42	1.39	2.42	1.39	2.44	1.41	0.16	0.02
June	3.40	2.40	4.17	3.17	3.40	2.40	1.44	0.94	4.50	3.50	1.85	0.85
July	4.64	4.18	5.61	4.15	4.64	4.18	....	....	4.34	3.88	6.06	5.60
August	3.95	3.61	4.59	4.25	3.95	3.61	....	....	0.61	0.39	5.81	5.47
September	2.40	1.89	2.74	2.23	1.54	1.29	....	....	....	....	....	....
October	....	....	....	....	....	....	....	....	....	....	....	....
November	....	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	18.22	14.19	21.11	16.43	16.85	13.43	4.78	2.91	12.29	9.24	13.88	11.94

Table 4. (continued)

Area: Klamath

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Potatoes	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	1.64	0.89	1.24	0.88	1.04	0.66	1.07	0.74	0.47	0.09	....	....
May	2.78	1.69	3.36	2.27	2.78	1.69	2.78	1.69	2.80	1.71	0.18	0.03
June	3.76	2.85	4.62	3.71	3.76	2.85	1.63	1.18	4.98	4.07	2.04	1.13
July	5.18	4.89	6.26	5.97	5.18	4.89	....	....	4.85	4.56	6.76	6.47
August	4.40	4.13	5.13	4.86	4.40	4.13	....	....	0.68	0.52	6.48	6.21
September	2.90	2.30	3.30	2.70	1.78	1.48	....	....	....	....	....	....
October	....	....	....	....	....	....	....	....	....	....	....	....
November	....	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	20.66	16.75	23.91	20.39	18.94	15.70	5.48	3.61	13.78	10.95	15.46	13.84

Table 4. (continued)

Area: Lakeview

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.63	0.66	1.23	0.74	1.04	0.55	1.06	0.58	0.47	.....	2.84	1.87
May	2.76	1.43	3.34	2.01	2.76	1.43	2.76	1.43	2.79	1.46	4.48	3.15
June	3.87	2.78	4.75	3.66	3.87	2.78	1.64	1.10	5.13	4.04	5.64	4.55
July	5.41	5.04	6.53	6.16	5.41	5.04	.....	.....	5.06	4.69	3.32	3.08
August	4.68	4.42	5.46	5.20	4.68	4.42	.....	.....	0.72	0.54	.....	.....
September	2.87	2.32	3.27	2.72	1.83	1.56	.....	.....	.....	.....	.....	.....
October	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	21.22	16.65	24.58	20.49	19.59	15.78	5.46	3.11	14.17	10.73	16.28	12.65



Table 4. (continued)

Area: Harney Valley

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....
April	1.57	0.87	1.21	0.86	1.02	0.67	1.04	0.69	0.45	0.10
May	2.76	1.55	3.34	2.13	2.76	1.55	2.76	1.55	2.79	1.58
June	3.77	2.70	4.63	3.56	3.77	2.70	1.62	1.09	5.00	3.93
July	5.64	5.32	6.81	6.49	5.64	5.32	....	....	5.27	4.95
August	4.79	4.37	5.57	5.15	4.79	4.37	....	....	0.74	0.46
September	2.98	2.42	3.38	2.82	1.88	1.60	....	....	....	....
October	....	....	....	....	....	....	....	....	....	....
November	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....
Seasonal total	21.51	17.23	24.94	21.01	19.86	16.21	5.42	3.33	14.25	11.02

Table 4. (continued)

Area: Dayville--Canyon City

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	2.07	0.75	1.52	0.86	1.28	0.62	1.31	0.65	0.57	.....
May	3.32	1.63	4.03	2.34	3.32	1.63	3.32	1.63	3.36	1.67
June	4.42	3.14	5.44	4.16	4.42	3.14	1.92	1.28	5.87	4.59
July	5.98	5.55	7.22	6.79	5.98	5.55	.....	.....	5.59	5.16
August	5.23	4.82	6.10	5.69	5.23	4.82	.....	.....	0.80	0.50
September	3.25	2.48	3.70	2.93	2.06	1.68	.....	.....	.....	.....
October	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	24.27	18.37	28.01	22.77	22.29	17.44	6.55	3.56	16.19	11.92

Table 4. (continued)

Area: Wallowa Valley

<u>Month</u>	<u>Pasture grass</u>		<u>Alfalfa</u>		<u>Legume seed</u>		<u>Grass seed</u>		<u>Spring grains</u>		<u>Fall seeded grains</u>	
	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.69	0.37	1.21	0.55	.....	.....	1.04	0.38	0.46	.....	2.79	1.47
May	2.73	0.98	3.30	2.55	2.73	0.98	2.73	0.98	2.76	1.01	4.46	2.71
June	3.74	1.77	4.59	2.62	3.74	1.77	1.61	0.63	4.96	2.99	5.57	3.60
July	4.99	4.36	6.03	5.40	4.99	4.36	.....	.....	4.66	4.03	5.70	5.07
August	4.60	3.96	5.35	4.71	4.60	3.96	.....	.....	0.69	0.28	.....	.....
September	2.60	1.53	2.97	1.90	1.73	1.20	.....	.....	.....	.....	.....	.....
October	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	20.35	12.97	23.45	17.73	17.79	12.27	5.38	1.99	13.53	8.31	18.52	12.85

Table 4. (continued)

Area: Grand Ronde Valley

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.84	0.01	1.38	0.47	1.16	0.25	1.19	0.28	0.52	.....	3.21	1.38
May	3.09	1.04	3.75	1.70	3.09	1.04	3.09	1.04	3.12	1.07	5.05	3.00
June	4.18	2.29	5.13	3.24	4.18	2.29	1.81	0.87	5.54	3.65	6.22	4.33
July	5.70	5.17	6.88	6.35	5.70	5.17	.....	.....	5.33	4.80	6.51	5.98
August	5.39	4.71	6.28	5.60	5.39	4.71	.....	.....	0.80	0.35	.....	.....
September	2.97	1.86	3.38	2.27	2.01	1.46	.....	.....	.....	.....	.....	.....
October	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	23.17	15.08	26.80	19.63	21.53	14.92	6.09	2.19	15.31	9.87	20.99	14.69

Table 4. (continued)  
 Area: Grand Ronde Valley (continued)

<u>Month</u>	Potatoes		Peas	
	$\frac{\text{CU}}{\text{In.}}$	$\frac{\text{IR}}{\text{In.}}$	$\frac{\text{CU}}{\text{In.}}$	$\frac{\text{IR}}{\text{In.}}$
January	.....	.....	.....	.....
February	.....	.....	.....	.....
March	.....	.....	.....	.....
April	.....	.....	.....	.....
May	0.90	.....	0.83	.....
June	3.31	1.42	3.68	1.79
July	8.00	7.47	1.68	1.41
August	7.88	7.20	.....	.....
September	.....	.....	.....	.....
October	.....	.....	.....	.....
November	.....	.....	.....	.....
December	.....	.....	.....	.....
Seasonal total	20.09	16.09	6.19	3.20

Table 4. (continued)

Area: Baker Valley

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.60	0.79	1.24	0.84	1.05	0.65	1.07	0.67	0.47	.....	2.78	1.97
May	2.84	1.32	3.44	1.92	2.84	1.32	2.84	1.32	2.87	1.35	4.64	3.12
June	3.86	2.52	4.74	3.40	3.86	2.52	1.67	1.00	5.12	3.78	5.75	4.41
July	5.37	4.94	6.48	6.05	5.37	4.94	.....	.....	5.02	4.59	6.13	5.70
August	4.55	4.09	5.30	4.94	4.55	4.09	.....	.....	0.70	0.40	.....	.....
September	2.76	2.20	3.13	2.57	1.77	1.49	.....	.....	.....	.....	.....	.....
October	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	20.98	15.86	24.33	19.72	19.44	15.01	5.58	2.99	14.18	10.12	19.30	15.20

Table 4. (continued)  
 Area: Baker Valley (continued)

<u>Month</u>	Potatoes	
	<u>CU</u> <u>In.</u>	<u>IR</u> <u>In.</u>
January	.....	.....
February	.....	.....
March	.....	.....
April	.....	.....
May	0.83	.....
June	3.06	1.72
July	7.54	7.11
August	6.65	6.19
September	.....	.....
October	.....	.....
November	.....	.....
December	.....	.....
Seasonal total	18.08	15.02

Table 4. (continued)  
 Area: Pine and Eagle Valleys

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU	IR In.	CU	IR In.	CU	IR In.	CU	IR In.	CU	IR In.	CU	IR In.
January	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....
April	1.94	0.72	1.48	0.87	....	....	1.27	0.66	0.55	....	3.37	2.15
May	3.12	1.50	4.03	2.41	3.33	1.71	3.33	1.71	3.37	1.75	5.44	3.82
June	4.52	3.37	5.56	4.41	4.52	3.37	1.96	1.39	6.00	4.85	6.74	5.59
July	6.13	5.83	7.40	7.10	6.13	5.83	....	....	5.73	5.43	7.00	6.70
August	5.24	4.91	6.10	5.87	5.24	4.91	....	....	0.81	0.59	....	....
September	3.16	2.48	3.60	2.92	2.03	1.69	....	....	....	....	....	....
October	....	....	....	....	....	....	....	....	....	....	....	....
November	....	....	....	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....	....	....	....
Seasonal total	24.11	18.81	28.17	23.58	21.25	17.51	6.56	3.76	16.46	12.62	22.55	18.26



Table 4. (continued)

Area: Malheur

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Fall seeded grains	
	CU	IR In.	CU	IR In.	CU	IR In.	CU	IR In.	CU	IR In.	CU	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	2.28	1.55	2.62	1.89	1.46	1.10	1.49	1.13	1.32	0.59	3.97	3.24
May	3.90	2.83	4.72	3.65	3.90	2.83	3.90	2.83	4.50	3.43	6.37	5.30
June	5.24	4.43	6.43	5.62	5.24	4.43	2.27	1.87	7.35	6.54	7.80	6.99
July	7.10	6.96	8.49	8.35	7.10	6.96	.....	.....	4.87	4.73	8.10	7.96
August	5.92	5.67	6.90	6.65	5.92	5.67	.....	.....	0.71	0.55	.....	.....
September	3.48	3.01	3.96	3.49	2.27	2.04	.....	.....	.....	.....	.....	.....
October	1.24	0.86	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	29.16	25.31	33.12	29.65	25.89	23.03	7.66	5.83	18.75	15.84	26.24	23.49

Table 4. (continued)  
 Area: Malheur (continued)

<u>Month</u>	Corn		Potatoes		Onions	
	$\frac{\text{CU}}{\text{In.}}$	$\frac{\text{IR}}{\text{In.}}$	$\frac{\text{CU}}{\text{In.}}$	$\frac{\text{IR}}{\text{In.}}$	$\frac{\text{CU}}{\text{In.}}$	$\frac{\text{IR}}{\text{In.}}$
January	....	....	....	....	....	....
February	....	....	....	....	....	....
March	....	....	....	....	0.32	....
April	....	....	....	....	1.43	0.70
May	1.20	0.67	1.86	0.79	3.25	2.18
June	4.21	3.40	5.64	4.83	4.67	3.86
July	8.34	8.20	10.65	10.54	6.02	5.88
August	4.33	4.17	6.24	6.06	3.64	3.39
September	....	....	....	....	....	....
October	....	....	....	....	....	....
November	....	....	....	....	....	....
December	....	....	....	....	....	....
Seasonal total	18.08	16.44	24.39	22.22	19.33	16.01

Table 4. (continued)

Area: Jordan Valley

Month	Pasture grass		Alfalfa		Legume seed		Grass seed		Spring grains		Potatoes	
	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.	CU In.	IR In.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	1.60	0.57	1.83	0.80	1.06	0.55	1.08	0.57	0.93	.....	.....	.....
May	2.88	1.60	3.50	2.22	2.88	1.60	2.88	1.60	3.34	2.06	0.19	0.02
June	4.10	3.07	5.04	4.01	4.10	3.07	1.73	1.22	5.75	4.72	2.23	1.20
July	5.74	5.43	6.87	6.56	5.74	5.43	.....	.....	3.94	3.63	7.49	7.18
August	4.87	4.71	5.67	5.51	4.87	4.71	.....	.....	0.58	0.50	7.16	7.00
September	2.95	2.46	3.35	2.86	1.90	1.66	.....	.....	.....	.....	.....	.....
October	1.05	0.64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seasonal total	23.19	18.48	26.26	21.96	20.55	17.02	5.69	3.39	14.54	10.91	17.07	15.40

Table 5. Growing Seasons Used in Computing Consumptive Use and Irrigation Requirements

Area	Fall seeded grains	Alfalfa	Grass & legume pasture & hay	Beans (bush)
COASTAL				
1 North Coast			3/1 to 12/1	
2 South Coast			2/15 to 12/1	
WILLAMETTE VALLEY				
3 Columbia River Below Hood Riv	4/1 to 7/31	4/15 to 10/15	3/1 to 11/15	6/5 to 8/15
4 Tualatin Valley	4/1 to 7/31	4/15 to 10/15	3/1 to 11/15	6/5 to 8/15
5 Willamette Valley	4/1 to 7/31	4/15 to 10/15	3/1 to 11/15	6/5 to 8/15
SOUTHWESTERN VALLEYS				
6 Umpqua River	4/1 to 7/31	3/1 to 10/15	3/1 to 11/15	5/25 to 8/5
7 Medford--Grants Pass	4/1 to 7/31	3/1 to 10/15	3/1 to 11/15	
8 Lake Creek-Little Butte Creek	4/1 to 7/31	3/1 to 10/15	3/1 to 11/15	
NORTH CENTRAL				
9 Hood River Valley	4/1 to 7/20	4/15 to 10/10	4/15 to 10/15	
10 Columbia River Above Hood Riv	4/1 to 7/20	4/15 to 10/10	4/15 to 10/15	
11 East Slope of Mt. Hood	4/1 to 7/20	4/15 to 10/10	4/15 to 10/15	
12 Columbia Basin Wheat Land	4/1 to 7/20	4/15 to 10/10	4/15 to 10/15	
13 Pendleton--Heppner	4/1 to 7/20	4/15 to 10/10	4/15 to 10/15	
14 Hermiston	4/1 to 7/20	4/15 to 10/10	4/1 to 11/1	
15 Milton--Freewater	4/1 to 7/20	4/15 to 10/10	4/1 to 11/1	
SOUTH CENTRAL				
16 Madras--Redmond	4/1 to 7/20	4/15 to 10/1	4/1 to 10/1	
17 Bend		4/15 to 10/1	4/1 to 10/1	
18 Klamath		4/15 to 10/1	4/1 to 10/1	
19 Lakeview	4/1 to 7/20	4/15 to 10/1	4/1 to 10/1	
20 Harney Valley		4/15 to 10/1	4/1 to 10/1	
21 Dayville--Canyon City		4/15 to 10/1	4/1 to 10/1	
NORTHEAST				
22 Wallowa Valley	4/1 to 7/31	4/15 to 10/1	4/1 to 10/1	
23 Grand Ronde Valley	4/1 to 7/31	4/15 to 10/1	4/1 to 10/1	
24 Baker Valley	4/1 to 7/31	4/15 to 10/1	4/1 to 10/1	
25 Pine & Eagle Valleys	4/1 to 7/31	4/15 to 10/1	4/1 to 10/1	
SOUTHEAST				
26 Malheur	4/1 to 7/31	4/1 to 10/1	4/1 to 10/15	
27 Jordan Valley	4/1 to 7/31	4/1 to 10/1	4/1 to 10/15	

Table 5. (continued)

	Beans (pole)	Spring grains	Peas	Onions
COASTAL				
1 North Coast				
2 South Coast				
WILLAMETTE VALLEY				
3 Columbia River Below Hood Riv	5/15 to 8/25	4/1 to 8/10	3/15 to 6/15	4/15 to 9/1
4 Tualatin Valley	5/15 to 8/25	4/1 to 8/10	3/15 to 6/15	4/15 to 9/1
5 Willamette Valley	5/15 to 8/25	4/1 to 8/10		
SOUTHWESTERN VALLEYS				
6 Umpqua River	4/15 to 7/25	4/1 to 8/10		3/15 to 9/1
7 Medford--Grants Pass		4/1 to 8/10		
8 Lake Creek-Little Butte Creek		4/1 to 8/10		
NORTH CENTRAL				
9 Hood River Valley		4/1 to 8/10		
10 Columbia River Above Hood Riv		4/1 to 8/10		
11 East Slope of Mt. Hood		4/1 to 8/10		
12 Columbia Basin Wheat Land		4/1 to 8/10		
13 Pendleton--Heppner		4/1 to 8/10		
14 Hermiston		4/1 to 8/10	2/15 to 6/15	
15 Milton--Freewater		4/1 to 8/10	2/15 to 6/15	
SOUTH CENTRAL				
16 Madras--Redmond		4/15 to 8/20		
17 Bend		4/15 to 8/20		
18 Klamath		4/15 to 8/20		
19 Lakeview		4/15 to 8/20		
20 Harney Valley		4/15 to 8/20		
21 Dayville--Canyon City		4/15 to 8/20		
NORTHEAST				
22 Wallowa Valley		4/15 to 8/20		
23 Grand Ronde Valley		4/15 to 8/20	5/15 to 7/15	
24 Baker Valley		4/15 to 8/20		
25 Pine & Eagle Valleys		4/15 to 8/20		
SOUTHEAST				
26 Malheur		4/1 to 8/15		3/15 to 8/30
27 Jordan Valley		4/1 to 8/15		

Table 5. (continued)

	Corn (sweet)	Truck crops	Mint	Tomatoes
COASTAL				
1 North Coast		6/15 to 7/30		
2 South Coast		6/15 to 7/30		
WILLAMETTE VALLEY				
3 Columbia River Below Hood Riv	5/1 to 8/30	6/15 to 7/30		
4 Tualatin Valley		6/15 to 7/30		
5 Willamette Valley	5/1 to 8/30	6/15 to 7/30	3/15 to 7/30	5/1 to 8/21
SOUTHWESTERN VALLEYS				
6 Umpqua River		6/15 to 7/30		5/1 to 7/21
7 Medford--Grants Pass		6/15 to 7/30		
8 Lake Creek--Little Butte Creek		6/15 to 7/30		
NORTH CENTRAL				
9 Hood River Valley				
10 Columbia River Above Hood Riv				
11 East Slope of Mt. Hood				
12 Columbia Basin Wheat Land				
13 Pendleton--Heppner	5/15 to 8/20			
14 Hermiston	5/15 to 8/20		3/30 to 8/10	5/1 to 7/21
15 Milton--Freewater	5/15 to 8/20			
SOUTH CENTRAL				
16 Madras--Redmond			3/30 to 8/10	
17 Bend				
18 Klamath				
19 Lakeview				
20 Harney Valley				
21 Dayville--Canyon City				
NORTHEAST				
22 Wallowa Valley				
23 Grand Ronde Valley				
24 Baker Valley				
25 Pine & Eagle Valleys				
SOUTHEAST				
26 Malheur	5/15 to 8/20			
27 Jordan Valley				

Table 5. (continued)

Area	Legume seed	Grass seed	Berries	Potatoes
COASTAL				
1 North Coast				
2 South Coast				
WILLAMETTE VALLEY				
3 Columbia River Below Hood Riv	3/15 to 9/15	3/15 to 6/15	4/30 to 11/23	6/15 to 9/1
4 Tualatin Valley	3/15 to 9/15	3/15 to 6/15	4/30 to 11/23	6/15 to 9/1
5 Willamette Valley	3/15 to 9/15	3/15 to 6/15	4/30 to 11/23	6/15 to 9/1
SOUTHWESTERN VALLEYS				
6 Umpqua River	3/15 to 9/15	3/15 to 6/15		
7 Medford--Grants Pass	3/15 to 9/15	3/15 to 6/15		
8 Lake Creek--Little Butte Creek	3/15 to 9/15	3/15 to 6/15		
NORTH CENTRAL				
9 Hood River Valley		4/1 to 6/15	5/21 to 10/31	
10 Columbia River Above Hood Riv		4/1 to 6/15	5/14 to 11/7	
11 East Slope of Mt. Hood		4/1 to 6/15	5/21 to 10/31	
12 Columbia Basin Wheat Land		4/1 to 6/15	5/14 to 11/7	
13 Pendleton--Heppner		4/1 to 6/15	5/14 to 11/7	
14 Hermiston	3/15 to 9/15	4/1 to 7/15	5/14 to 11/7	
15 Milton--Freewater	3/15 to 9/15	4/1 to 7/15	5/14 to 11/7	
SOUTH CENTRAL				
16 Madras--Redmond	4/15 to 9/15	4/15 to 6/15		5/27 to 9/1
17 Bend	4/15 to 9/15	4/15 to 6/15		5/27 to 9/1
18 Klamath	4/15 to 9/15	4/15 to 6/15		5/27 to 9/1
19 Lakeview	4/15 to 9/15	4/15 to 6/15		
20 Harney Valley	4/15 to 9/15	4/15 to 6/15		
21 Dayville--Canyon City	4/15 to 9/15	4/15 to 6/15		
NORTHEAST				
22 Wallowa Valley	5/1 to 9/15	4/15 to 6/15		5/12 to 9/1
23 Grand Ronde Valley	4/15 to 9/15	4/15 to 6/15		5/12 to 9/1
24 Baker Valley	4/15 to 9/15	4/15 to 6/15		
25 Pine & Eagle Valleys	5/1 to 9/15	4/15 to 6/15		
SOUTHEAST				
26 Malheur	4/15 to 9/15	4/15 to 6/15		5/1 to 8/21
27 Jordan Valley	4/15 to 9/15	4/15 to 6/15		5/27 to 9/1

Table 5. (continued)

Area	Orchards, deciduous with cover	Orchards, deciduous without cover
<b>COASTAL</b>		
1 North Coast		
2 South Coast		
<b>WILLAMETTE VALLEY</b>		
3 Columbia River Below Hood Riv	4/20 to 10/15	4/20 to 10/15
4 Tualatin Valley	4/20 to 10/15	4/20 to 10/15
5 Willamette Valley	4/20 to 10/15	4/20 to 10/15
<b>SOUTHWESTERN VALLEYS</b>		
6 Umpqua River	4/20 to 10/15	4/20 to 10/15
7 Medford--Grants Pass	4/20 to 10/15	4/20 to 10/15
8 Lake Creek--Little Butte Creek	4/20 to 10/15	4/20 to 10/15
<b>NORTH CENTRAL</b>		
9 Hood River Valley	5/1 to 10/1	5/1 to 10/1
10 Columbia River Above Hood Riv	4/12 to 10/1	4/12 to 10/1
11 East Slope of Mt. Hood	4/10 to 10/1	4/10 to 10/1
12 Columbia Basin Wheat Land	4/10 to 10/1	4/10 to 10/1
13 Pendleton--Heppner	4/10 to 10/1	4/10 to 10/1
14 Hermiston	4/10 to 10/1	4/10 to 10/1
15 Milton--Freewater	4/10 to 10/1	4/10 to 10/1
<b>SOUTH CENTRAL</b>		
16 Madras--Redmond		
17 Bend		
18 Klamath		
19 Lakeview		
20 Harney Valley		
21 Dayville--Canyon City		
<b>NORTHEAST</b>		
22 Wallowa Valley		
23 Grand Ronde Valley		
24 Baker Valley		
25 Pine & Eagle Valleys		
<b>SOUTHEAST</b>		
26 Malheur		
27 Jordan Valley		



REFERENCES

1. Pruitt, W. O. Personal communication. 1965.
2. USDA--SCS. Irrigation water requirements, Technical Release No. 21. 1964.
3. Tileston, F. M. and J. W. Wolfe. Irrigation requirements (estimates for Oregon). Oregon Agricultural Experiment Station Bulletin 500, July 1951.